

# EURADOS Intercomparison 2018 for Whole Body Dosemeters - Summary of Procedures, Results and Conclusions

A. F. McWhan, W. Dobrzynska, H. Stadtmann,  
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## Abstract

EURADOS Working Group 2 has developed a system for a self-sustained programme of regular dosimeter intercomparisons (ICs), (Figel, M. Report to Council, WG02-SG2, 2007). ICs for whole body dosimeters were carried out in 2008, 2010, 2012, 2014, 2016 and 2018. In addition, four ICs with different scopes were carried out, two for extremity dosimeters in photon and beta fields (IC2009<sub>ext</sub> and IC2015<sub>ext</sub>) and two for whole-body dosimeters in neutron fields (IC2012<sub>n</sub> and IC2017<sub>n</sub>). This IC, ie. IC2018, has built on the success of these previous ICs with a total of 121 systems from 100 institutes with participants from 40 countries around the world.

The systems tested during this exercise included 82 TLD, 18 OSL, 9 Film and 12 dosimeter systems based on other techniques (Other). A total of 4114 dosimeters were handled by the coordinator of which 2662 were irradiated. Photon (source and 1 mixed source/x-ray) irradiations were carried out by GAEC (Greek Atomic Energy Commission) and the x-ray irradiations were carried out by VSL (Dutch Metrology Institute).

Out of the total of 121 systems, 30 reported results for  $H_p(10)$  only and 91 reported both  $H_p(10)$  and  $H_p(0.07)$ . In general, the participants showed a very satisfactory performance with the medians of all  $H_p(10)$  and  $H_p(0.07)$  response values very close to unity.

From the statistical overviews of the results, the reports provided by the irradiation laboratories and the remarks received from the participants, it can be concluded that the IC exercise was successful and that there were no significant issues encountered by the IC organization or the irradiation laboratories during the execution of the IC.

The Participants Meeting was held on 12 February in Lodz at AM2019.

These IC results can assist the participants to show compliance with their quality management system, compare their results with those from other participants and develop action plans for improvement of their systems. The high number of participants confirms that there is strong demand for international IC exercises in Europe, and that these are of significant operational value for Individual Monitoring Services (IMS).

## 1 Introduction

EURADOS working groups on Harmonisation of Individual Monitoring in Europe (1997-2000 (Bartlett, Ambrosi, Bordy, & Van Dijk., 2000) (Bartlett, Boehm, & Hyvonen, Individual Monitoring of External Radiation., 2001), 2001-2004 (Van Dijk, Bolognese-Milsztajn, Fantuzzi, Lopez Ponte, & Stadtmann, 2004) ) have shown that intercomparison exercises (ICs) are fundamental for harmonisation of Individual Monitoring Services (IMS). Consequently, these EURADOS working groups recommended periodic performance tests or IC exercises within the European Union (EU) to assist this objective. It was believed that ICs would stimulate IMS to improve the quality of their results, provide information on IMS quality throughout EU and assist harmonisation of IMS quality control standards. Further support was provided by the response to questionnaires sent to IMS in the EU and non-EU countries which showed very strong interest in participating in the proposed programme of periodic ICs.

Participation in regular ICs is now specifically recommended in the European Commission's *Technical Recommendations for Monitoring Individuals Occupationally Exposed to External Radiation* (European Commission, 2009). Participation is also being considered as an essential criterion for IMS approval by a number of national authorities. At the same time, a growing number of IMS are either working towards, or have already achieved, formal EN ISO/IEC 17025 (ISO 17025, 2017) accreditation which specifically requires participation in regular inter laboratory comparisons.

EURADOS WG2 has now successfully carried out five ICs for whole body doseimeters (IC2008, IC2010, IC2012, IC2014, IC2018) (Grimbergen, Figel, Romero, Stadtmann, & McWhan, EURADOS Intercomparison 2008 for Whole Body Doseimeters in Photon Fields, 2012) (McWhan, et al., EURADOS Intercomparison 2010 for Whole Body Doseimeters in Photon Fields, 2015) (McWhan, et al., EURADOS Intercomparison 2012 for Whole Body Doseimeters in Photon Fields, 2015) (Stadtmann, et al., 2018) and two for extremity doseimeters in photon and beta fields (IC2009, IC2015<sub>ext.</sub>) – see (Grimbergen, Figel, Romero, Stadtmann, & McWhan, EURADOS Intercomparison 2009 for Extremity Doseimeters in Photon and Beta Fields,, 2013). All of these ICs have been performed without any external funding with all costs being covered by the participants' fees. Details are summarised in the Appendix A and in further publications in scientific journals (Grimbergen, Figel, Mcwhan, Romero, & Stadtmann, 2016) (Romero, et al., 2016) (Figel, Stadtmann, Grimbergen, Mcwhan, & Romero, 2016) (Stadtmann, et al., 2017).

IC2018 has built on the success of these previous ICs.

**Please note:** *The tables and figures are presented as accurately as possible. However, there may appear to be a few inconsistencies in some of the data e.g. total number of doseimeters. This is a consequence of different data samples used for individual table and figures, e.g. where there have been wrongly irradiated doseimeters, missing reported numerical dose values etc.*

## 2 Outline of the EURADOS IC2018

### 2.1 Organization Group

Andrew McWhan/Wioletta Dobrzynska	Cavendish Nuclear Limited, UK (Coordinating Lab)
Hannes Stadtmann	Seibersdorf Labor GmbH, AT
Markus Figel	Helmholtz-Zentrum Muenchen, DE
Tom Grimbergen	Mirion Dosimetry Services, NL
Ana M. Romero	Ciemat, ES

#### Coordinating Laboratory:

Andrew McWhan & Wioletta Dobrzynska  
Cavendish Nuclear Limited, Berkeley Approved Dosimetry Service  
Building A11, Gloucestershire Science and Technology Park  
Berkeley, Gloucestershire, GL13 9FB, UK

### 2.2 Scope

The scope was for:

Whole body dosimeters used for the assessment of  $H_p(10)$  and/or  $H_p(0.07)$ . Irradiations for photons, were carried out in accredited or primary standard European irradiation facilities in terms of  $H_p(10)$  and  $H_p(0.07)$  in the following ranges:

- > Energy: 30 keV to 1.3 MeV
- > Dose equivalent: 0.2 mSv to 1.0 Sv
- > Angle of incidence:  $\pm 60^\circ$

34 dosimeters were required from each participant.

- > 22 dosimeters for irradiation
- > 12 transit / spare dosimeters

### 2.3 Coordination

Cavendish Nuclear Limited (Berkeley Approved Dosimetry Service) acted as the coordinating institute. The task of the coordinator is to receive, forward for irradiation and return all dosimeters back to the participants. The coordinator also carries out all communication between the participants, the irradiation laboratories and the organization group (OG). This includes the dose values reported by the participants and the irradiation laboratory. The on-line platform (OLP) employed in previous ICs was used to facilitate handling all dosimeter information including registration, communication and data exchange. The participants were also kept up to date with the current status of their documents, dosimeters etc. via the OLP.

### 2.4 Set-up

IC2018 set-up closely followed the same pattern as all previous EURADOS ICs.

In anticipation of receiving a significant number of participants two irradiation laboratories, GAEC (Greek Atomic Energy Commission) and VSL (Dutch Metrology Institute), were selected for the



irradiations. This helped to keep the task manageable for each irradiation laboratory and to keep the IC on schedule.

All dosimeters were sent by the participants to the coordinator. When all dosimeters had been received the coordinator forwarded them to the irradiation laboratories accompanied by electronic dosimeters to monitor the doses received in storage and transit. Road transport was used to avoid air travel to reduce the risk of x-ray inspections in transit.

After irradiation, the dosimeters were despatched back to the coordinator who returned them to the participants for evaluation. The OLP was used by the IMS to transfer the evaluated dose values to the coordinator.

After receiving the results, the coordinator calculated the value of the response,  $R$ , for each dosimeter by dividing the IMS result ( $H_{p, \text{participant}}$ ) by the reference dose given by the irradiation laboratory ( $H_{p, \text{reference}}$ ) in accordance with equation (1).

$$R = \frac{H_{p, \text{participant}}}{H_{p, \text{reference}}} \quad (1)$$

The calculated response values were downloaded from the OLP by each participant for the initial check and confirmation along with the opportunity to add any comments. Thus, each participant was informed of the radiation qualities and the doses given to their dosimeters. All comments were assessed by the OG (see Section 3.1) to decide if any applications for result modification could be permitted. Note that as a general rule, the OG only accepts changes to the results when it is clear that there has been an error made by the OG or by the irradiation laboratory.

The original "Certificates of Participation", signed by the coordinator and the chairperson of EURADOS, were sent by standard mail to the participants. Copies were also made available on the OLP.

## 2.5 Time schedule

Announcement - Call for participants	Feb 2018
Registration of participants and systems	16 March 2018
Deadline for IMS sending application forms	13 April 2018
Deadline for IMS sending dosimeters to Coordinator	11 May 2018
Irradiations	June - August 2018
Coordinator sending dosimeters for readout	September 2018
Deadline for IMS sending dosimeters results to Coordinator	9 November 2018
Final results available	January 2019
IMS receiving certificates of participation	February 2019
Participants Meeting – held at AM2019 Lodz	12 February 2019

## 2.6 Irradiation plan

Photon irradiation qualities were chosen from ISO 4037-1 (ISO 4037-1, 1996), ISO 4037-2 (ISO 4037-2, 1997) and ISO 4037-3 (ISO 4037-3, 1999). The plan details were confidential and only known by the

OG and the irradiation laboratory. The exact dose value (which was varied from the nominal value) was selected by the irradiation laboratory for each irradiation. These exact dose values were known only by the irradiation laboratory until all measured values had been reported to the coordinator.

Table 1: Outline irradiation plan for the EURADOS 2018 IC. Irradiation qualities are reported according to ISO 4037

<b>Irradiation plan for 1 participant/system</b>				
<b>Quality</b>	<b><math>H_p(10)</math> Low dose (1 mSv - 10 mSv)</b>	<b><math>H_p(10)</math> Medium dose (max: 100 mSv )</b>	<b><math>H_p(10)</math> High dose (max: 500 mSv)</b>	<b>number of irradiations points</b>
<b>S-Cs 0°</b>	<b>2 x 0.5 mSv 4 x 5 mSv 2 x 3 mSv</b>			<b>2 + 4 +2</b>
<b>S-Co 0°</b>	<b>2 x 5 mSv</b>	<b>2 x 50 mSv</b>	<b>2 x 500 mSv</b>	<b>2 + 2 + 2</b>
<b>N-60 0°</b>	<b>2 x 5 mSv</b>			<b>2</b>
<b>N-60 60°</b>	<b>2 x 5 mSv</b>			<b>2</b>
<b>N-150 0°</b>	<b>2 x 3 mSv</b>			<b>2</b>
<b>N-150 60°</b>	<b>2 x 5 mSv</b>			<b>2</b>
<b>W-110 0°</b>	<b>2 x 5 mSv</b>			<b>2</b>
<b>Total:</b>				<b>24 irradiations (22 dosimeters)</b>

S-Cs 0° (3 mSv) + N-150 0° (3 mSv) were combined to obtain a mixed dosimeter pair.

Table 2: Detailed irradiation plan

$H_p(10)$		Dose (mSv)			Total no of dosemeters irradiated
Radiation	Quality	Mean	Min	Max	
x-ray	N-60	1.4	1.2	1.6	242
	N-60/60°	1.7	1.4	1.9	242
	W-110	4.6	4.1	5.0	242
	N-150/60°	1.6	1.3	1.8	242
Gamma	S-Cs-S	0.8	0.7	1.0	242
	S-Cs-L	4.9	4.3	5.7	484
	S-Co-L	5.2	4.4	5.9	242
	S-Co-M	51	44	58	242
	S-Co-H	349	305	407	242
mixed	N-150/Cs-137	5.7	5.0	6.7	242
All		42.6	0.7	407	2662

## 2.7 Participants and systems.

Table 3 provides a summary of all participating countries and the number of participating services. All information was provided by the participants on the OLP and application forms.

- > 100 participants (Institutes/IMS)
- > 121 systems
- > 40 countries

Table 3: Number of participants (Institutes) per country ranked by total number of systems

Country	Institutes	Systems
Italy	12	16
Spain	7	7
Belgium	6	9
Bulgaria	5	5
UK	4	5
France	4	4
Turkey	4	4
Germany	3	7
Austria	3	5
Switzerland	3	5
Croatia	3	3
Czech Republic	3	3
Serbia	3	3
Sweden	3	3
USA	2	4
Israel	2	3
Bosnia and Herzegovina	2	2
Denmark	2	2
Estonia	2	2
Greece	2	2
Lithuania	2	2
Macedonia	2	2
Portugal	2	2
Romania	2	2
Slovenia	2	2
Netherlands	1	3
Albania	1	1
Canada	1	1
Cyprus	1	1
Hungary	1	1

Country	Institutes	Systems
India	1	1
Iraq	1	1
Japan	1	1
Kosovo	1	1
Latvia	1	1
Lebanon	1	1
Luxembourg	1	1
Montenegro	1	1
Norway	1	1
Ukraine	1	1

Table 4: Dosimetry System Analysis – Quantity, Position and Materials

Dosimetry Systems: 121		
Measurement Quantity	Quantity	Number of Systems
	$H_p(10)$ only	30
	$H_p(10)$ and $H_p(0.07)$	91
		121
Detector Type/Material	Detector Type/Material	Number of Systems
	APD	1
	DIS	7
	Film - Agfa	7
	Film - Foma	2
	OSL - $Al_2O_3$	13
	OSL - BeO	5
	RPL	4
	TL - Other	8
	TL $Li_2B_4O_7/CaSO_4$	15
	TL - LiFMgCuP	13
	TL - LiFMgTi	46
		121
	Number of Detectors/Filters	Number of Detectors/Filters
1		8
2		48
3		10
4		46
>4		9
		121
Algorithm	Algorithm	Number
	No	29
	Yes - Linear	49
	Yes - Non-Linear	13
	Yes - Branching	30
		121



Figure 1: Representative selection of dosemeters

Table 5: Number of systems per dosimeter type and type of detector

	systems	% of all	% of type
<b>TL</b>	<b>82</b>	<b>68</b>	<b>68</b>
LiF:Mg,Ti	46	38	56
Li <sub>2</sub> B <sub>4</sub> O <sub>7</sub> /CaSO <sub>4</sub>	15	12	18
LiF:Mg,Cu,P	13	11	16
TL - Other	8	7	10
<b>Other</b>	<b>12</b>	<b>10</b>	<b>10</b>
DIS	7	6	58
RPL	4	3	33
APD	1	1	7
<b>Film</b>	<b>9</b>	<b>7</b>	<b>7</b>
Agfa	7	6	78
FOMA	2	2	22
<b>OSL</b>	<b>18</b>	<b>15</b>	<b>15</b>
Al <sub>2</sub> O <sub>3</sub> :C	13	11	72
BeO	5	4	28
All	121	100	100

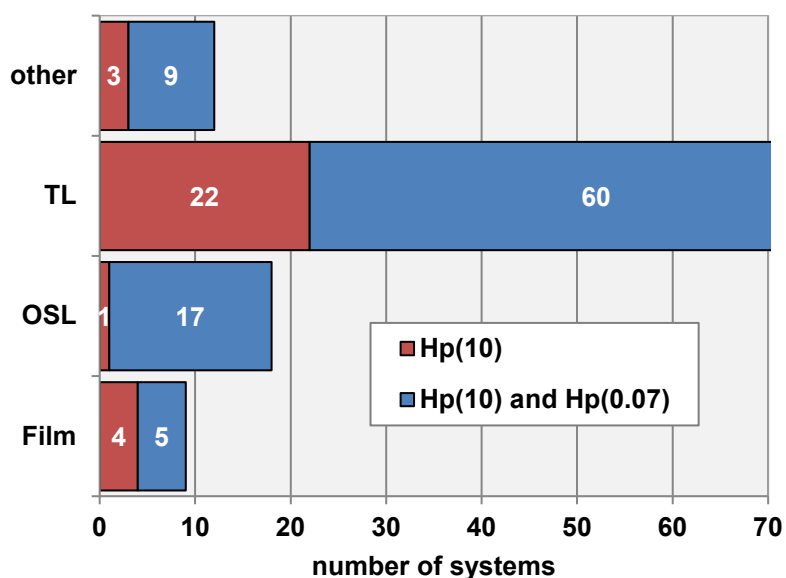


Figure 2: Summary of all systems showing detector type and dose quantity



## 2.8 Intercomparison procedure compared to ISO 14146

IC2018 was set up to meet the ISO standard (ISO 14146, 2000) "Criteria and performance limits for the periodic evaluation of dosimetry services". The performance limits set by ISO 14146:2010 were also adopted for the analysis of the global results:

$$\text{ISO 14146:2000} \quad \frac{1}{F} \left( 1 - \frac{2H_0}{H_0 + H_c} \right) \leq R \leq F \left( 1 + \frac{H_0}{2H_0 + H_c} \right)$$

$$F = 1.5 \quad H_0 = 0.085 \text{ mSv}$$

10% of outliers are accepted

Where  $R$  is the response,  $H_c$  is the conventional true value and  $H_0$  is the "lower dose limit below which irradiations should not be performed":

For the analysis of the global results in this report, any result exceeding the above performance limits was considered as an outlier. The standard ISO 14146:2010 allows a maximum of one-tenth of the dosimeters irradiated to exceed these limits.

### 2.8.1 Irradiations at GAEC and VSL

GAEC was selected for performing the gamma irradiations S-Cs and S-Co, (i.e. 14 irradiations) and the 2 x N-150 0° 3 mSv irradiations, which were combined with S-Cs 0° 3 mSv to form a mixed field irradiation (in total 14 of the 22 irradiations for each participant). VSL was selected for the x-ray irradiations (8 dosimeters for each participant).

Road transport in dedicated vans was arranged to reduce the risk of x-ray inspection at airports.

See Appendices C and D for details of the irradiations.



Figure 3: Preparation of dosimeters at Berkeley for road transport to VSL and GAEC



1 van direct to VSL  
(13 dosemeters/ system)

1 van direct to GAEC  
(21 dosemeters/ system)

5 spares for each lab

Figure 4: Road transport (two dedicated vans) leaving Berkeley (29 May 2018) for GAEC and VSL

2.8.2 Photon and mixed irradiations at GAEC



Figure 5: Example irradiation set up at GAEC

2.8.3 X-ray irradiations at VSL

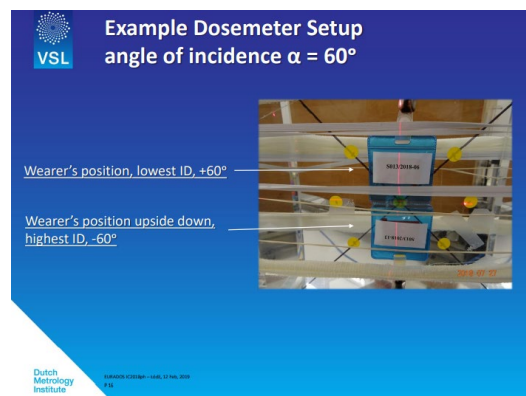
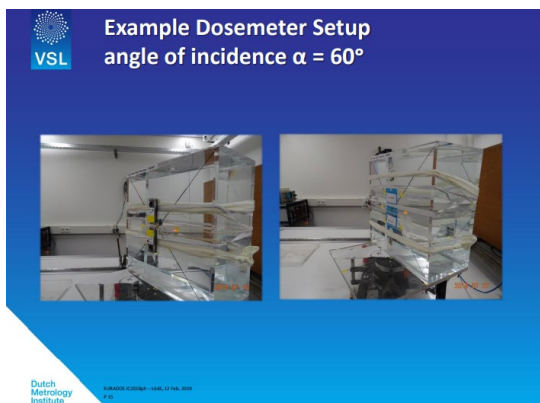


Figure 6: Example irradiation set up at VSL

## 2.9 Background and transit dose control

For this intercomparison a total of 34 dosimeters were required from each participant. 22 dosimeters were irradiated which allowed for 12 to be designated for “background and transit dose control” for participants to make corrections for background and transfer dose. These dosimeters were also available for use by the irradiation laboratory in case of damage or errors during the irradiations although only a few of these were required. The coordinator did not make any adjustment for transit or background dose and all associated correction was the responsibility of the participants.

The results of the electronic dosimeters (see Section 2.4) which accompanied the participants’ dosimeters for the land travel between the coordinator and the irradiation laboratories are shown in the table below. The participants were not informed of these dose values.

Table 6: EPD Transit Doses – road transport between coordinator and Irradiation Laboratories

Depart	Arrive	Transit Dose mSv	Depart	Arrive	Transit Dose mSv
Berkeley 29-05-2018	GAEC 04-06-2018	0.008	GAEC 25-07-2018	Berkeley 08-09-2018	0.017
Berkeley 29-05-2018	VSL 31-05-2018	0.003	VSL 01-09-2018	Berkeley 07-09-2018	0.009

The coordinator provided the participants with the identification codes of the unused “background and transit dose control” dosimeters. The mean values per system for the non-irradiated “background and transit control” dosimeters are shown in Figure 7. It can be seen that few significant transit doses were reported and that some of the participants reported zero doses.

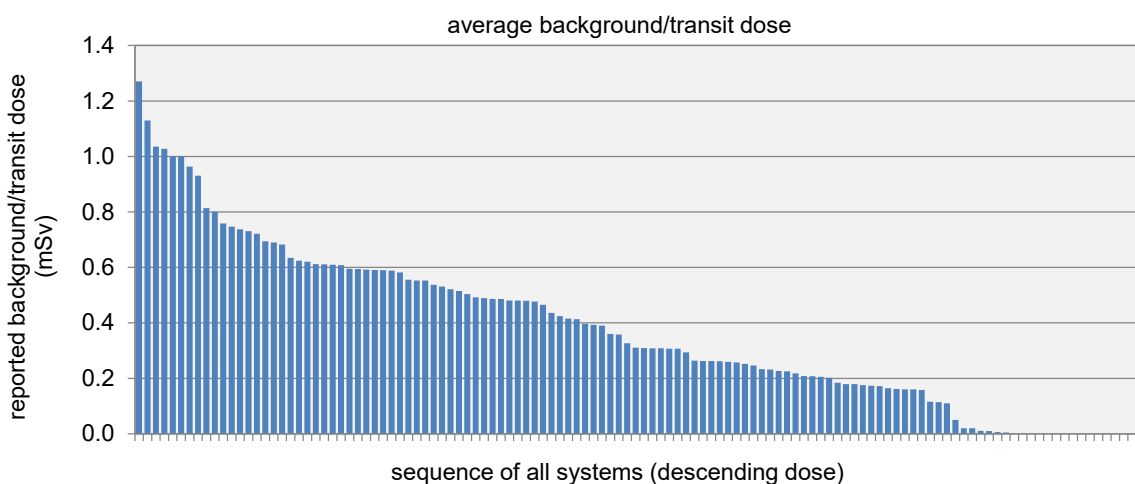


Figure 7: Background/ transport doses: each bar represents the mean reported background dose value for each individual system

## 2.10 Confidentiality of the data and the results

The data processed by the OG is always treated confidentially for two specific reasons.

**Firstly**, the IC programme was designed as a blind test for all the participants. This means that participants report their results without knowing any specific details of the irradiation plan, in particular the dose values.

The dose values are reported to the participants only after the coordinator has received the dose values evaluated by the participant. At the time of application for the IC, only the ranges of dose, energies and angles are known to the participants (section: 2.4 Set-up). Direct communication between participants and the irradiation laboratory is not allowed. It is acknowledged that some IMS participate with more than one dosimetry system and that some IMS might have access to results of other participants. In order to prevent these participants guessing dose values by combining results, the irradiation plan is executed in a random order for each participant. In addition, the irradiation laboratory varies the dose values in the irradiation plan within specified ranges from participant to participant, rather than using fixed dose values for each radiation quality.

**Secondly**, the individual results are the property of the participants only and thus have to be kept confidential.

To assure this confidentiality the coordinator separates all information which could possibly lead to the identity of the participants from the published results. In the overviews of the results, the participating dosimetry systems are only referenced by a randomized code. All participants' certificates contained "Reporting number used in publications" known only to the participant and the coordinator. However, once participants have received their certificates, OG has no influence on the use that participants make of their own results.

During the IC exercises significant quantities of data have to be exchanged. In order to assure data integrity, parallel data streams (paper & electronic) are used. All official results are reported on signed papers. However, the majority of the data is exchanged in electronic formats by means of the web based OLP. To maintain data security, all relevant electronic documents containing IC results (draft results or certificate) are password protected.

## **2.11 Certificates of participation and participants meeting**

EURADOS is not accredited for the evaluation of IMS and consequently the results issued by EURADOS itself cannot be regarded as an official test report. As an alternative, the established protocol is to report the results to the individual participants in the form of a "Certificate of Participation", with the irradiation reports of the accredited irradiation laboratories as an annex.

These certificates consist of three pages if  $H_p(10)$  only was reported, or four pages if both  $H_p(10)$  and  $H_p(0.07)$  were reported. The front page, signed by both the EURADOS Chairperson and the IC coordinator, shows the certificate number, the reporting number, the details of the participant, the description of the system as given by the participant and a summary of the IC procedure. The second page shows the actual results for each dosimeter, irradiation quality, value of  $H_p(10)$  and  $H_p(0.07)$  as reported by participant, value of  $H_p(10)$  and  $H_p(0.07)$  as reported by the irradiation laboratory, and the ratio of these two values. The Certificates do not indicate any performance limits because these might differ from one participant to the other. All participants received their signed certificates by post.

## 3 Results and Discussion

### 3.1 Review of the comments and requests received from participants

After the participants submitted their results, the coordinator processed the dose values and created a draft report for each system. These reports were made available to each participant followed by a two-week time frame to comment on their report. The participants were informed that if they requested corrections because of errors made by the OG organization, they would need to indicate the results they were requesting to be corrected and the justification. The OG would have the final decision on any amendments.

In total 6 requests were received relating to 9 separate systems:

1. Lower beta results than expected – one participant requested for information on irradiation conditions
2. Higher x-ray results than expected – one participant requested confirmation that irradiations were correct
3. Cs-137 response higher than expected – reported by one participant
4. Three separate IMS reported the same possible problem with one specific quality

OG convened before the release of the final results to review and discuss these requests. In this process confidentiality is maintained as far as practicable and only the coordinator knows the identity of the participants who have sent these comments.

In accordance with the terms and conditions, OG concluded that the requests 1, 2 & 3 (see above) could not be allowed and an appropriate letter was sent to these participants to explain that the OG was satisfied that all irradiations had been carried out in accordance with the appropriate ISO standards. However, after further investigation, OG concluded that there had been a problem with the one specific quality as reported by the three separate participants (see 4 above) but it was established that none of the other participants had been affected. OG sent appropriate letters of apology informing these participants that these irradiations would be excluded from the certificates of participation.

### 3.2 Basic statistical results

The response ( $R$ ) was calculated for each dosimeter by dividing the participant's result,  $H_{p, \text{participant}}$  by the reference dose value (given by irradiation laboratory)  $H_{p, \text{reference}}$  in accordance with equation (1). The corresponding frequency and cumulative distributions as well as basic statistical results are given for these distributions in Figures 8 and 9.

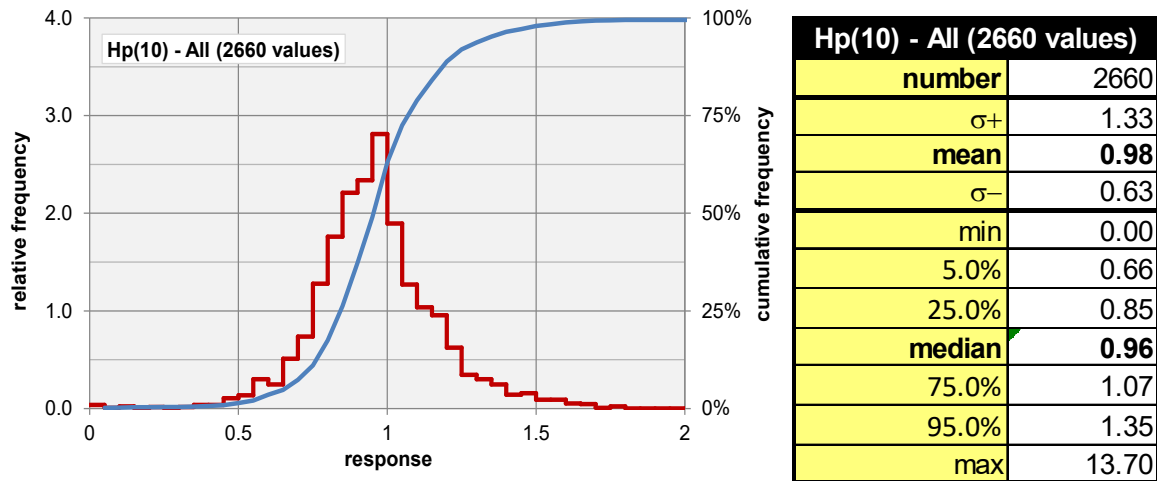


Figure 8: Frequency distribution of all response values for  $H_p(10)$

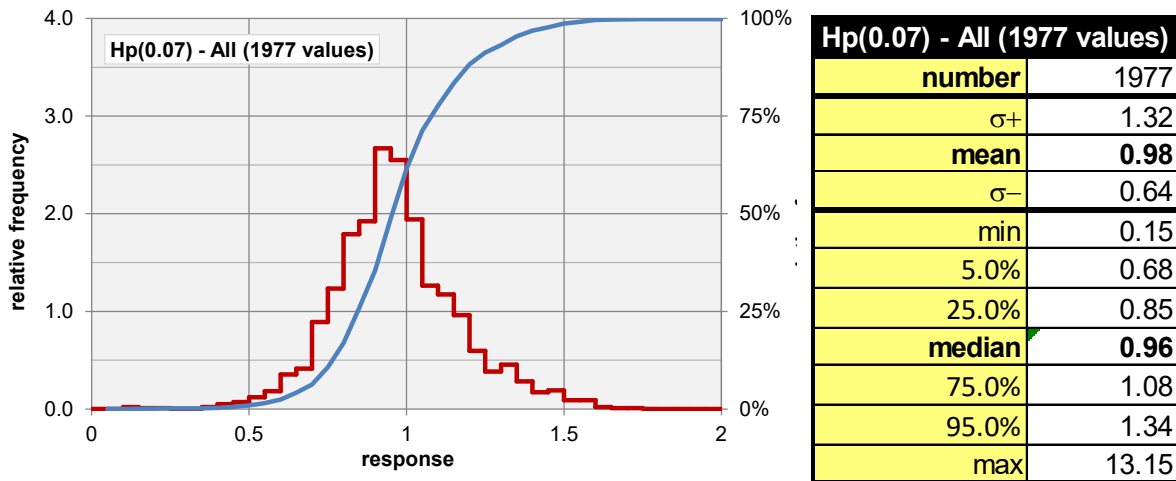


Figure 9: Frequency distribution of all response values for  $H_p(0.07)$

### 3.3 Response values per radiation quality

The energy and the angular response is given in Figures 10 to 16. Diamond (Median), box (50% range), bar (90% range), dots (minimum, maximum).

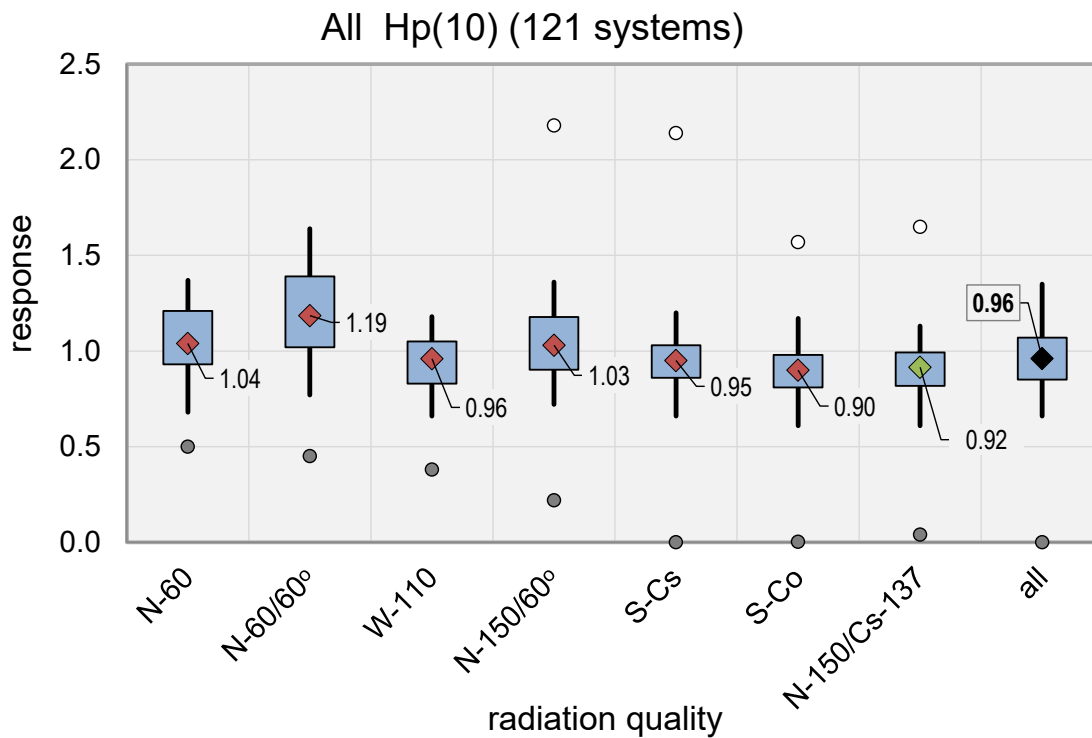


Figure 10: Distributions of all  $H_p(10)$  response values for different radiation qualities

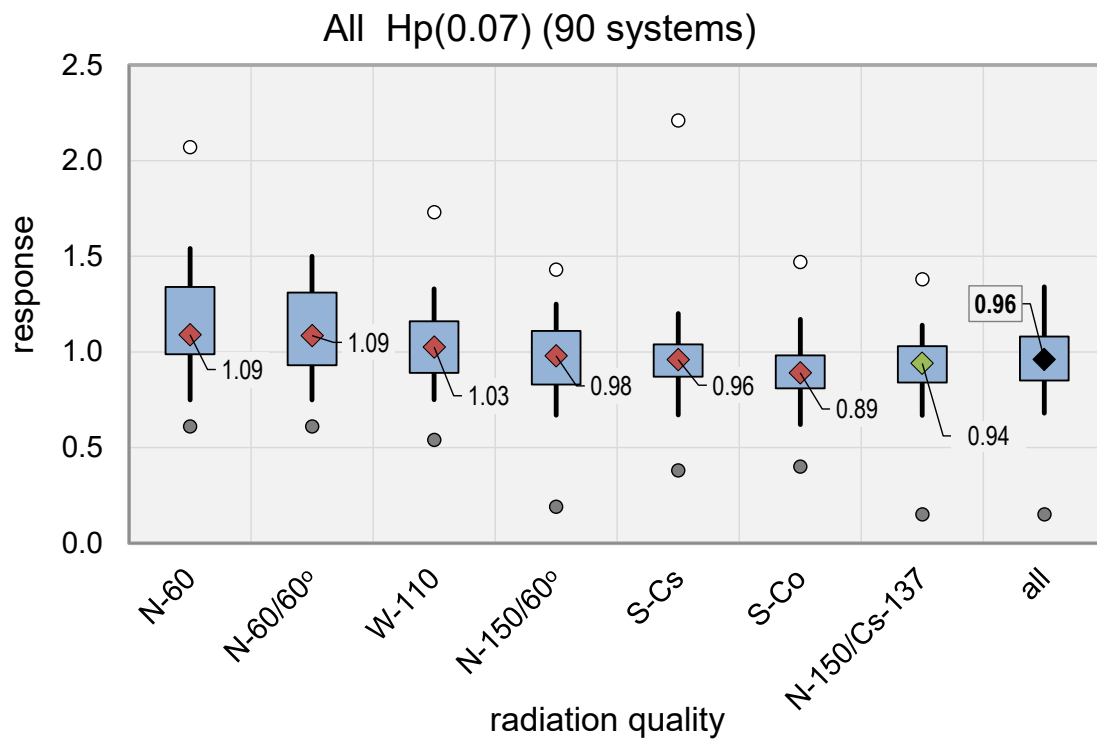


Figure 11: Distributions of all  $H_p(0.07)$  response values for different radiation qualities (1 service registered for  $H_p(0.07)$  did not submit corresponding dose values)

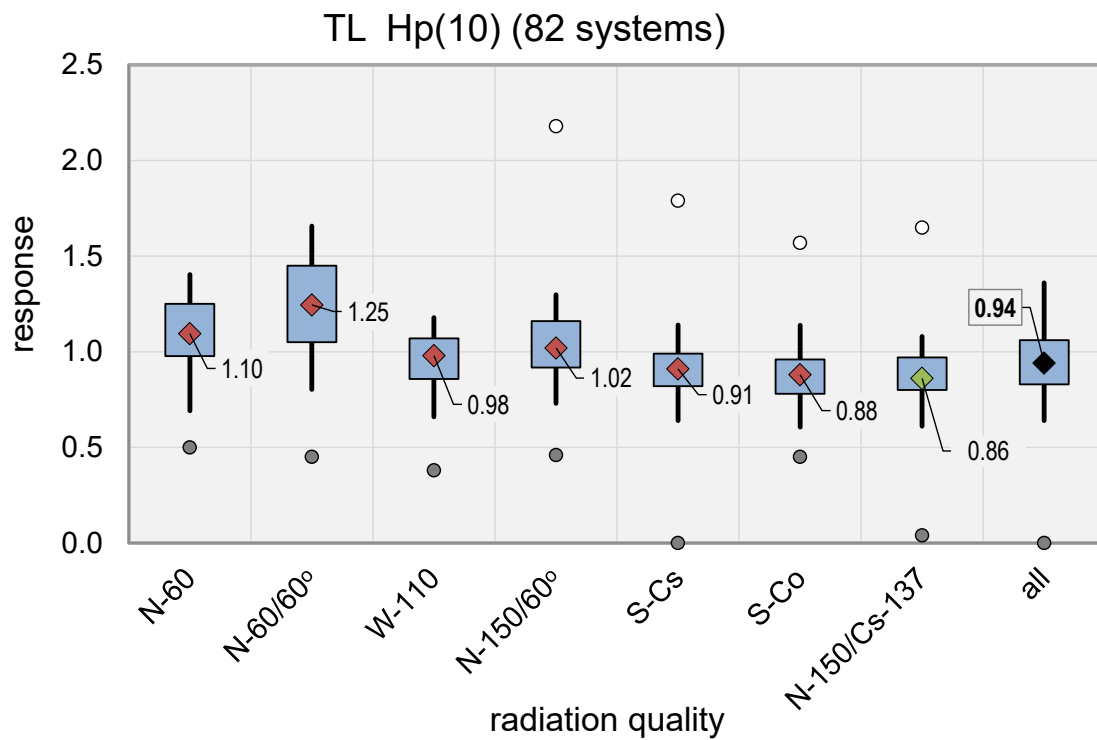


Figure 12: Distributions of TLD  $H_p(10)$  response values for different radiation qualities.



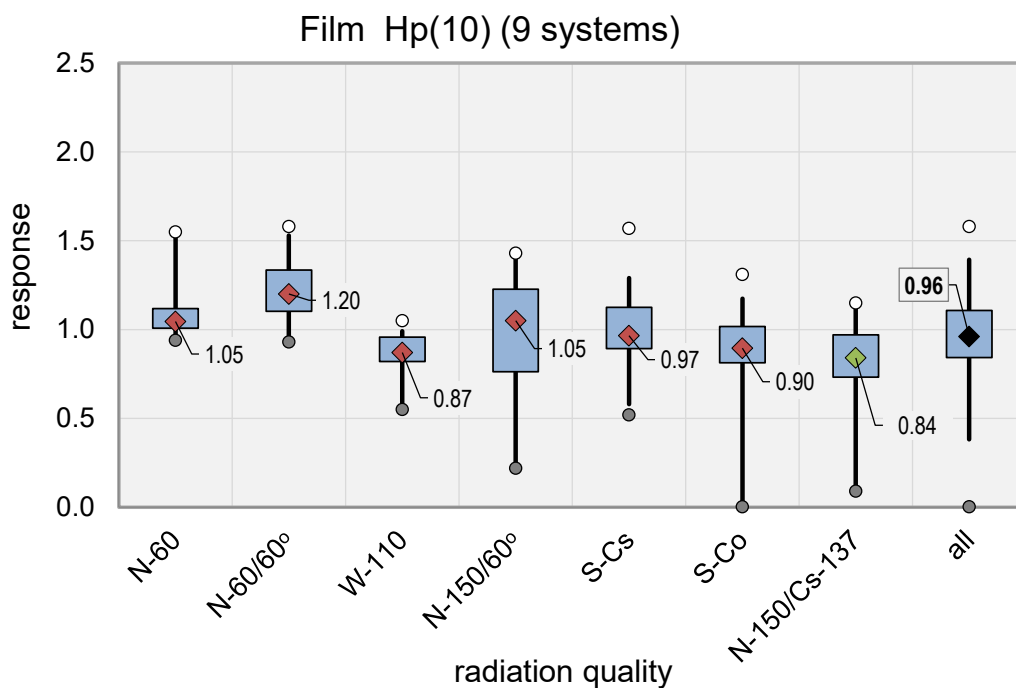


Figure 13: Distributions of Film  $H_p(10)$  response values for different radiation qualities

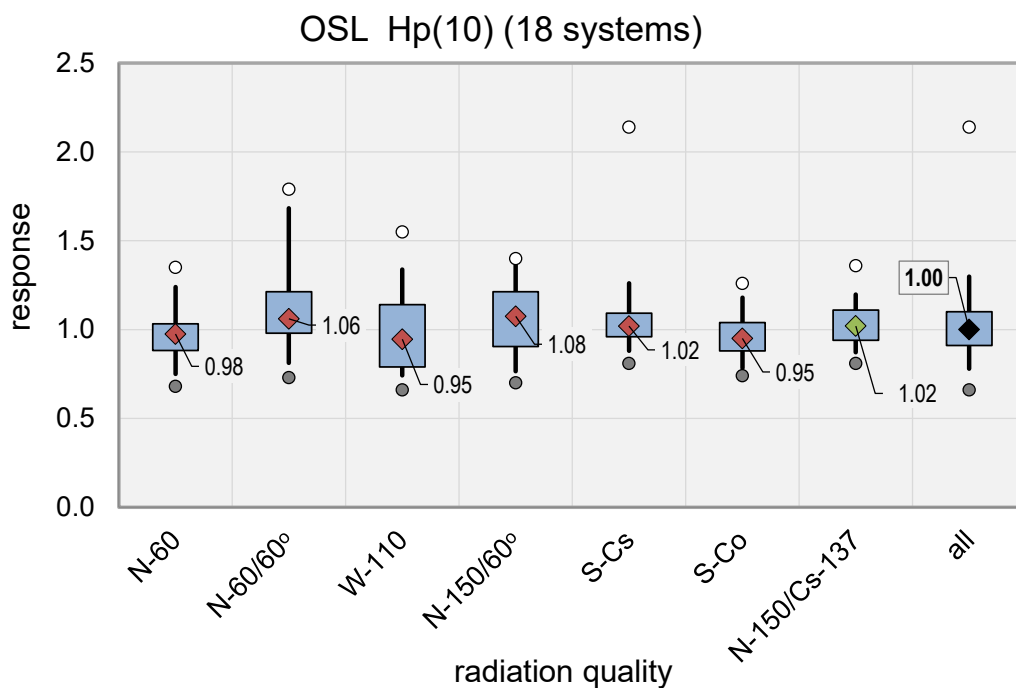


Figure 14: Distributions of OSL  $H_p(10)$  response values for different radiation qualities

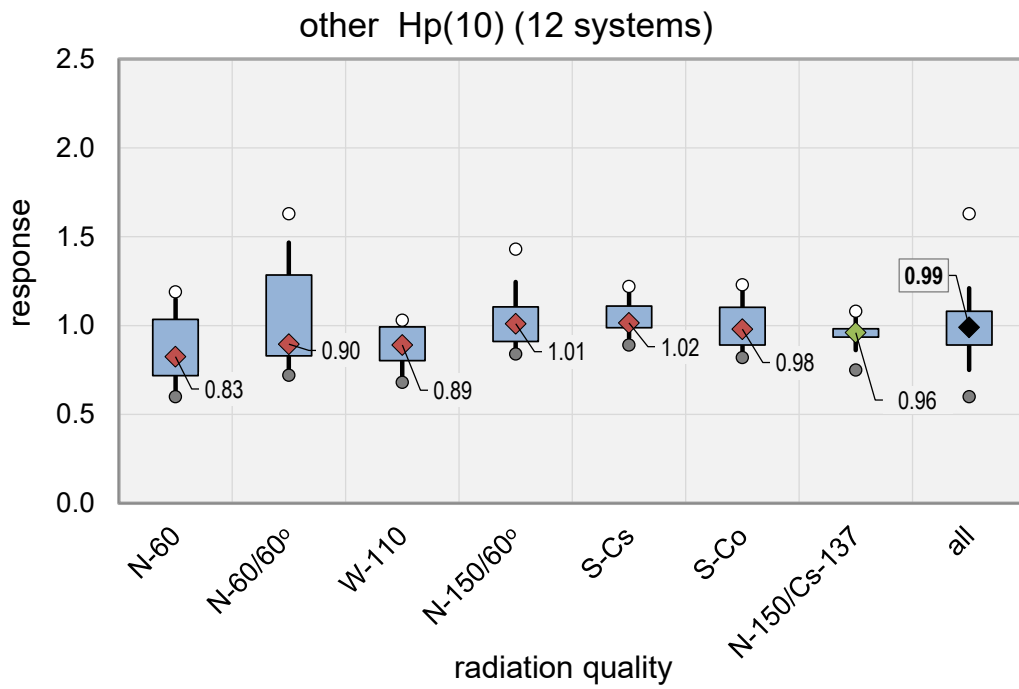


Figure 15: Distributions of “other”  $H_p(10)$  response values for different radiation qualities

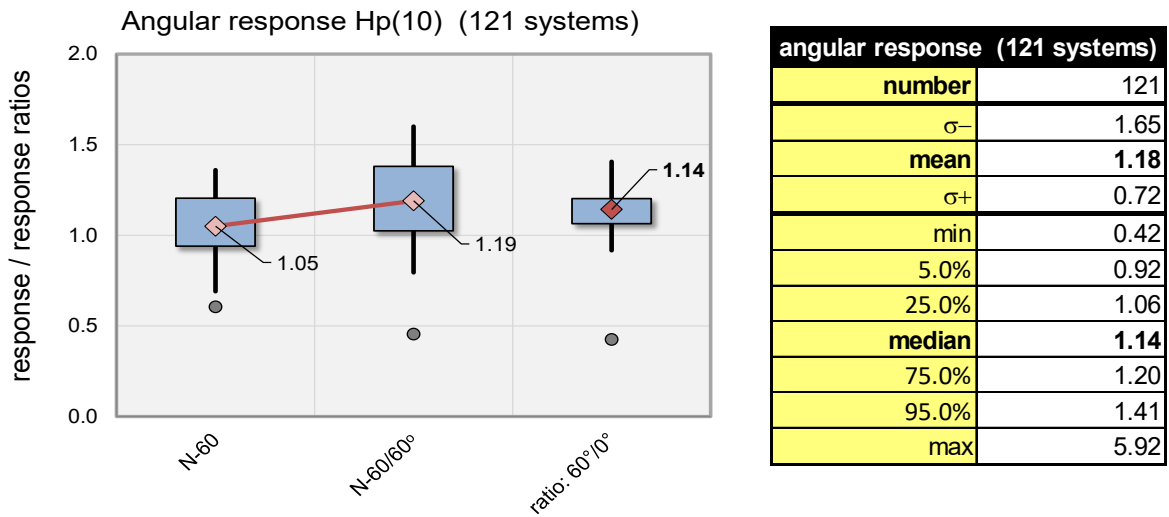


Figure 16: Angular response - all 121 systems

### 3.4 Linearity

Linearity was tested (using S-Cs and S-Co) through a range, from 2 mSv to 400 mSv, without varying any other parameter. L: low dose; M: medium dose; H: high dose.

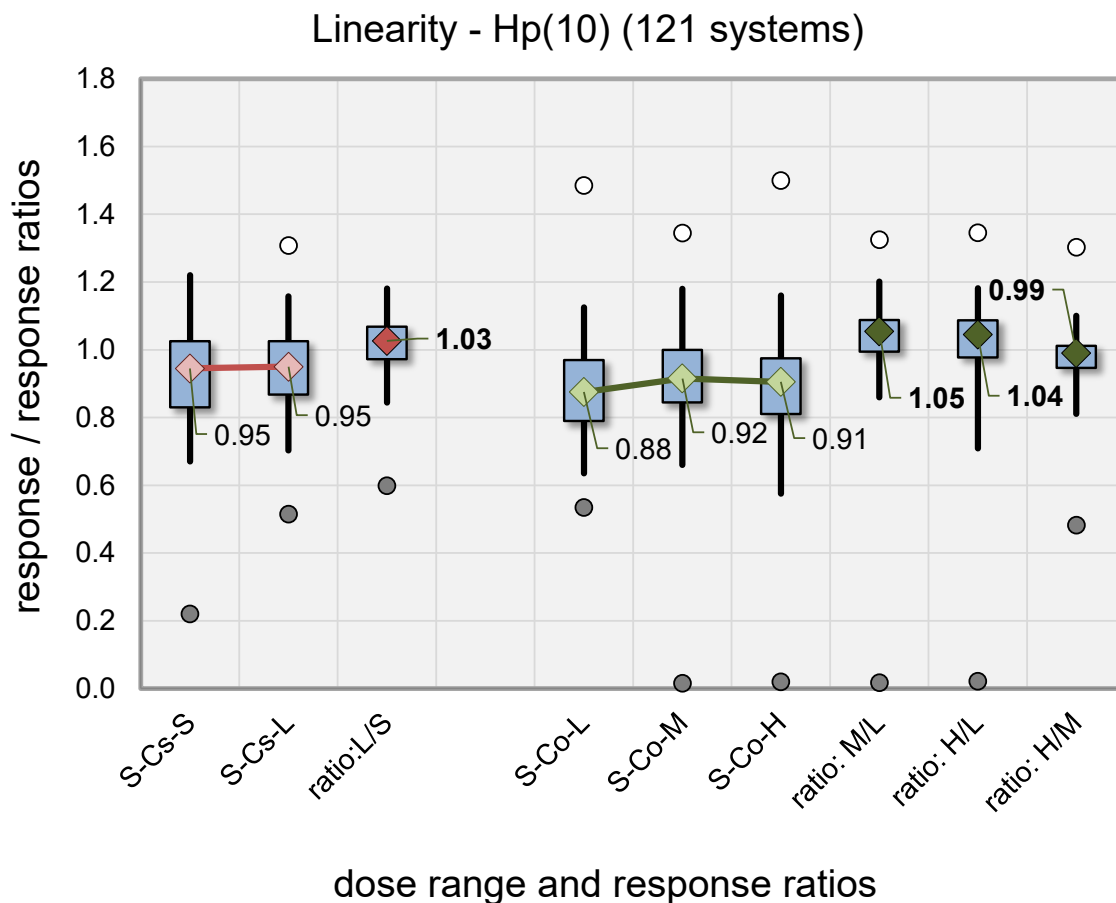


Figure 17: Linearity for  $H_p(10)$

### 3.5 Response values as a function of reference doses

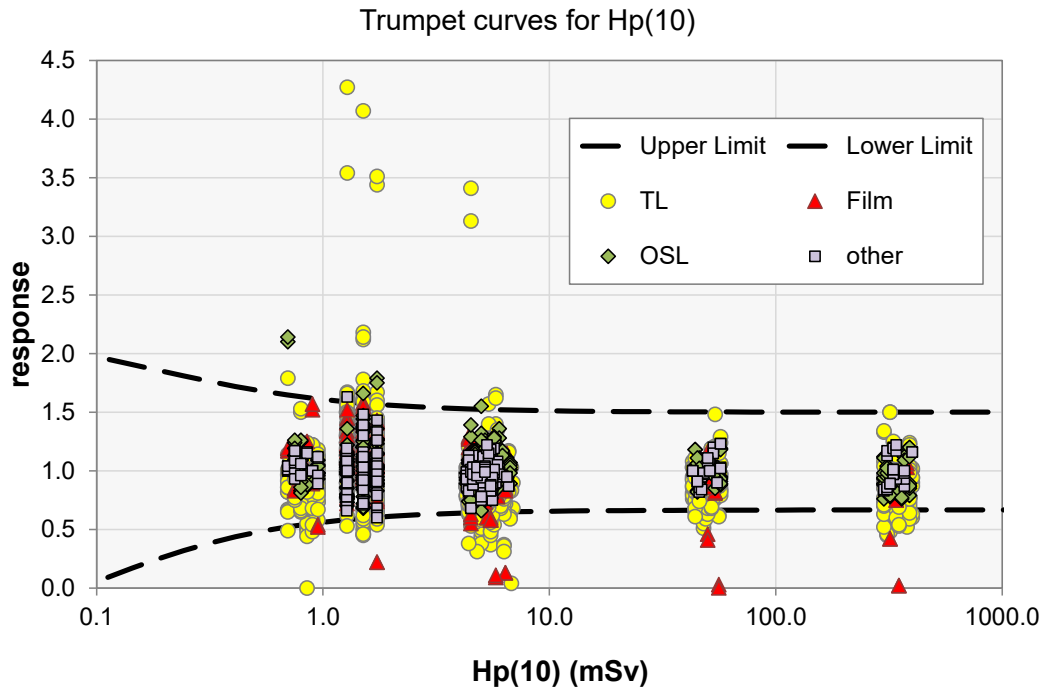


Figure 18: Response values for  $H_p(10)$  as a function of reference dose. The dashed lines represent the trumpet curves ISO14146:2000

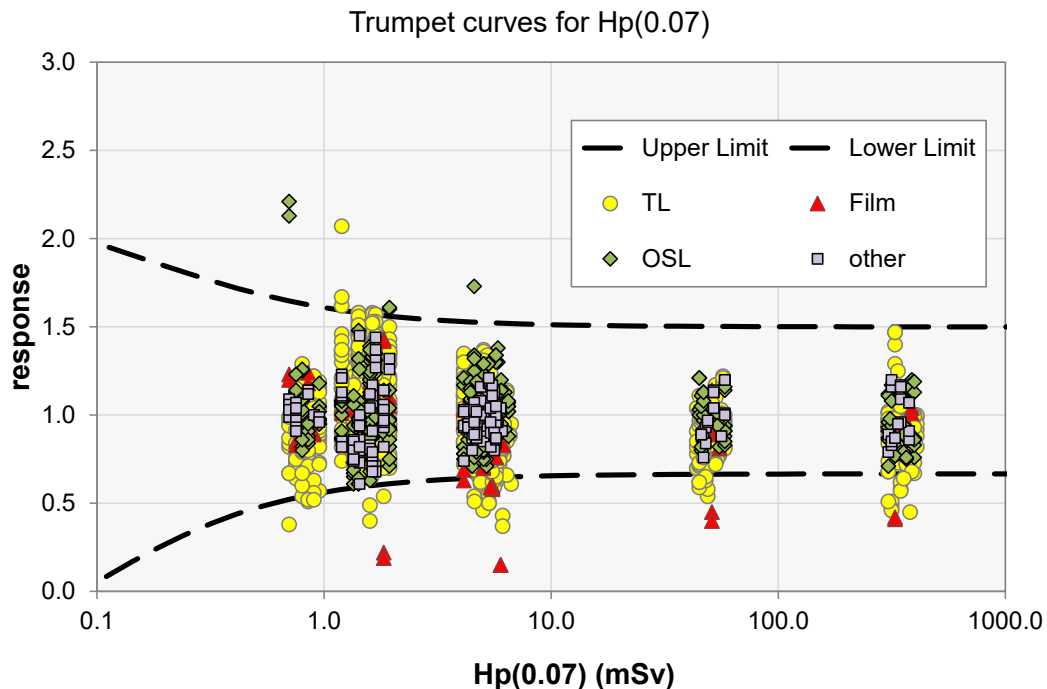


Figure 19: Response values for  $H_p(0.07)$  as a function of reference dose. The dashed lines represent the trumpet curves ISO14146:2000

### 3.6 Outliers (defining outliers as response values outside of the trumpet curves)

Table 7: Outliers (by radiation quality)

Outliers / Trumpet						
Quantity	Quality	TL	Film	OSL	other	All
Hp(10)	N-60	5%	0%	0%	4%	4%
	N-60/60°	12%	6%	8%	4%	10%
	W-110	5%	17%	3%	0%	5%
	S-Cs	5%	13%	2%	0%	4%
	S-Co	8%	19%	0%	0%	7%
	N-150/60°	4%	11%	0%	0%	3%
	N-150/Cs-137	7%	22%	0%	0%	7%
	All	6%	14%	2%	1%	6%
Outliers / Trumpet						
Quantity	Quality	TL	Film	OSL	other	All
Hp(0.07)	N-60	3%	0%	0%	0%	2%
	N-60/60°	3%	0%	6%	0%	3%
	W-110	1%	10%	3%	0%	2%
	S-Cs	5%	13%	2%	0%	4%
	S-Co	8%	20%	0%	0%	6%
	N-150/60°	3%	20%	0%	0%	3%
	N-150/Cs-137	4%	20%	0%	0%	4%
	All	5%	14%	1%	0%	4%

Table 8: Number of Outliers (approximately 1 out of 10 is accepted)

Hp(10)															
# outliers (sys)	0	1	2	3	4	6	7	10	11	12	16	18	0-2	> 2	
TL	56%	18%	11%	2%	5%	1%	1%	2%	-	1%	-	1%	85%	15%	
Film	78%	-	-	-	-	-	-	-	11%	-	11%	-	78%	22%	
OSL	83%	6%	6%	6%	-	-	-	-	-	-	-	-	94%	6%	
other	83%	17%	-	-	-	-	-	-	-	-	-	-	100%	0%	
All	64%	15%	8%	2%	3%	1%	1%	2%	1%	1%	1%	1%	88%	12%	
		88%			12%										

Hp(0.07)														
# outliers (sys)	0	1	2	3	4	5	6	10	13	15	0-2	> 2		
TL	72%	8%	3%	8%	2%	2%	2%	2%	2%	-	83%	17%		
Film	80%	-	-	-	-	-	-	-	-	20%	80%	20%		
OSL	88%	-	6%	6%	-	-	-	-	-	-	94%	6%		
other	100%	-	-	-	-	-	-	-	-	-	100%	0%		
All	78%	5%	3%	7%	1%	1%	1%	1%	1%	1%	87%	13%		
		87%			13%									

### 3.7 Results for individual systems

This section presents results for individual systems separately (but anonymously). Individual systems are represented with a randomly assigned "reporting number". This number has no relation to the participant number as used by the organizer for keeping track of correspondence etc.

Response values for each individual system are shown in Figures 20 and 21. These show that most outliers are associated with a relatively small number of systems. Some systems show a significant bias, others have a greater than normal spread of results.

It should be noted, as in previous ICs, that there are examples of excellent performances within each type of dosimetry system.

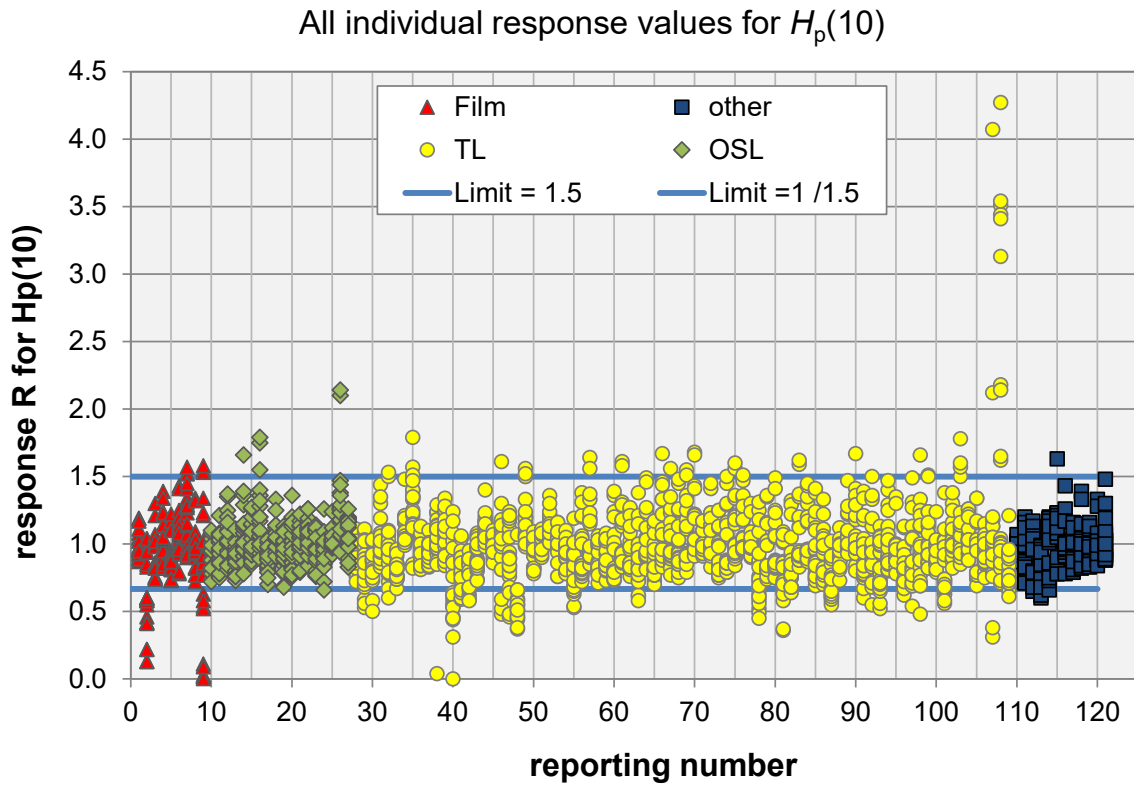


Figure 20: Response values for  $H_p(10)$  for each individual participant system

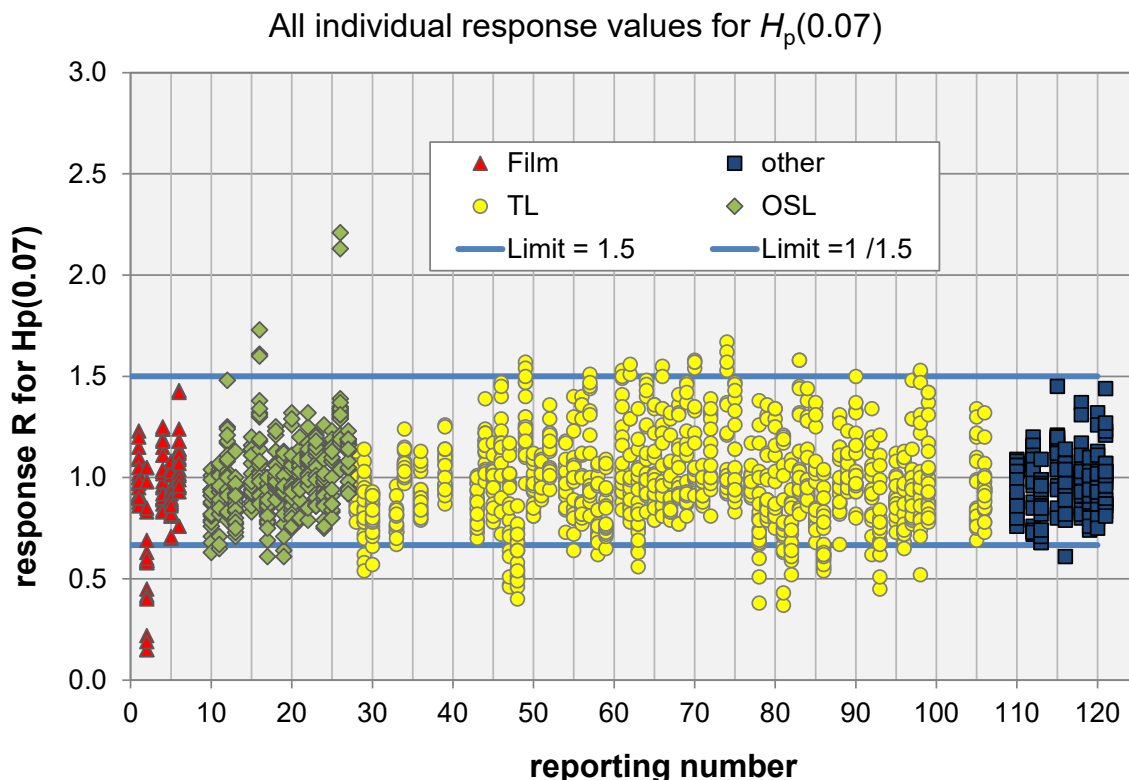


Figure 21: Response values for Hp(0.07) for each individual participant system

For each participating system a separate datasheet was prepared summarizing all the results and the underlying data. Each sheet shows the data reported by the irradiation laboratory and by the participant, and the response value calculated from these values (separately for each irradiation). Data has been combined for the radiation qualities and some statistical quantities are also provided. Two diagrams have been included in the datasheet to show the response values in the trumpet curve and the response values for the different radiation qualities.

These sheets have been prepared primarily to enable the participants to analyse their own results and to compare these with the results of the other participants. The individual results will not be analysed in further detail in this report. The datasheets for all participants can be inspected in Appendix F.

## 4 Conclusions

EURADOS WG2 carried out IC2018 for whole body dosimeters in photon fields as part of the programme which EURADOS has developed for self-sustained ICs for IMS for external radiation. It has been established that the results from these ICs can assist all participants to demonstrate compliance within their own quality management system, compare their results with other participants and develop action plans for improving their own systems.

IC2018 had 121 participating systems from 100 IMS with participants from 40 countries from around the world. In general, the participants showed a very satisfactory performance with the median of all response values very close to unity. This finding confirms that, in general, the calibration procedures, especially the traceability to standard metrology laboratories, meet the required standards without any general bias. However, the results, in particular the outliers, also indicate that a small number of IMS could improve the quality of their systems by reviewing their calibration procedures.

From the statistical overviews of the results, the reports provided by the irradiation laboratories and the remarks received from the participants, it can be concluded that the IC exercise was successful and that there were no significant issues encountered by the IC organization or the irradiation laboratories during the execution of the exercise.

Specific additional information was supplied by the participants which allowed a more detailed analysis of the results with respect to detector type. The observed characteristics are generally in agreement with results established in scientific literature.

The high number of participating systems confirms that there is a significant demand for regular, internationally organized, ICs and that these are of operational value for individual monitoring services. Therefore, it is planned to continue with this programme of EURADOS ICs.



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## Appendix A: Previous whole body and extremity intercomparisons organised by EURADOS WG2

Intercomparison Type of dosimeter	Systems / IMS / Countries	Dosemeters required / irradiated	Quantities compared	Radiation categories
IC2008 Whole body	62 / 52 / 21	26 / 20	$H_p(10)$ and $H_p(0.07)$	S-Cs, S-Co, N-60(0°,45°), N-150(±45°), N-60+S-Cs
IC2009 <sub>ext</sub> Extremity	59 / 44 / 18	28 / 22	$H_p(0.07)$	S-Cs, N-20, W-80(0°, 60°), N-150, <sup>85</sup> Kr, <sup>90</sup> Sr (0°, 60°)
IC2010 Whole body	85 / 70 / 30	26 / 20	$H_p(10)$ and $H_p(0.07)$	S-Cs, S-Co, N-40(30°), W-110 (45°), N-40+S-Cs, W-250+S-Cs
IC2012 <sub>ph</sub> Whole body	88 / 74 / 30	26 / 16	$H_p(10)$ and $H_p(0.07)$	S-Cs, S-Co, N-60(0°,60°)
IC2012 <sub>n</sub> Whole body neutron	34 / 31 / 18	36 / 24	$H_p(10)$	250 keV neutrons, <sup>252</sup> Cf(0°, 45°), <sup>252</sup> Cf(D <sub>2</sub> O), <sup>252</sup> Cf+shadow cone
IC2014 Whole body	112 / 96 / 35	30 / 20	$H_p(10)$ and $H_p(0.07)$	S-Cs, S-Co, W-80(0°,60°), W-150, RQR7
IC2015 <sub>ext</sub> Extremity	72 / 52 / 22	30 / 22	$H_p(0.07)$	S-Cs, RQR3 (0°,60°) W-80, RQR9, <sup>90</sup> Sr+S-Cs, Kr-85 <sup>90</sup> Sr(0°,60°)
IC2016 Whole body	103 / 86 / 36	30 / 22	$H_p(10)$ and $H_p(0.07)$	S-Cs, S-Co, N-40(0°,60°), N-150 (0°,45°) S-Cs+ <sup>90</sup> Sr
IC2017 <sub>n</sub> Whole body neutron	33 / 32 / 17	40 / 28	$H_p(10)$	<sup>252</sup> Cf (0°,45°), <sup>252</sup> Cf+S-Cs, <sup>241</sup> Am-Be, <sup>252</sup> Cf(D <sub>2</sub> O), <sup>252</sup> Cf+shadow block
IC2018 Whole Body	121 / 100 / 40	34 / 22	$H_p(10)$ and $H_p(0.07)$	S-Cs, S-Co, N-60(0°,60°), N-150(60°) N-150+S-Cs W-110

## Appendix B: List of participants

(Participants sorted alphabetically by country and institute)

Institute	Place	Country	No of Systems
Department of Radiation Protection and Monitoring Network	Tirana	Albania	1
International Atomic Energy Agency	Vienna	Austria	2
MA 39 - Labor für Strahlenschutz	Vienna	Austria	1
Seibersdorf Labor GmbH	Seibersdorf	Austria	2
Belgoprocess	Dessel	Belgium	1
Dosimetrie SCK-CEN	Mol	Belgium	2
Dosimetry Department	Ghent	Belgium	1
Personendosimetrie UZ Leuven	Leuven	Belgium	1
University of Liège, SUCPR	Liège	Belgium	1
Vinçotte Controlatom	Vilvoorde	Belgium	3
Institute for Public Health FBiH	Sarajevo	Bosnia and Herzegovina	1
Public Health Institute of Republic of Srpska	Banja Luka	Bosnia and Herzegovina	1
Control body of type B Individual Dosimetric Control	Kozloduy	Bulgaria	1
Inspection Body Type C "Personal dosimetry" Control Centre	Kozloduy	Bulgaria	1
Laboratories Protecta	Sofia	Bulgaria	1
NCRRP, Dosimetry Control Laboratory	Sofia	Bulgaria	1
Scientific laboratory of radiation protection - Military medical academy	Sofia	Bulgaria	1
Ontario Power Generation	Whitby	Canada	1
Ekoteh Dosimetry Co Ltd	Zagreb	Croatia	1
Institute for Medical Research and Occupational Health	Zagreb	Croatia	1
Ruđer Bošković Institute	Zagreb	Croatia	1
Personnel Dosimetry Laboratory, Nicosia General Hospital	Nicosia	Cyprus	1

Institute	Place	Country	No of Systems
Nuvia Dosimetry	Praha	Czech Republic	1
VF	Cerna Hora	Czech Republic	1
SURO R 45 S007	Praha	Czech Republic	1
SIS PL	Herlev	Denmark	1
DTU Nutech R 102 S 086	Herlev	Denmark	1
Environmental Board, Radiation Safety Department	Tallinn	Estonia	1
North Estonia Medical Centre Measurement Laboratory	Tallinn	Estonia	1
Laboratoire de Dosimétrie de l'IRSN	Croissy-sur-Seine	France	1
LANDAUER	Vélizy-Villacoublay Cedex	France	1
Orano Cycle La Hague Activite Dosimetrie	La Hague	France	1
Service de Dosimétrie - Institut de Physique Nucléaire d'Orsay - C.N.R.S	Cedex	France	1
Helmholtz Zentrum München, Auswertungsstelle	München	Germany	3
Landesanstalt für Personendosimetrie und Strahlenschutz Ausbildung Mecklenburg-Vorpommern	Berlin	Germany	3
Materialprüfungsamt Nordrhein-Westfalen	Dortmund	Germany	1
Mediray Personnel Dosimetry Laboratory	Athens	Greece	1
Personal Dosimetry Departement of Greek Atomic Energy Commissiion	Agia Paraskevi, Attiki	Greece	1
Hungarian Academy of Sciences Centre for Energy Research MTA EK	Budapest	Hungary	1
TLD Personnel Monitoring Services	Tamilnadu	India	1
Scitek	Erbil	Iraq	1
NRCN	Beer-Sheva	Israel	1

Institute	Place	Country	No of Systems
Soreq NRC	Yavne	Israel	2
AOU Careggi	Firenze	Italy	1
Dosimetrie-Service Bozen	Bozen	Italy	1
ENEA Radiation Protection Institute Individual Monitoring Dosimetry Service -	Bologna	Italy	1
European Commission Joint Research Centre Dosimetry Service	Ispra (VA)	Italy	1
L.B. Servizi per le Aziende Srl	Roma	Italy	2
Lavoro e Ambiente srl	Forlì (FC)	Italy	2
MCF Ambiente Srl	Pasian di Prato (Udine)	Italy	1
Nucleonova Srl	Palermo	Italy	1
Servizio di Dosimetria - PoliMI	Milano	Italy	1
Servizio Dooosimetrico Azienda USL Della Romagna	Cesena	Italy	1
Tecnorad s.u.r.l.	Verona	Italy	2
X-Gammaguard	Saronno (VA)	Italy	2
Chiyoda Technol Corporation	Ibaraki	Japan	1
Institute of Occupational Medicine	Obilig	Kosovo	1
Latvian Environment, Geology and Metrology Center	Riga	Latvia	1
Individual Exposure Monitoring Laboratory	Beirut	Lebanon	1
Radiation Protection Centre	Vilnius	Lithuania	1
Ignalina Nuclear Power Plant, Radiation Protection Department Individual dosimetric co	Vilnius	Lithuania	1
Division de la Radioprotection	Luxembourg	Luxembourg	1
IPH – Macedonian Personnel Dosimetry Services	Skopje	Macedonia	1
Ekoteh dosimetry radiation protection	Skopje	Macedonia	1
Center for Ecotoxicological Research	Podgorica	Montenegro	1



Institute	Place	Country	No of Systems
NRG	Arnhem	Netherlands	3
Norwegian Radiation Protection Authority	Oslo	Norway	1
IST-LPSR	Bobadela LRS	Portugal	1
Medical Consult	Torres Vedras	Portugal	1
DOZIMED S.R.L.	Magurele	Romania	1
Dosimetry Laboratory, Nuclear Fuel Plant, Romania R 31	Mioveni	Romania	1
Laboratory for Personal Dosimetry Control	Belgrade	Serbia	1
Vinca Institute of Nuclear Sciences, Radiation and Environmental Protection Department	Belgrade	Serbia	1
X-ray Kosutic – Ekoteh dozimetrija doo	Belgrade	Serbia	1
Jozef Stefan Institute	Ljubljana	Slovenia	1
ZVD	Ljubljana Polje	Slovenia	1
Centro De Dosimetria	Barcelona	Spain	1
Centro Nacional de Dosimetria	Valencia	Spain	1
Centro Nacional de Sanidad Ambiental Laboratorio de Dosimetría	Madrid	Spain	1
CIEMAT External Dosimetry Service	Madrid	Spain	1
Infocitec SL	Madrid	Spain	1
Nuclear Control SL	Madrid	Spain	1
Servicio de Dosimetría Externa ENUSA-Juzbado	Juzbado Salamanca	Spain	1
Dosimetrin, Forsmarks Kraftgrupp AB	Osthammar	Sweden	1
Landauer Nordic Holdings AB	Uppsala	Sweden	1
Ringhals AB	Varobacka	Sweden	1
Dosilab	Köniz	Switzerland	1
Institute of Radiation Physics	CHUV	Switzerland	1
Paul Scherrer Institut	Villigen PSI	Switzerland	3

Institute	Place	Country	No of Systems
Epsilon Landauer Dosemetry Technologies Ind. Trd. Inc	Istanbul	Turkey	1
RADAT Dosimetry Laboratory Services Co.	Ankara	Turkey	1
RADKOR Training Teaching Medical Production Energy Electricity Electronic and Information Technology Ltd. Co.	Ankara	Turkey	1
Turkish Atomic Energy Authority Individual Monitoring Service	Ankara	Turkey	1
Ukrainian Radiation Protection Institute	Kiev	Ukraine	1
AWE	Aldermaston	United Kingdom	2
Berkeley Approved Dosimetry Service	Berkeley	United Kingdom	1
PHE Personal Dosimetry Service	Didcot	United Kingdom	1
Sellafield Ltd Approved Dosimetry Service	Sellafield	United Kingdom	1
Landauer	Glenwood, IL	United States	1
Mirion Technologies (GDS), Inc.	Irvine	United States	3
Total number of IMS/countries/systems	100	40	121

## Appendix C: Example Irradiation Certificate - GAEC

IRRADIATION CERTIFICATE FOR PERSONAL DOSEMETERS  
EEAE-IRCL-Cal. Cert. No: DOS / [REDACTED]

E ERG(D)04 05  
Page 1 of 2



HELLENIC REPUBLIC  
MINISTRY OF EDUCATION & RELIGIOUS AFFAIRS  
GENERAL SECRETARIAT FOR RESEARCH & TECHNOLOGY



Calibrations  
Cert. No 116(ε)



**ΕΕΑΕ** ΕΛΛΗΝΙΚΗ ΕΠΙΤΡΟΠΗ ΑΤΟΜΙΚΗΣ ΕΝΕΡΓΕΙΑΣ  
GREEK ATOMIC ENERGY COMMISSION

IONIZING RADIATION CALIBRATION LABORATORY (IRCL)  
Affiliated to the Hellenic Metrology Institute

IRRADIATION CERTIFICATE No: DOS / [REDACTED]  
Number of Pages: 2  
Date of Issue: 01/08/2018

The following personnel dosimeters from: **EURADOS INTERCOMPARISON PROGRAM**  
System No: [REDACTED]  
have been irradiated at the *Ionizing Radiation Calibration Laboratory of Greek Atomic Energy Commission:*

<b>Personal Dosimeters (PD):</b>	<b>Whole body</b>
<b>Dosimeter Identification:</b>	-
<b>Detection Principle:</b>	-
<b>Irradiation Period:</b>	<b>See below</b>

The Kair reference values have been obtained using the reference/transfer ionization chambers PTW W-32002-LS01 (S/N 69) or FC65-G and the electrometer PTW UNIDOS 10002 (S/N 20314). The LS01 chamber was calibrated in PTB for S-Cs, ISO -Narrow Series during 21-22/09/2015 (PTB, Cal. Cert. No 60123-15/6.25-30/15K). Both FC65-G chamber and electrometer were calibrated at BIPM for S-Co on 06-10-2015 (BIPM, Cal. Cert. No 98).

The irradiation conditions are in accordance to ISO 4037/1-2-3-4 and IEC 62387.

**Irradiation conditions**

<b>Phantom:</b>	ISO water phantom, (30x30x15) cm <sup>3</sup>
<b>Source to PD Distance:</b>	200 cm, depending on required Kair rate
<b>Kair Rate:</b>	S-Cs: 125.7 μGy/min (at 200 cm) N-150: 543.1 μGy/min (at 200 cm) S-Co: 26.55 mGy/min (at 300 cm) S-Co: 1.237 mGy/min (at 300 cm with lead block)
<b>Field Size:</b>	S-Cs: Circular with diameter of 55.6 cm (at 200 cm) S-Co: Rectangular (30x30) cm <sup>2</sup> (at 300 cm) x-rays: Circular with diameter 26.8 cm (at 200 cm)
<b>Build up PMMA:</b>	S-Cs: (0.2 x 30x30) cm <sup>3</sup> S-Co: (0.4 x 30x30) cm <sup>3</sup>
<b>Reference point of PD:</b>	Frontal surface of slab phantom

IRRADIATION CERTIFICATE FOR PERSONNAL DOSEMETERS  
EEAE-IRCL-Cal. Cert. No: DOS / [REDACTED]

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Page 2 of 2

**Environmental conditions during irradiations:**

Temperature	Pressure	Relative Humidity
20.0-22.5 °C	979.0-985.0 hPa	≈ 10 %

**Irradiation Data**

# Dosimeter	Date	Quality	Hp(10) <sup>2</sup> mSv	U % <sup>1</sup>	Hp(0.07) <sup>2</sup> mSv	U % <sup>1</sup>
[REDACTED]-02	23/06/2018	S-Cs	5.10	4.9	5.10	4.9
[REDACTED]-03	23/06/2018	S-Cs	5.10	4.9	5.10	4.9
[REDACTED]-11	23/06/2018	S-Cs	5.10	4.9	5.10	4.9
[REDACTED]-16	23/06/2018	S-Cs	5.10	4.9	5.10	4.9
[REDACTED]-17	10/07/2018	S-Cs	0.95	4.9	0.95	4.9
[REDACTED]-21	10/07/2018	S-Cs	0.95	4.9	0.95	4.9
[REDACTED]-24	21/06/2018	S-Co	360	4.9	366	4.9
[REDACTED]-34	21/06/2018	S-Co	360	4.9	366	4.9
[REDACTED]-04	21/06/2018	S-Co	47.0	4.9	47.8	4.9
[REDACTED]-15	21/06/2018	S-Co	47.0	4.9	47.8	4.9
[REDACTED]-30	09/07/2018	S-Co	5.80	4.9	5.90	4.9
[REDACTED]-33	09/07/2018	S-Co	5.80	4.9	5.90	4.9

# Dosimeter	Date	Quality	Hp(10) <sup>2</sup> mSv	U % <sup>1</sup>	Hp(0.07) <sup>2</sup> mSv	U % <sup>1</sup>
[REDACTED]-05	10/07/2018	S-Cs	3.30	4.9	3.30	4.9
	12/07/2018	N150-0°	2.70	5.1	2.51	5.1
	<b>Total</b>		6.00	7.1	5.81	7.1
[REDACTED]-06	10/07/2018	S-Cs	3.30	4.9	3.30	4.9
	12/07/2018	N150-0°	2.70	5.1	2.51	5.1
	<b>Total</b>		6.00	7.1	5.81	7.1

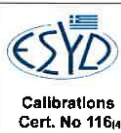
<sup>1</sup>U= uncertainty 95% confidence level (k=2)

<sup>2</sup>The conversion coefficients  $h_{p,k}(10;N,a)$ ,  $h_{p,k}(0.07;N,a)$ ,  $h_{p,k}(10;S,a)$  from ISO 4037-3.  
The conversion coefficient,  $h_{p,k}(0.07;S,a)$  from IEC 62387.

Background dosimeters: [REDACTED]


Irradiations performed by:

Boziari A., Medical Physicist  
Konstantinou P., Technician  
Askounis P., Physicist



This certificate is issued in accordance with the requirements of ISO 17025. It provides traceability of measurements to recognized national standards laboratories. The HIRCL/GAEC is a member of the IAEA/WHO Secondary Standard Dosimetry Laboratory Network. This certificate may not be reproduced other than in full, except with the prior written approval of the HIRCL/GAEC

# Appendix D: Example Irradiation Certificate - VSL



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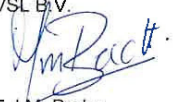
## CERTIFICATE OF IRRADIATION

Number [REDACTED]  
Page 1 of 6


  

Applicant	European Radiation Dosimetry Group e.V. IC2018 <sub>ph</sub> organisation group
Participant	System identification: [REDACTED]
Subject	EURADOS Intercomparison IC2018 <sub>ph</sub> Photon irradiation of personal whole body dosimeters in the quantity personal dose equivalent.
Submitted	[REDACTED] Identification [REDACTED] [REDACTED] have been delivered to VSL. 8 for irradiation and 5 for spare or background.
Irradiation plan and period of storage	The personal whole body dosimeters were irradiated in the quantity personal dose equivalent according to the EURADOS IC2018 <sub>ph</sub> irradiation plan. An overview of the irradiation plan and a description of the irradiation method are given on the following pages of this certificate. Between May 30, 2018 (date of arrival) and August 1, 2018 (date of dispatch) all dosimeters were stored in the control room of the laboratory. During storage and irradiation, the environmental conditions were as follows: temperature between 19 °C and 21 °C, atmospheric pressure between 99 kPa and 103 kPa and relative humidity between 45 % and 55 %. During storage the background radiation dose rate (Cs-137 ambient dose equivalent) in the control room varied between 90 nSv/h and 120 nSv/h.
Date of irradiation	See table 3 of this certificate.
Result	The results of the irradiations are shown on page 6 of this certificate. The reported uncertainty of measurement is based on the standard uncertainty of measurement multiplied by a coverage factor $k = 2$ , which for a normal distribution corresponds to a coverage probability of approximately 95 %. The standard uncertainty of measurement has been determined in accordance with the GUM 'Evaluation of measurement data - Guide to the expression of uncertainty in measurement'.
Traceability	The results of the irradiation services are traceable to primary and/or (inter)nationally accepted measurement standards.

Delft, 11 January 2019  
VSL B.V.



F.J.M. Bader  
Allround Metrologist



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I www.vsl.nl

This certificate is issued under the provision that no liability is accepted and that the applicant gives warranty for each responsibility against third parties.

Reproduction of the complete certificate is permitted. Parts of this certificate may only be reproduced after written permission.



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## CERTIFICATE OF IRRADIATION

Number   
Page 2 of 6

### Irradiation plan

The irradiation plan was in accordance with the applicant. The irradiations of the dosimeters were carried out on the ISO 4037 water slab phantom and were according to the international standards ISO 4037-1, ISO 4037-3 and ISO 29661.

ISO 29661:2012(E)	Reference radiation fields for radiation protection – Definitions and fundamental concepts.
ISO 29661:2012/Amd.1:2015(E)	Reference radiation fields for radiation protection – Definitions and fundamental concepts. AMENDMENT 1: Reference point of personal dosimeters.
ISO 4037-1:1996(E)	X and gamma reference radiation for calibrating dosimeters and doserate meters and for determining their response as a function of photon energy – Part 1: Radiation characteristics and production methods.
ISO 4037-3:1999(E)	X and gamma reference radiation for calibrating dosimeters and doserate meters and for determining their response as a function of photon energy – Part 3: Calibration of area and personal dosimeters and the measurement of the response as a function of energy and angle of incidence.

**Table 1: Irradiation plan**

Radiation type	Radiation quality	Angle of incidence, $\alpha$	Short name for radiation quality	Number of dosimeters	$H_p(10)$ nominal mSv
Photon	N-60	0°	N-60(0°)	2	1.25 – 1.75
Photon	N-60	60°	N-60(60°)	2	1.25 – 1.75
Photon	W-110	0°	W-110(0°)	2	4.5 – 5.5
Photon	N-150	60°	N-150(60°)	2	1.25 – 1.75

### Radiation facilities

The x-rays were generated by a constant potential high voltage generator equipped with an x-ray tube with an inherent filtration of 3 mm Be and with a W-anode (20°). The added filtration is excluding the inherent filtration of the x-ray tube and the air-path between the x-ray tube and the reference point of the dosimeter. The first HVL and calibration of the HV were determined from the measured x-ray spectra by a calibrated HPGe-spectrometer. The uncertainty in the determination of the HV is 1.2 %. The quantity air-kerma was realized with the VSL primary air-kerma standard (free-air-chamber) with an uncertainty of 1.0 %.



# CERTIFICATE OF IRRADIATION

Number XXXXXXXXXX  
Page 3 of 6

**Table 2: Characteristics radiation qualities**

The source-detector-distance (*SDD*) is the distance between the reference point of the x-ray tube and the front surface of the used ISO 4037 water slab phantom. The beam size is the free-in-air diameter of the radiation field at *SDD*.  $E_{\text{mean}}$  and the conversion coefficients,  $h_{p,k}(10;E,\alpha)$  and  $h_{p,k}(0.07;E,\alpha)$ , were adopted from ISO 4037-1 and ISO 4037-3, respectively.  $K_a$  is the nominal reference air-kerma rate at the *SDD*.

Radiation quality	HV kV	Added filtration mm	$E_{\text{mean}}$ keV	First HVL mm	<i>SDD</i> cm	Beam size cm
N-60	60	3.90 Al + 0.60 Cu	48	0.24 Cu	420	Ø42
W-110	110	4.01 Al + 2.00 Cu	79	0.95 Cu	420	Ø42
N-150	150	3.90 Al + 2.49 Sn	118	2.36 Cu	420	Ø42
Radiation quality	Angle of incidence, $\alpha$	$h_{p,k}(10;E,\alpha)$ Sv/Gy	$h_{p,k}(0.07;E,\alpha)$ Sv/Gy	$K_{a,\text{reference}}$ mGy/h		
N-60	0°	1.65 ± 4 %	1.55 ± 4 %	6		
	60°	1.27 ± 4 %	1.42 ± 4 %			
W-110	0°	1.87 ± 4 %	1.71 ± 4 %	23		
N-150	60°	1.46 ± 4 %	1.54 ± 4 %	13		

**Determination of the personal dose equivalent**

The personal dose equivalent at 0.07 mm was calculated according to equation 1 and the personal dose equivalent at 10 mm was calculated according to equation 2:

$$H_p(0.07) = K_{a,\text{ref}} \cdot h_{p,k}(0.07;E,\alpha) \cdot \Delta t \tag{1}$$

$$H_p(10) = K_{a,\text{ref}} \cdot h_{p,k}(10;E,\alpha) \cdot \Delta t \tag{2}$$

where:

- $H_p(0.07)$  : is the personal dose equivalent at 0.07 mm tissue, Sv;
- $H_p(10)$  : is the personal dose equivalent at 10 mm tissue, Sv;
- $K_{a,\text{ref}}$  : is the reference air-kerma rate, Gy/s;
- $h_{p,k}(0.07;E,\alpha)$  : is the corresponding conversion coefficient for the photon energy  $E$  and angle of incidence  $\alpha$ , Sv/Gy;
- $h_{p,k}(10;E,\alpha)$  : is the corresponding conversion coefficient for the photon energy  $E$  and angle of incidence  $\alpha$ , Sv/Gy;
- $\Delta t$  : is the irradiation time, s.



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## CERTIFICATE OF IRRADIATION

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### Irradiation set-up

The dosimeters were irradiated with the front surface of the phantom in the point of measurement (specified by the given *SDD* and beam size) in a homogeneous radiation field. Foam spacers were used if necessary according to ISO 29861. Differences between the point of measurement and the dosimeter's reference point are included as an uncertainty contribution in the uncertainty budget. Field inhomogeneity was considered in the uncertainty budget. The mutual influence of dosimeters in a simultaneous irradiation was neglected.

For the irradiations with the angle of incidence  $\alpha$  at  $0^\circ$ , the phantom was positioned perpendicular to the horizontal beam axis with the point of measurement aligned at the beam axis. The dosimeters were vertically mounted on the phantom's front surface perpendicular to the beam axis according to the wearer's position at participant's diagram. See figure 1.

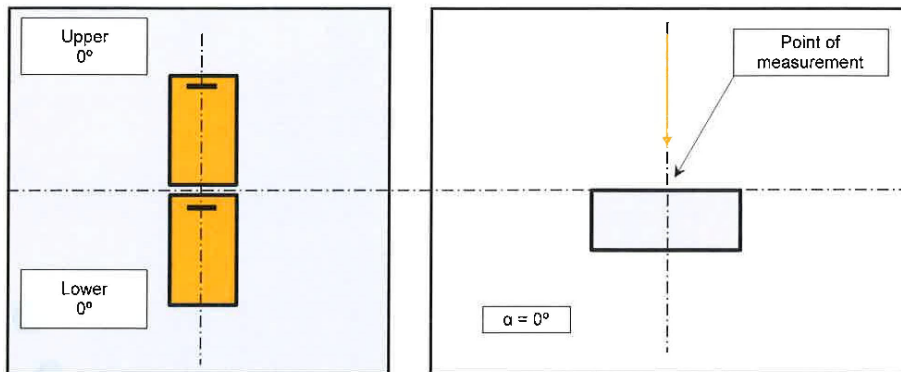
For the irradiations with an angle of incidence  $\alpha$  at  $60^\circ$ , the phantom was horizontally rotated around its point of measurement from the angle of incidence  $\alpha$  at  $0^\circ$  to the angle of incidence  $\alpha$  at  $60^\circ$ . The dosimeters were vertically mounted on the phantom's front surface perpendicular to the angle of incidence  $\alpha$  at  $60^\circ$ .

The upper dosimeter was mounted according to wearer's position at the participant's diagram. The lower dosimeter was mounted upside down according to wearer's position at participant's diagram. The angle of incidence for the upper dosimeter (lowest ID) is defined as  $+60^\circ$  and the angle of incidence for the lower dosimeter (highest ID) is defined as  $-60^\circ$ . See figure 2.

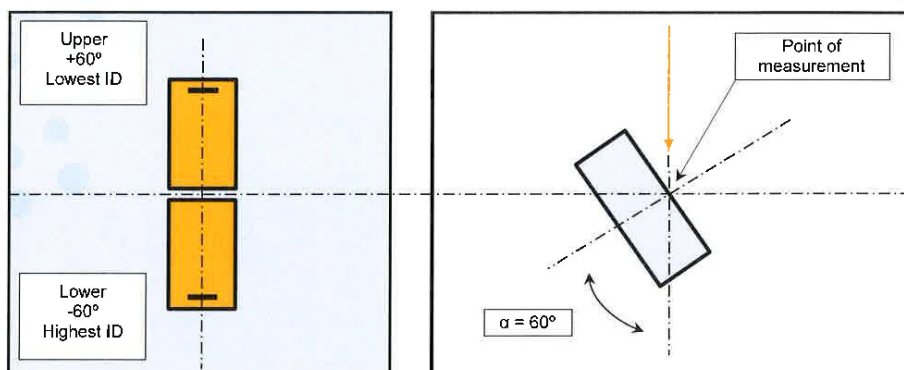


## CERTIFICATE OF IRRADIATION

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**Figure 1:** Schematic view of the setup for irradiation with an angle of incidence  $\alpha$  at  $0^\circ$ . The dosemeters were vertically mounted on the phantom's front surface perpendicular to the beam axis according to the wearer's position at participant's diagram.



**Figure 2:** Schematic view of the setup for irradiation with an angle of incidence  $\alpha$  at  $60^\circ$ . The upper dosemeter was mounted according to wearer's position at the participant's diagram. The lower dosemeter was mounted upside down according to wearer's position at participant's diagram. The angle of incidence for the upper dosemeter (lowest ID) is defined as  $+60^\circ$  and the angle of incidence for the lower dosemeter (highest ID) is defined as  $-60^\circ$ .



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## CERTIFICATE OF IRRADIATION

Number    
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**Table 3: Irradiation results**

Dosemeter #	Radiation Quality	Date of Irradiation 2018	$H_p(10)$ mSv	$H_p(0.07)$ mSv	Remark
6/2018 - 01					
6/2018 - 02					
6/2018 - 03					
6/2018 - 04					
6/2018 - 05					
6/2018 - 06					
6/2018 - 07	N-60(0°)	26-jun	1.73	1.63	
6/2018 - 08					
6/2018 - 09					
6/2018 - 10					
6/2018 - 11					
6/2018 - 12	N-60(60°)	30-jul	1.51	1.68	
6/2018 - 13					
6/2018 - 14					
6/2018 - 15					
6/2018 - 16					
6/2018 - 17					
6/2018 - 18	N-60(60°)	30-jul	1.51	1.68	
6/2018 - 19	N-60(0°)	26-jun	1.73	1.63	
6/2018 - 20	W-110(0°)	5-jul	4.50	4.12	
6/2018 - 21					
6/2018 - 22					
6/2018 - 23					
6/2018 - 24					
6/2018 - 25	N-150(60°)	11-jul	1.73	1.83	
6/2018 - 26					
6/2018 - 27					
6/2018 - 28	N-150(60°)	11-jul	1.73	1.83	
6/2018 - 29	W-110(0°)	5-jul	4.50	4.12	
6/2018 - 30					
6/2018 - 31					
6/2018 - 32					
6/2018 - 33					
6/2018 - 34					

**Table 4: Uncertainty per irradiation for the delivered personal dose equivalent**

Irradiation	N-60(0°)	N-60(60°)	W-110(0°)	N-150(60°)
Uncertainty	6.0 %	6.0 %	5.0 %	5.0 %



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## Information/Informatie VSL Accreditation/Accreditatie

VSL is het Nationaal Metrologisch Instituut (NMI) van Nederland en levert in die hoedanigheid herleidbaarheid van meetresultaten naar internationaal geaccepteerde meetstandaarden. Het bestaan van een gezamenlijk vertrouwen in juiste productspecificaties en productcontrole is van fundamenteel belang om aan internationale, geharmoniseerde wetgeving op het gebied van handel, kwaliteit, gezondheid, veiligheid en milieu te kunnen voldoen. Gestandaardiseerde en gelijkwaardige metingen die herleidbaar zijn naar internationaal geaccepteerde standaarden zijn hierbij essentieel.

De kalibratie- en meetmogelijkheden (CMC's) zijn opgenomen in Appendix C van de wederzijdse erkenningsovereenkomst (MRA), opgesteld door het Internationaal Comité voor Maten en Gewichten (CIPM). In het kader van de MRA, erkennen alle deelnemende instituten de geldigheid van elkaars kalibratie- en meetcertificaten voor de grootheden, bereiken en meetonzekerheden zoals gespecificeerd in Appendix C (details op <http://www.bipm.org>).

VSL is geaccrediteerd door de Raad van Accreditatie (RvA) voor kalibraties tegen de vereisten vastgelegd in de ISO/IEC 17025 (accreditatiescope K999), voor het organiseren van interlaboratoriumonderzoeken tegen de vereisten vastgelegd in de ISO/IEC 17043 (accreditatiescope R006) en voor het produceren van referentiematerialen tegen de vereisten vastgelegd in ISO Guide 34 alsmede tegen de relevante vereisten vastgelegd in de ISO/IEC 17025 (accreditatiescope P002). De accreditaties verzekeren dat aan alle eisen van de betrokken norm(en) is voldaan en dat er op regelmatige basis audits plaatsvinden.



VSL is the National Metrology Institute (NMI) of the Netherlands. As such, it provides direct traceability of measurement results to internationally accepted measurement standards. The existence of mutual confidence in product specifications and product control is of fundamental importance in order to fulfill international, harmonized legislation on trade, quality, health, safety and environment. In this respect, standardized and equivalent measurement units and traceability to internationally accepted standards are essential.

The calibration and measurement capabilities (CMCs) are included in Appendix C of the Mutual Recognition Arrangement (MRA) drawn up by the International Committee for Weights and Measures (CIPM). Under the MRA, all participating institutes recognize the validity of each other's calibration and measurement certificates for the quantities, ranges and measurement uncertainties specified in Appendix C (for details see <http://www.bipm.org>).

VSL is accredited by the Dutch Accreditation Council (RvA) for calibrations against the requirements as laid down in ISO/IEC 17025 (accreditation scope K999), for organizing proficiency tests against the requirements as laid down in ISO/IEC 17043 (accreditation scope R006) and for producing reference materials against the requirements as laid down in ISO Guide 34 and the relevant requirements of the ISO/IEC 17025 (accreditations scope P002). The accreditations ensure that all requirements of the standard(s) involved are met and that audits conducted are on a regular basis.

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## Appendix E: Example "Certificate of Participation"



### Whole body dosimeter intercomparison IC2018ph

## Certificate of Participation

EURADOS Intercomparison 2018 for whole body dosimeters (IC2018ph)

**Certificate Number:** EURADOS-2018- [REDACTED]  
**Number of pages:** 4  
**Date of Issue:** January 15, 2019  
**Participating Institute:** [REDACTED]  
**Dosimetry System:** [REDACTED]  
**Reporting number:** 28 (this anonymous number will be used in further publications)  
**Intercomparison procedure:** The EURADOS Intercomparison 2018 for whole body dosimeters was managed and coordinated on behalf of EURADOS by the WG2 Intercomparison Organization Group (OG). The OG established the irradiation plan and announced the intercomparison, including the range limits of the doses and radiation qualities, in February 2018.  
The IC2018ph on-line platform (IOP) was used by the participants for registration and for all data transfer between the participants and the OG Coordinator. Participants were required to provide details of their dosimeters (including the dosimeter reference point) on the IOP. The participants then sent their dosimeters to the Coordinator (May 2018). The Coordinator checked the correct labelling of the dosimeters and transferred all dosimeters, along with the technical details provided by the participants, to the two irradiation laboratories. The dosimeters were irradiated according to the irradiation plan and returned to the Coordinator (September 2018).  
The Coordinator then returned the dosimeters to the participants and indicated which dosimeters had not been irradiated. The participants were instructed to follow normal routine procedures as far as possible. The participants then sent the results of the dosimeter readings to the Coordinator (November 2018). After receipt of all the participants' results, the Coordinator sent the appropriate irradiation data to each participant.  
**Number of participants:** 101 institutes participated in IC2018ph with a total of 121 systems.  
**Coordinator:** A.McWhan, W.Dobrzynska, S.Eliasik (Cavendish Nuclear Ltd., Berkley ADS, Berkeley, GI13 9FB Gloucestershire, United Kingdom)  
**Intercomparison results:** See the table on pages 2 to 4 of this certificate.  
**Irradiation data:** See the attached certificate of the irradiation laboratories No: [REDACTED]  
**Participant results:** See the attached signed dose report provided by the participant.

On behalf of the intercomparison  
Organization Group:

Andrew McWhan  
Coordinator

On behalf of EURADOS:

Werner Rühm  
Chairperson



Whole body dosimeter intercomparison IC2018ph

Result of the Intercomparison IC2018ph (Dosimetry System [redacted])

EURADOS Dosemeter ID	Participant's Dosemeter ID	Radiation Quality	Quantity	Participant's Value	Reference Value	Ratio
S [redacted] 2018-4	62358	Co-60	$H_p(10)$	45.769 mSv	47.000 mSv	0.97
			$H_p(0.07)$	49.020 mSv	47.800 mSv	1.03
S [redacted] 2018-15	62895	Co-60	$H_p(10)$	47.254 mSv	47.000 mSv	1.01
			$H_p(0.07)$	49.147 mSv	47.800 mSv	1.03
S [redacted] 2018-24	65731	Co-60	$H_p(10)$	373.580 mSv	360.000 mSv	1.04
			$H_p(0.07)$	403.942 mSv	366.000 mSv	1.10
S [redacted] 2018-30	66968	Co-60	$H_p(10)$	5.193 mSv	5.800 mSv	0.90
			$H_p(0.07)$	5.620 mSv	5.900 mSv	0.95
S [redacted] 2018-33	65273	Co-60	$H_p(10)$	5.323 mSv	5.800 mSv	0.92
			$H_p(0.07)$	5.907 mSv	5.900 mSv	1.00
S [redacted] 2018-34	71991	Co-60	$H_p(10)$	352.078 mSv	360.000 mSv	0.98
			$H_p(0.07)$	389.028 mSv	366.000 mSv	1.06
S [redacted] 2018-2	66777	Cs-137	$H_p(10)$	5.170 mSv	5.100 mSv	1.01
			$H_p(0.07)$	5.111 mSv	5.100 mSv	1.00
S [redacted] 2018-3	65835	Cs-137	$H_p(10)$	4.877 mSv	5.100 mSv	0.96
			$H_p(0.07)$	5.123 mSv	5.100 mSv	1.00
S [redacted] 2018-11	61939	Cs-137	$H_p(10)$	4.149 mSv	5.100 mSv	0.81
			$H_p(0.07)$	5.422 mSv	5.100 mSv	1.06
S [redacted] 2018-16	63434	Cs-137	$H_p(10)$	4.708 mSv	5.100 mSv	0.92
			$H_p(0.07)$	5.111 mSv	5.100 mSv	1.00

Radiation Qualities and average photon energy (according to ISO 4037-1):

- Gamma Radiation:
  - S-Cs: 662 keV
  - S-Co: 1250 keV
- X-Rays:
  - N-60: 48 keV
  - W-110: 79 keV
  - N-150: 118 keV

**Whole body dosimeter intercomparison IC2018ph**

**Result of the Intercomparison IC2018ph (Dosimetry System ██████████, continued)**

EURADOS Dosemeter ID	Participant's Dosemeter ID	Radiation Quality	Quantity	Participant's Value	Reference Value	Ratio
S██████/2018-17	67016	Cs-137	$H_p(10)$	1.051 mSv	0.950 mSv	1.11
			$H_p(0.07)$	1.075 mSv	0.950 mSv	1.13
S██████/2018-21	71769	Cs-137	$H_p(10)$	0.967 mSv	0.950 mSv	1.02
			$H_p(0.07)$	0.898 mSv	0.950 mSv	0.95
S██████/2018-5	72148	N-150 & Cs-137	$H_p(10)$	4.765 mSv	6.000 mSv	0.79
			$H_p(0.07)$	4.815 mSv	5.810 mSv	0.83
S██████/2018-6	64462	N-150 & Cs-137	$H_p(10)$	5.097 mSv	6.000 mSv	0.85
			$H_p(0.07)$	5.470 mSv	5.810 mSv	0.94
S██████/2018-25	67572	N-150(60°)	$H_p(10)$	1.490 mSv	1.734 mSv	0.86
			$H_p(0.07)$	1.432 mSv	1.829 mSv	0.78
S██████/2018-28	67244	N-150(60°)	$H_p(10)$	1.414 mSv	1.734 mSv	0.82
			$H_p(0.07)$	1.634 mSv	1.829 mSv	0.89
S██████/2018-7	60654	N-60(0°)	$H_p(10)$	1.426 mSv	1.733 mSv	0.82
			$H_p(0.07)$	1.403 mSv	1.628 mSv	0.86
S██████/2018-19	66339	N-60(0°)	$H_p(10)$	1.546 mSv	1.733 mSv	0.89
			$H_p(0.07)$	1.514 mSv	1.628 mSv	0.93
S██████/2018-12	70954	N-60(60°)	$H_p(10)$	1.351 mSv	1.506 mSv	0.90
			$H_p(0.07)$	1.460 mSv	1.684 mSv	0.87
S██████/2018-18	64472	N-60(60°)	$H_p(10)$	1.352 mSv	1.506 mSv	0.90
			$H_p(0.07)$	1.535 mSv	1.684 mSv	0.91
S██████/2018-20	68488	W-110(0°)	$H_p(10)$	3.227 mSv	4.503 mSv	0.72
			$H_p(0.07)$	3.498 mSv	4.118 mSv	0.85
S██████/2018-29	71822	W-110(0°)	$H_p(10)$	3.427 mSv	4.503 mSv	0.76
			$H_p(0.07)$	3.419 mSv	4.118 mSv	0.83

Radiation Qualities and average photon energy (according to ISO 4037-1):

- **Gamma Radiation:**
  - S-Cs: 662 keV
  - S-Co: 1250 keV
- **X-Rays:**
  - N-60: 48 keV
  - W-110: 79 keV
  - N-150: 118 keV



**Whole body dosimeter intercomparison IC2018ph**

**Result of the Intercomparison IC2018ph (Dosimetry System ██████████, continued)**

EURADOS Dosimeter ID	Participant's Dosimeter ID	Radiation Quality
██████/2018-13	71272	WIR
██████/2018-32	71800	WIR
██████/2018-1	60489	not irradiated
██████/2018-8	71498	not irradiated
██████/2018-9	66839	not irradiated
██████/2018-10	64649	not irradiated
██████/2018-14	65179	not irradiated
██████/2018-22	65928	not irradiated
██████/2018-23	66800	not irradiated
██████/2018-26	60368	not irradiated
██████/2018-27	67139	not irradiated
██████/2018-31	65692	not irradiated

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## Appendix F: Datasheets with results for individual participants

In this annex all individual results are given for all participating systems, identified by their reporting number (see section 2.4), for the dose quantity  $H_p(10)$  and  $H_p(0.07)$ .

For the non-irradiated and wrongly irradiated dosimeters the following terms were used:

NIR not irradiated dosimeter (available for background and transport dose correction by the monitoring service)

WIR wrongly irradiated dosimeter (wrongly irradiated by the irradiation laboratory).

These results were not included in the data sheets.

## Reporting number 1: (Film) for dose quantity Hp(10)

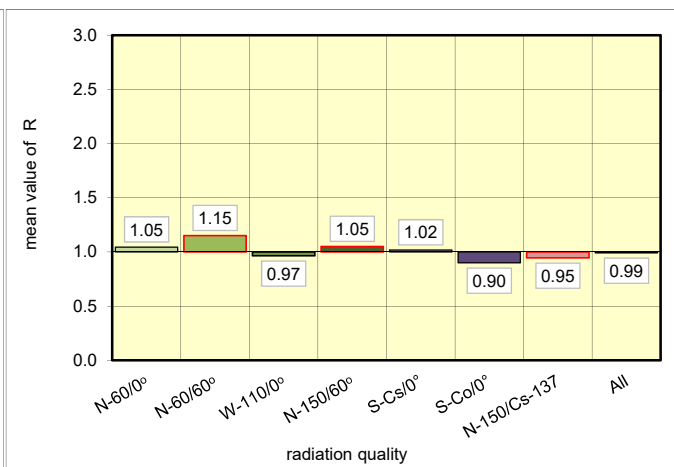
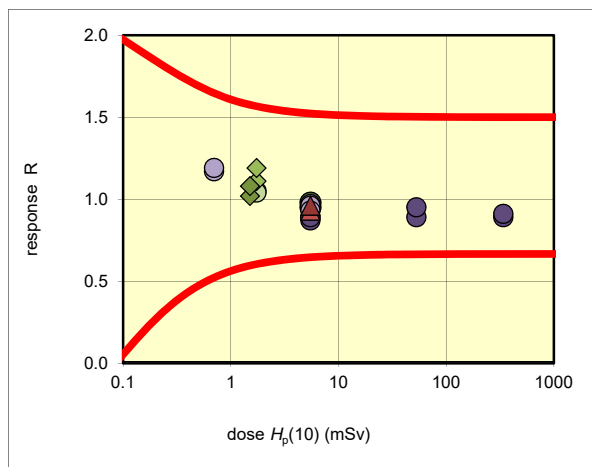
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	15	1.73	1.82	1.05	OK
		32	1.73	1.80	1.04	OK
	N-60/60°	22	1.73	1.93	1.11	OK
		7	1.73	2.06	1.19	OK
	W-110/0°	2	5.50	5.24	0.95	OK
		18	5.50	5.37	0.98	OK
N-150/60°	3	1.51	1.53	1.02	OK	
	21	1.51	1.63	1.08	OK	
gamma	S-Cs-S/0°	34	0.70	0.82	1.17	OK
		31	0.70	0.83	1.19	OK
	S-Cs-L/0°	19	5.50	4.89	0.89	OK
		14	5.50	5.31	0.97	OK
		23	5.50	5.30	0.96	OK
		33	5.50	5.13	0.93	OK
	S-Co-L/0°	17	5.50	4.79	0.87	OK
		11	5.50	4.89	0.89	OK
	S-Co-M/0°	26	53.00	47.39	0.89	OK
		24	53.00	50.41	0.95	OK
S-Co-H/0°	5	340.00	303.25	0.89	OK	
	6	340.00	308.61	0.91	OK	
mixed	N-150/Cs-137	27	5.50	5.12	0.93	OK
		28	5.50	5.29	0.96	OK
NIR	NIR	1		0.00		
	NIR	4		0.00		
	NIR	8		0.00		
	NIR	9		0.00		
	NIR	10		0.00		
	NIR	12		0.00		
	NIR	13		0.00		
	NIR	16		0.00		
	NIR	20		0.00		
	NIR	25		0.00		
	NIR	29		0.00		
NIR	30		0.00			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.05	1.05	1.05	1.04	1%
N-60/60°	2	1.15	1.15	1.19	1.11	5%
W-110/0°	2	0.97	0.97	0.98	0.95	2%
N-150/60°	2	1.05	1.05	1.08	1.02	4%
S-Cs/0°	6	0.97	1.02	1.19	0.89	13%
S-Co/0°	6	0.89	0.90	0.95	0.87	3%
N-150/Cs-137	2	0.95	0.95	0.96	0.93	2%
All	22	0.96	0.99	1.19	0.87	10%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 1: (Film) for dose quantity Hp(0.07)

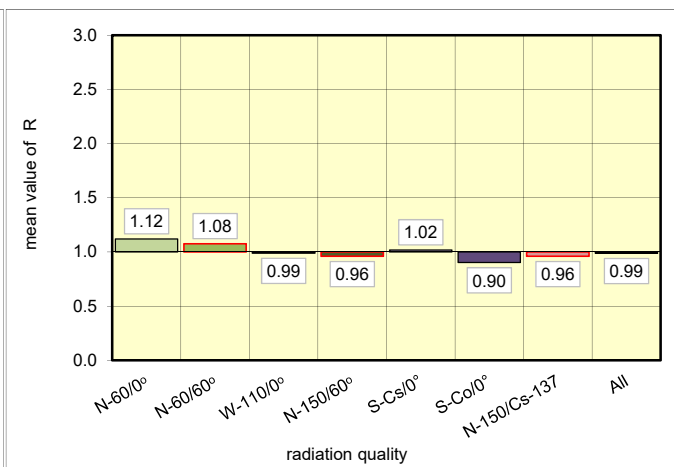
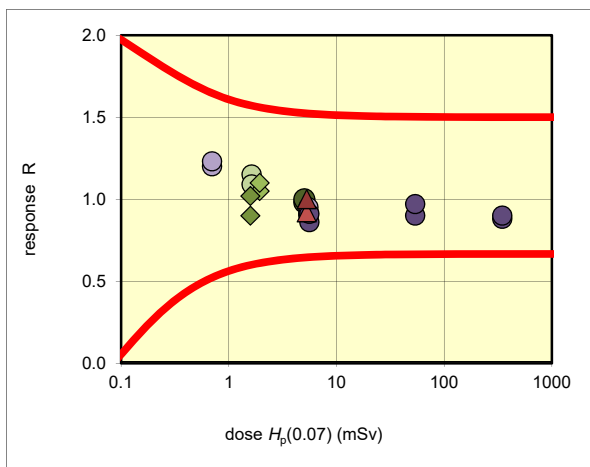
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	15	1.63	1.88	1.15	OK
		32	1.63	1.77	1.09	OK
	N-60/60°	22	1.94	2.03	1.05	OK
		7	1.94	2.14	1.10	OK
	W-110/0°	2	5.03	4.94	0.98	OK
		18	5.03	5.03	1.00	OK
	N-150/60°	3	1.59	1.42	0.90	OK
		21	1.59	1.61	1.02	OK
gamma	S-Cs-S/0°	34	0.70	0.84	1.20	OK
		31	0.70	0.86	1.23	OK
	S-Cs-L/0°	19	5.50	5.02	0.91	OK
		14	5.50	4.93	0.90	OK
		23	5.50	5.06	0.92	OK
		33	5.50	5.24	0.95	OK
	S-Co-L/0°	17	5.60	4.82	0.86	OK
		11	5.60	5.12	0.91	OK
	S-Co-M/0°	26	53.90	48.58	0.90	OK
		24	53.90	52.36	0.97	OK
	S-Co-H/0°	5	346.00	305.28	0.88	OK
		6	346.00	312.15	0.90	OK
mixed	N-150/Cs-137	27	5.30	4.88	0.92	OK
		28	5.30	5.32	1.00	OK
NIR	NIR	1		0.00		
	NIR	4		0.00		
	NIR	8		0.00		
	NIR	9		0.00		
	NIR	10		0.00		
	NIR	12		0.00		
	NIR	13		0.00		
	NIR	16		0.00		
	NIR	20		0.00		
	NIR	25		0.00		
	NIR	29		0.00		
	NIR	30		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.12	1.12	1.15	1.09	4%
N-60/60°	2	1.08	1.08	1.10	1.05	3%
W-110/0°	2	0.99	0.99	1.00	0.98	1%
N-150/60°	2	0.96	0.96	1.02	0.90	9%
S-Cs/0°	6	0.94	1.02	1.23	0.90	15%
S-Co/0°	6	0.90	0.90	0.97	0.86	4%
N-150/Cs-137	2	0.96	0.96	1.00	0.92	6%
All	22	0.96	0.99	1.23	0.86	11%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 2: (Film) for dose quantity Hp(10)

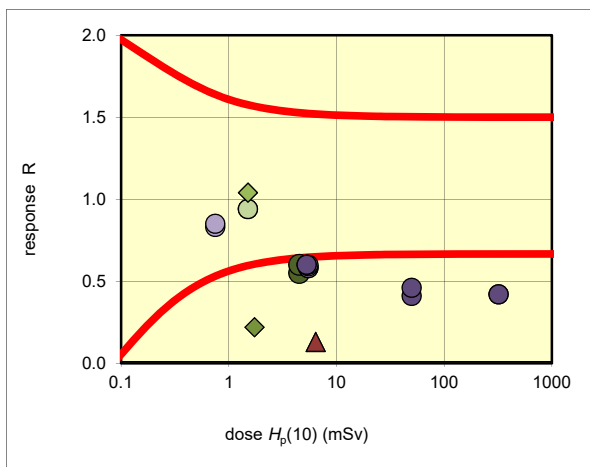
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	28	1.51	1.42	0.94	OK
		31	1.51	1.42	0.94	OK
	N-60/60°	19	1.51	1.57	1.04	OK
		24	1.51	1.57	1.04	OK
	W-110/0°	18	4.50	2.49	0.55	outlier
		3	4.50	2.72	0.60	outlier
N-150/60°	15	1.73	0.38	0.22	outlier	
	22	1.73	0.38	0.22	outlier	
gamma	S-Cs-S/0°	10	0.75	0.62	0.83	OK
		11	0.75	0.64	0.85	OK
	S-Cs-L/0°	17	5.50	3.18	0.58	outlier
		27	5.50	3.18	0.58	outlier
		21	5.50	3.26	0.59	outlier
		29	5.50	3.28	0.60	outlier
	S-Co-L/0°	32	5.30	3.18	0.60	outlier
		34	5.30	3.18	0.60	outlier
	S-Co-M/0°	30	50.00	20.50	0.41	outlier
		14	50.00	22.97	0.46	outlier
S-Co-H/0°	16	320.00	134.16	0.42	outlier	
	26	320.00	135.79	0.42	outlier	
mixed	N-150/Cs-137	6	6.40	0.86	0.13	outlier
		8	6.40	0.86	0.13	outlier
NIR	NIR	1			0.11	
	NIR	2			0.11	
	NIR	4			0.11	
	NIR	5			0.11	
	NIR	7			0.11	
	NIR	9			0.11	
	NIR	12			0.11	
	NIR	13			0.11	
	NIR	20			0.11	
	NIR	23			0.11	
	NIR	25			0.11	
	NIR	33			0.11	

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

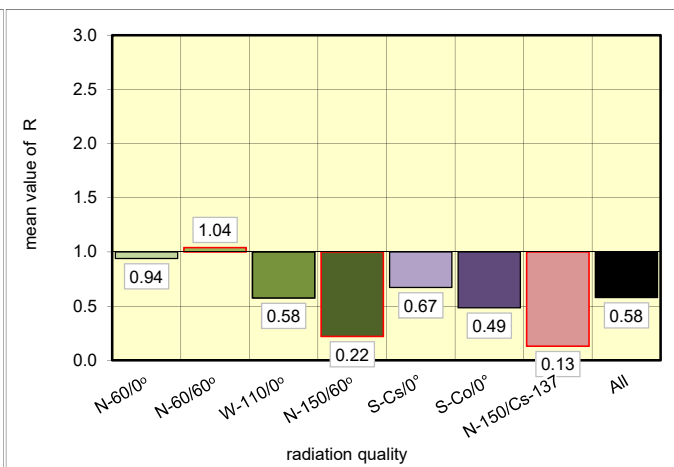
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.94</b>	0.94	0.94	0.94	0%
N-60/60°	2	<b>1.04</b>	1.04	1.04	1.04	0%
W-110/0°	2	<b>0.58</b>	0.58	0.60	0.55	6%
N-150/60°	2	<b>0.22</b>	0.22	0.22	0.22	0%
S-Cs/0°	6	<b>0.60</b>	0.67	0.85	0.58	19%
S-Co/0°	6	<b>0.44</b>	0.49	0.60	0.41	19%
N-150/Cs-137	2	<b>0.13</b>	0.13	0.13	0.13	0%
<b>All</b>	<b>22</b>	<b>0.59</b>	<b>0.58</b>	<b>1.04</b>	<b>0.13</b>	<b>47%</b>

outliers: 16 of 22

fraction of outliers: 73%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 2: (Film) for dose quantity $H_p(0.07)$

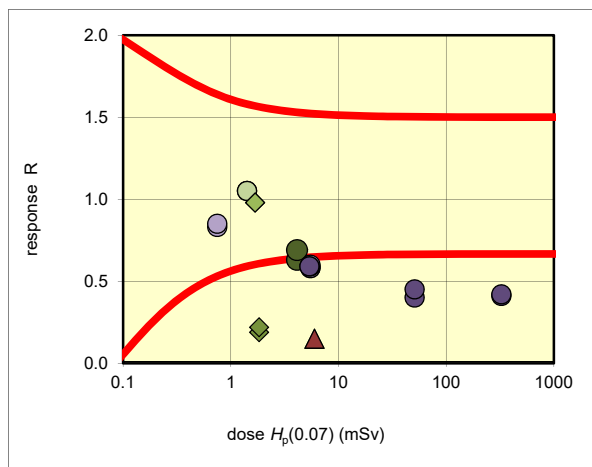
true values reported by the irradiating laboratory				values reported by participant	results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	28	1.42	1.49	1.05	OK
		31	1.42	1.49	1.05	OK
	N-60/60°	19	1.68	1.65	0.98	OK
		24	1.68	1.65	0.98	OK
	W-110/0°	18	4.12	2.61	0.63	outlier
		3	4.12	2.86	0.69	OK
N-150/60°	15	1.83	0.35	0.19	outlier	
	22	1.83	0.40	0.22	outlier	
gamma	S-Cs-S/0°	10	0.75	0.62	0.83	OK
		11	0.75	0.64	0.85	OK
	S-Cs-L/0°	17	5.50	3.18	0.58	outlier
		27	5.50	3.18	0.58	outlier
		21	5.50	3.26	0.59	outlier
		29	5.50	3.28	0.60	outlier
	S-Co-L/0°	32	5.39	3.18	0.59	outlier
		34	5.39	3.18	0.59	outlier
	S-Co-M/0°	30	50.90	20.50	0.40	outlier
		14	50.90	22.97	0.45	outlier
S-Co-H/0°	16	326.00	134.16	0.41	outlier	
	26	326.00	135.79	0.42	outlier	
mixed	N-150/Cs-137	6	5.98	0.90	0.15	outlier
		8	5.98	0.90	0.15	outlier
NIR	NIR	1		0.13		
	NIR	2		0.13		
	NIR	4		0.13		
	NIR	5		0.13		
	NIR	7		0.13		
	NIR	9		0.13		
	NIR	12		0.13		
	NIR	13		0.13		
	NIR	20		0.13		
	NIR	23		0.13		
	NIR	25		0.13		
	NIR	33		0.13		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

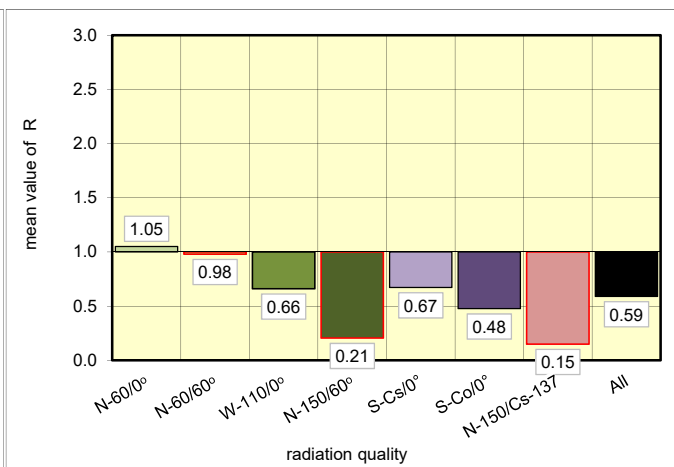
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.05</b>	1.05	1.05	1.05	0%
N-60/60°	2	<b>0.98</b>	0.98	0.98	0.98	0%
W-110/0°	2	<b>0.66</b>	0.66	0.69	0.63	6%
N-150/60°	2	<b>0.21</b>	0.21	0.22	0.19	10%
S-Cs/0°	6	<b>0.60</b>	0.67	0.85	0.58	19%
S-Co/0°	6	<b>0.44</b>	0.48	0.59	0.40	19%
N-150/Cs-137	2	<b>0.15</b>	0.15	0.15	0.15	0%
<b>All</b>	<b>22</b>	<b>0.59</b>	<b>0.59</b>	<b>1.05</b>	<b>0.15</b>	<b>48%</b>

outliers: 15 of 22

fraction of outliers: 68%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 3: (Film) for dose quantity Hp(10)

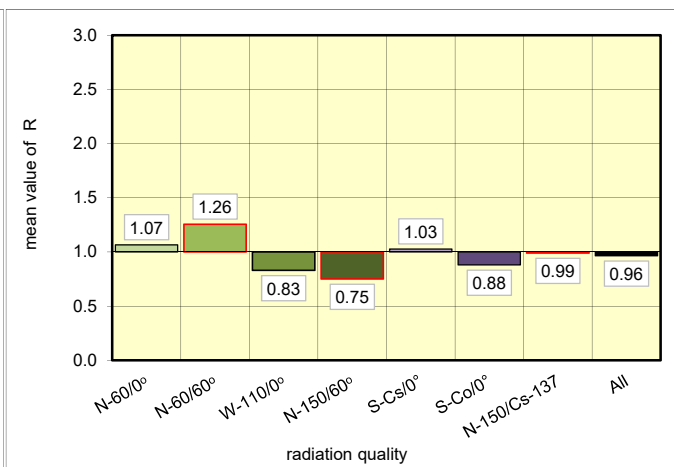
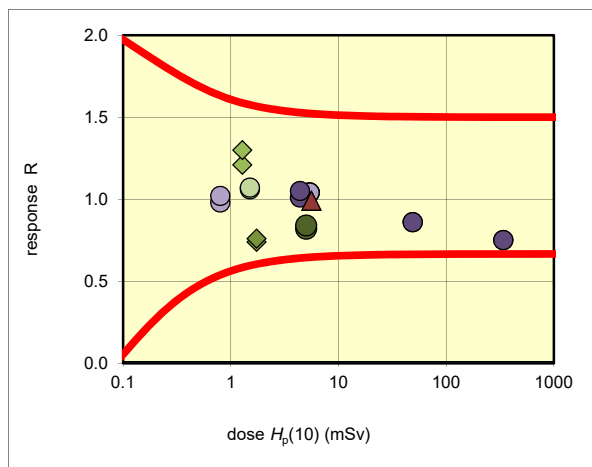
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	14	1.51	1.60	1.06	OK
		25	1.51	1.61	1.07	OK
	N-60/60°	8	1.28	1.55	1.21	OK
		26	1.28	1.66	1.30	OK
	W-110/0°	23	5.00	4.10	0.82	OK
		31	5.00	4.21	0.84	OK
	N-150/60°	2	1.73	1.29	0.74	OK
		18	1.73	1.31	0.76	OK
gamma	S-Cs-S/0°	32	0.80	0.78	0.98	OK
		33	0.80	0.82	1.02	OK
	S-Cs-L/0°	9	5.40	5.62	1.04	OK
		10	5.40	5.61	1.04	OK
		20	5.40	5.62	1.04	OK
		21	5.40	5.62	1.04	OK
	S-Co-L/0°	15	4.40	4.45	1.01	OK
		5	4.40	4.62	1.05	OK
	S-Co-M/0°	12	49.00	42.20	0.86	OK
		24	49.00	42.20	0.86	OK
S-Co-H/0°	11	340.00	256.00	0.75	OK	
	22	340.00	256.00	0.75	OK	
mixed	N-150/Cs-137	6	5.60	5.53	0.99	OK
		16	5.60	5.57	0.99	OK
NIR	NIR	1		0.30		
	NIR	3		0.33		
	NIR	4		0.30		
	NIR	7		0.33		
	NIR	13		0.30		
	NIR	17		0.26		
	NIR	19		0.29		
	NIR	27		0.30		
	NIR	28		0.32		
	NIR	29		0.34		
	NIR	30		0.30		
	NIR	34		0.33		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.07	1.07	1.07	1.06	1%
N-60/60°	2	1.26	1.26	1.30	1.21	5%
W-110/0°	2	0.83	0.83	0.84	0.82	2%
N-150/60°	2	0.75	0.75	0.76	0.74	2%
S-Cs/0°	6	1.04	1.03	1.04	0.98	2%
S-Co/0°	6	0.86	0.88	1.05	0.75	14%
N-150/Cs-137	2	0.99	0.99	0.99	0.99	0%
All	22	1.00	0.96	1.30	0.74	16%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 4: (Film) for dose quantity $H_p(10)$

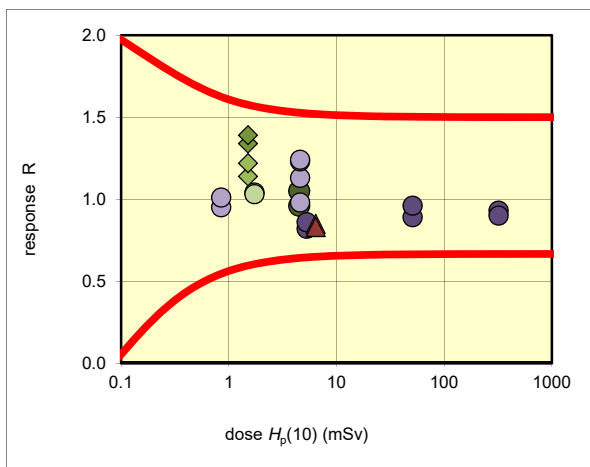
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	25	1.73	1.81	1.04	OK
		28	1.73	1.79	1.03	OK
	N-60/60°	4	1.51	1.72	1.14	OK
		7	1.51	1.83	1.22	OK
	W-110/0°	13	4.50	4.31	0.96	OK
		10	4.50	4.71	1.05	OK
	N-150/60°	9	1.51	2.01	1.34	OK
		24	1.51	2.10	1.39	OK
gamma	S-Cs-S/0°	11	0.85	0.81	0.95	OK
		2	0.85	0.86	1.01	OK
	S-Cs-L/0°	20	4.60	4.49	0.98	OK
		22	4.60	5.19	1.13	OK
		30	4.60	5.65	1.23	OK
		27	4.60	5.72	1.24	OK
	S-Co-L/0°	34	5.30	4.33	0.82	OK
		32	5.30	4.56	0.86	OK
	S-Co-M/0°	6	51.00	45.22	0.89	OK
		26	51.00	48.85	0.96	OK
	S-Co-H/0°	16	320.00	296.63	0.93	OK
		19	320.00	287.52	0.90	OK
mixed	N-150/Cs-137	14	6.40	5.42	0.85	OK
		15	6.40	5.31	0.83	OK
NIR	1			1.00		
	3			1.00		
	5			1.00		
	8			1.00		
	12			1.00		
	17			1.00		
	18			1.00		
	21			1.00		
	23			1.00		
	29			1.00		
	31			1.00		
	33			1.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

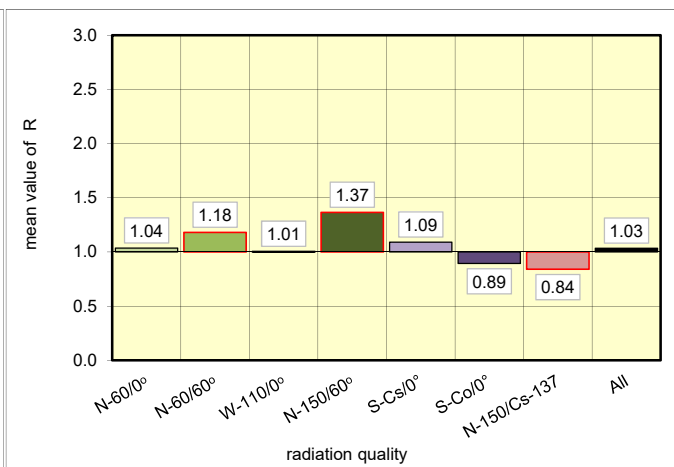
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.04	1.04	1.04	1.03	1%
N-60/60°	2	1.18	1.18	1.22	1.14	5%
W-110/0°	2	1.01	1.01	1.05	0.96	6%
N-150/60°	2	1.37	1.37	1.39	1.34	3%
S-Cs/0°	6	1.07	1.09	1.24	0.95	12%
S-Co/0°	6	0.90	0.89	0.96	0.82	6%
N-150/Cs-137	2	0.84	0.84	0.85	0.83	2%
<b>All</b>	<b>22</b>	<b>1.00</b>	<b>1.03</b>	<b>1.39</b>	<b>0.82</b>	<b>16%</b>

**outliers: 0 of 22**

**Fraction of outliers: 0%**



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018



## Reporting number 4: (Film) for dose quantity Hp(0.07)

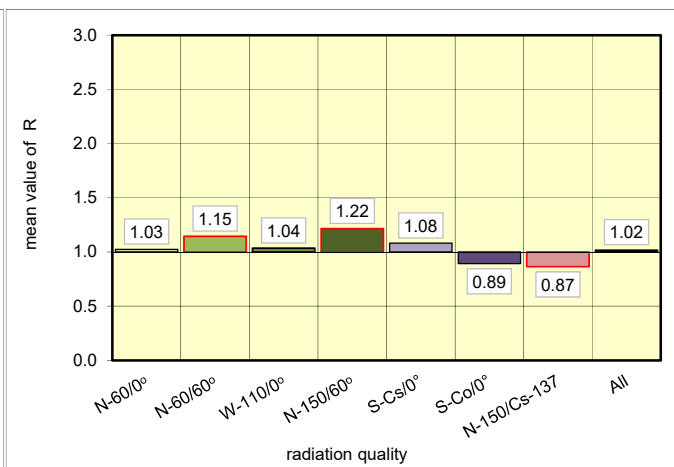
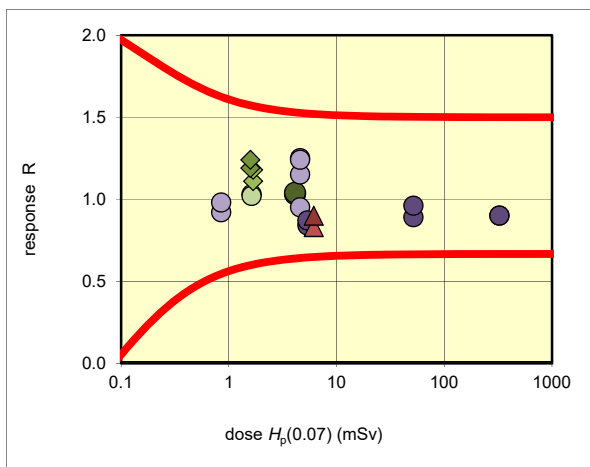
true values reported by the irradiating laboratory				values reported by participant	results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	25	1.63	1.68	1.03	OK
		28	1.63	1.66	1.02	OK
	N-60/60°	4	1.68	1.87	1.11	OK
		7	1.68	1.99	1.18	OK
	W-110/0°	13	4.12	4.24	1.03	OK
		10	4.12	4.29	1.04	OK
	N-150/60°	9	1.59	1.89	1.19	OK
		24	1.59	1.97	1.24	OK
gamma	S-Cs-S/0°	11	0.85	0.78	0.92	OK
		2	0.85	0.83	0.98	OK
	S-Cs-L/0°	20	4.60	4.37	0.95	OK
		22	4.60	5.28	1.15	OK
		30	4.60	5.74	1.25	OK
		27	4.60	5.72	1.24	OK
	S-Co-L/0°	34	5.39	4.51	0.84	OK
		32	5.39	4.67	0.87	OK
	S-Co-M/0°	6	51.90	46.01	0.89	OK
		26	51.90	49.71	0.96	OK
	S-Co-H/0°	16	326.00	292.58	0.90	OK
		19	326.00	294.04	0.90	OK
mixed	N-150/Cs-137	14	6.16	5.10	0.83	OK
		15	6.16	5.52	0.90	OK
NIR	NIR	1		1.00		
	NIR	3		1.00		
	NIR	5		1.00		
	NIR	8		1.00		
	NIR	12		1.00		
	NIR	17		1.00		
	NIR	18		1.00		
	NIR	21		1.00		
	NIR	23		1.00		
	NIR	29		1.00		
	NIR	31		1.00		
	NIR	33		1.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.03	1.03	1.03	1.02	1%
N-60/60°	2	1.15	1.15	1.18	1.11	4%
W-110/0°	2	1.04	1.04	1.04	1.03	1%
N-150/60°	2	1.22	1.22	1.24	1.19	3%
S-Cs/0°	6	1.07	1.08	1.25	0.92	14%
S-Co/0°	6	0.90	0.89	0.96	0.84	4%
N-150/Cs-137	2	0.87	0.87	0.90	0.83	6%
All	22	1.00	1.02	1.25	0.83	14%

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 5: (Film) for dose quantity Hp(10)

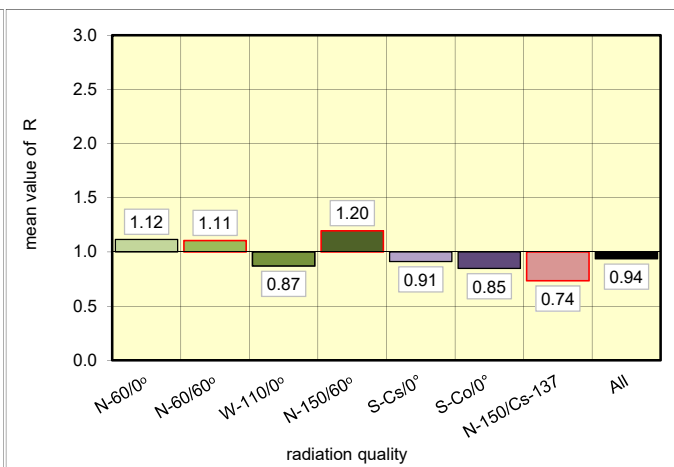
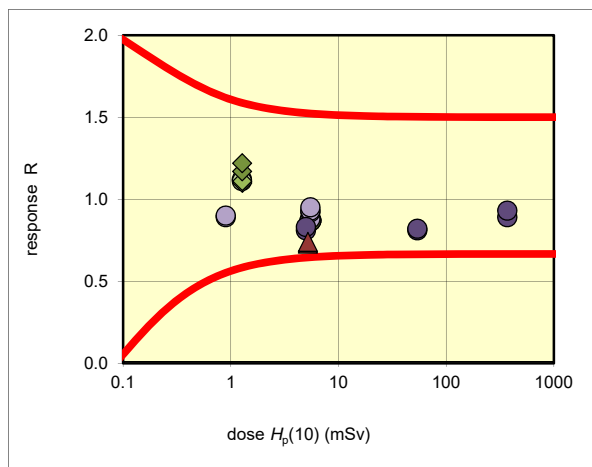
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	33	1.27	1.42	1.12	OK
		3	1.27	1.41	1.11	OK
	N-60/60°	17	1.28	1.41	1.10	OK
		16	1.28	1.42	1.11	OK
	W-110/0°	7	5.50	4.76	0.87	OK
		29	5.50	4.81	0.87	OK
N-150/60°	23	1.28	1.49	1.17	OK	
	11	1.28	1.56	1.22	OK	
gamma	S-Cs-S/0°	30	0.90	0.80	0.89	OK
		21	0.90	0.81	0.90	OK
	S-Cs-L/0°	9	5.50	4.86	0.88	OK
		13	5.50	5.08	0.92	OK
		2	5.50	5.12	0.93	OK
		14	5.50	5.25	0.95	OK
	S-Co-L/0°	24	5.00	4.07	0.81	OK
		25	5.00	4.14	0.83	OK
	S-Co-M/0°	28	54.00	43.83	0.81	OK
		31	54.00	44.47	0.82	OK
S-Co-H/0°	20	370.00	328.60	0.89	OK	
	27	370.00	342.34	0.93	OK	
mixed	N-150/Cs-137	19	5.20	3.77	0.73	OK
		18	5.20	3.83	0.74	OK
NIR	NIR	1		0.17		
	NIR	4		0.15		
	NIR	5		0.18		
	NIR	6		0.17		
	NIR	8		0.18		
	NIR	10		0.19		
	NIR	12		0.17		
	NIR	15		0.17		
	NIR	22		0.18		
	NIR	26		0.15		
	NIR	32		0.18		
	NIR	34		0.17		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.12	1.12	1.12	1.11	1%
N-60/60°	2	1.11	1.11	1.11	1.10	1%
W-110/0°	2	0.87	0.87	0.87	0.87	0%
N-150/60°	2	1.20	1.20	1.22	1.17	3%
S-Cs/0°	6	0.91	0.91	0.95	0.88	3%
S-Co/0°	6	0.83	0.85	0.93	0.81	6%
N-150/Cs-137	2	0.74	0.74	0.74	0.73	1%
<b>All</b>	<b>22</b>	<b>0.90</b>	<b>0.94</b>	<b>1.22</b>	<b>0.73</b>	<b>15%</b>

outliers: 0 of 22

fraction of outliers: 0%



Results: IC2018

## Reporting number 5: (Film) for dose quantity Hp(0.07)

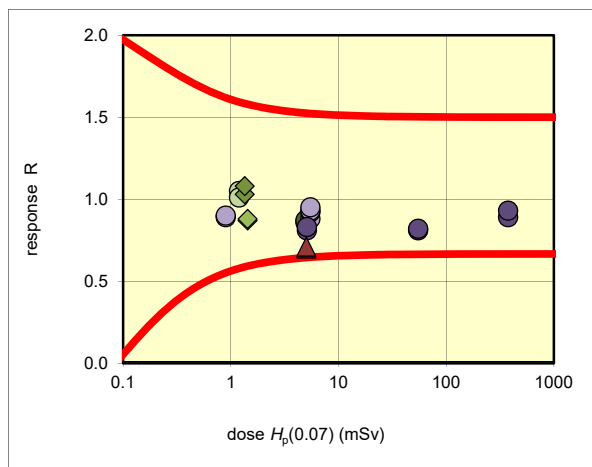
true values reported by the irradiating laboratory				values reported by participant	results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	33	1.20	1.26	1.05	OK
		3	1.20	1.21	1.01	OK
	N-60/60°	17	1.43	1.25	0.87	OK
		16	1.43	1.26	0.88	OK
	W-110/0°	7	5.03	4.35	0.86	OK
		29	5.03	4.40	0.87	OK
	N-150/60°	23	1.35	1.38	1.03	OK
		11	1.35	1.45	1.08	OK
gamma	S-Cs-S/0°	30	0.90	0.80	0.89	OK
		21	0.90	0.81	0.90	OK
	S-Cs-L/0°	9	5.50	4.86	0.88	OK
		13	5.50	5.08	0.92	OK
		2	5.50	5.12	0.93	OK
		14	5.50	5.25	0.95	OK
	S-Co-L/0°	24	5.09	4.14	0.81	OK
		25	5.09	4.21	0.83	OK
	S-Co-M/0°	28	54.90	44.58	0.81	OK
		31	54.90	45.23	0.82	OK
S-Co-H/0°	20	376.00	334.19	0.89	OK	
	27	376.00	348.16	0.93	OK	
mixed	N-150/Cs-137	19	5.02	3.51	0.70	OK
		18	5.02	3.57	0.71	OK
	NIR	1		0.16		
	NIR	4		0.15		
	NIR	5		0.17		
	NIR	6		0.16		
	NIR	8		0.17		
	NIR	10		0.18		
	NIR	12		0.16		
	NIR	15		0.16		
	NIR	22		0.17		
	NIR	26		0.15		
	NIR	32		0.17		
	NIR	34		0.16		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

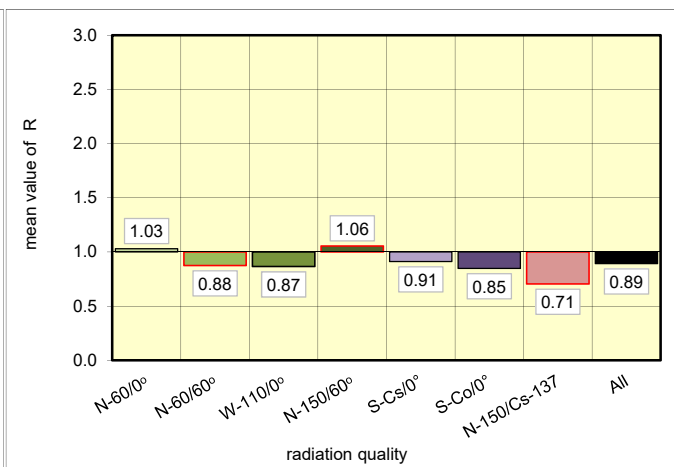
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.03</b>	1.03	1.05	1.01	3%
N-60/60°	2	<b>0.88</b>	0.88	0.88	0.87	1%
W-110/0°	2	<b>0.87</b>	0.87	0.87	0.86	1%
N-150/60°	2	<b>1.06</b>	1.06	1.08	1.03	3%
S-Cs/0°	6	<b>0.91</b>	0.91	0.95	0.88	3%
S-Co/0°	6	<b>0.83</b>	0.85	0.93	0.81	6%
N-150/Cs-137	2	<b>0.71</b>	0.71	0.71	0.70	1%
<b>All</b>	<b>22</b>	<b>0.89</b>	<b>0.89</b>	<b>1.08</b>	<b>0.70</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 6: (Film) for dose quantity Hp(10)

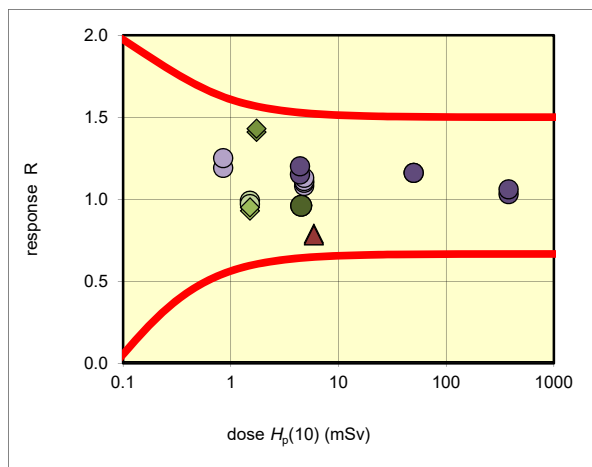
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	28	1.51	1.50	0.99	OK
		31	1.51	1.46	0.97	OK
	N-60/60°	19	1.51	1.40	0.93	OK
		5	1.51	1.43	0.95	OK
	W-110/0°	2	4.50	4.33	0.96	OK
		34	4.50	4.33	0.96	OK
	N-150/60°	25	1.73	2.45	1.41	OK
		29	1.73	2.47	1.43	OK
gamma	S-Cs-S/0°	8	0.85	1.01	1.19	OK
		14	0.85	1.06	1.25	OK
	S-Cs-L/0°	30	4.80	5.20	1.08	OK
		1	4.80	5.28	1.10	OK
		9	4.80	5.33	1.11	OK
		27	4.80	5.42	1.13	OK
	S-Co-L/0°	6	4.40	5.04	1.15	OK
		7	4.40	5.28	1.20	OK
	S-Co-M/0°	22	50.00	58.12	1.16	OK
		26	50.00	58.06	1.16	OK
	S-Co-H/0°	10	380.00	392.70	1.03	OK
		12	380.00	402.60	1.06	OK
mixed	N-150/Cs-137	16	5.90	4.64	0.79	OK
		17	5.90	4.60	0.78	OK
NIR	NIR	3		0.00		
	NIR	4		0.00		
	NIR	11		0.00		
	NIR	13		0.00		
	NIR	15		0.00		
	NIR	18		0.00		
	NIR	20		0.00		
	NIR	21		0.00		
	NIR	23		0.00		
	NIR	24		0.00		
	NIR	32		0.00		
NIR	33		0.00			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

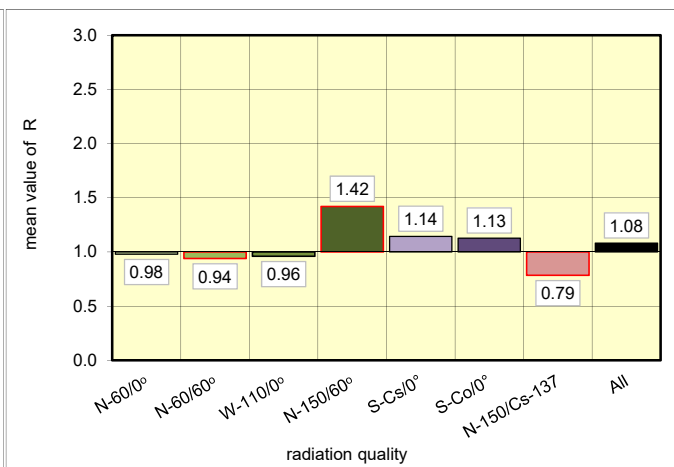
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.98</b>	0.98	0.99	0.97	1%
N-60/60°	2	<b>0.94</b>	0.94	0.95	0.93	2%
W-110/0°	2	<b>0.96</b>	0.96	0.96	0.96	0%
N-150/60°	2	<b>1.42</b>	1.42	1.43	1.41	1%
S-Cs/0°	6	<b>1.12</b>	1.14	1.25	1.08	6%
S-Co/0°	6	<b>1.16</b>	1.13	1.20	1.03	6%
N-150/Cs-137	2	<b>0.79</b>	0.79	0.79	0.78	1%
<b>All</b>	<b>22</b>	<b>1.09</b>	<b>1.08</b>	<b>1.43</b>	<b>0.78</b>	<b>15%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 6: (Film) for dose quantity $H_p(0.07)$

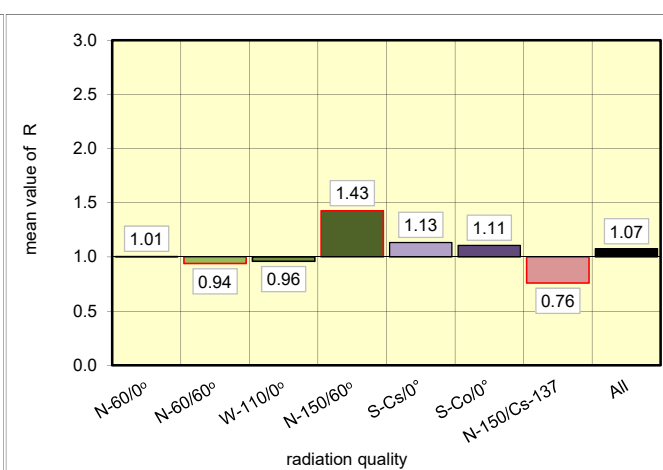
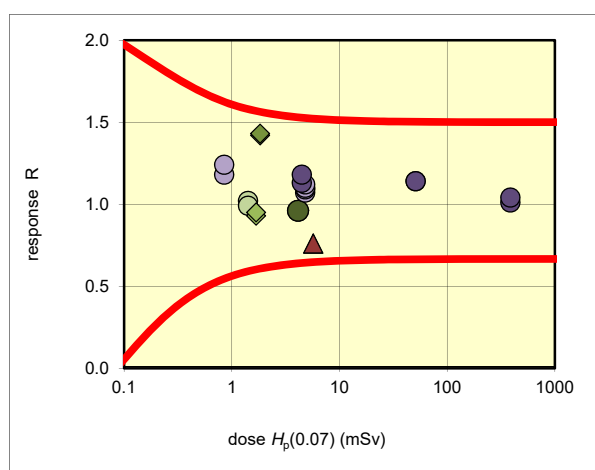
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	28	1.42	1.44	1.02	OK
		31	1.42	1.41	0.99	OK
	N-60/60°	19	1.68	1.57	0.93	OK
		5	1.68	1.59	0.95	OK
	W-110/0°	2	4.12	3.96	0.96	OK
		34	4.12	3.96	0.96	OK
	N-150/60°	25	1.83	2.59	1.42	OK
		29	1.83	2.61	1.43	OK
gamma	S-Cs-S/0°	8	0.85	1.00	1.18	OK
		14	0.85	1.06	1.24	OK
	S-Cs-L/0°	30	4.80	5.15	1.07	OK
		1	4.80	5.24	1.09	OK
		9	4.80	5.29	1.10	OK
		27	4.80	5.37	1.12	OK
	S-Co-L/0°	6	4.48	5.04	1.13	OK
		7	4.48	5.28	1.18	OK
	S-Co-M/0°	22	50.90	58.12	1.14	OK
		26	50.90	58.06	1.14	OK
	S-Co-H/0°	10	387.00	392.70	1.01	OK
		12	387.00	402.60	1.04	OK
mixed	N-150/Cs-137	16	5.71	4.36	0.76	OK
		17	5.71	4.33	0.76	OK
NIR	NIR	3		0.00		
	NIR	4		0.00		
	NIR	11		0.00		
	NIR	13		0.00		
	NIR	15		0.00		
	NIR	18		0.00		
	NIR	20		0.00		
	NIR	21		0.00		
	NIR	23		0.00		
	NIR	24		0.00		
	NIR	32		0.00		
	NIR	33		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.01	1.01	1.02	0.99	2%
N-60/60°	2	0.94	0.94	0.95	0.93	2%
W-110/0°	2	0.96	0.96	0.96	0.96	0%
N-150/60°	2	1.43	1.43	1.43	1.42	0%
S-Cs/0°	6	1.11	1.13	1.24	1.07	6%
S-Co/0°	6	1.14	1.11	1.18	1.01	6%
N-150/Cs-137	2	0.76	0.76	0.76	0.76	0%
<b>All</b>	<b>22</b>	<b>1.08</b>	<b>1.07</b>	<b>1.43</b>	<b>0.76</b>	<b>16%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 7: (Film) for dose quantity Hp(10)

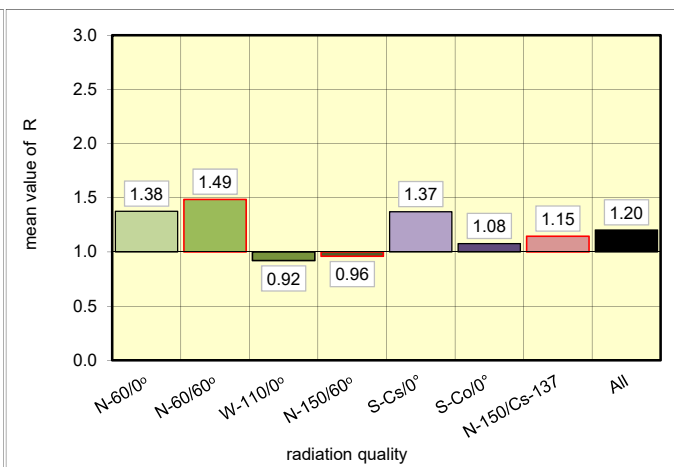
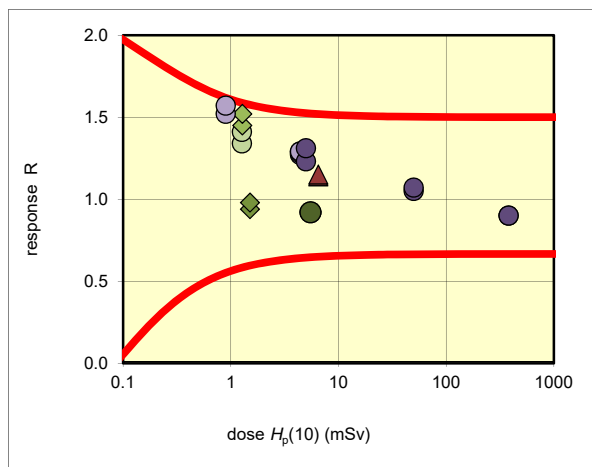
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	20	1.27	1.70	1.34	OK
		32	1.27	1.80	1.41	OK
	N-60/60°	28	1.28	1.86	1.45	OK
		5	1.28	1.95	1.52	OK
	W-110/0°	10	5.50	5.09	0.92	OK
		12	5.50	5.07	0.92	OK
N-150/60°	18	1.51	1.42	0.94	OK	
	19	1.51	1.48	0.98	OK	
gamma	S-Cs-S/0°	17	0.90	1.37	1.52	OK
		34	0.90	1.42	1.57	OK
	S-Cs-L/0°	24	4.40	5.60	1.27	OK
		26	4.40	5.62	1.28	OK
		3	4.40	5.66	1.29	OK
		6	4.40	5.68	1.29	OK
	S-Co-L/0°	25	5.00	6.14	1.23	OK
		11	5.00	6.53	1.31	OK
	S-Co-M/0°	9	50.00	52.47	1.05	OK
		13	50.00	53.38	1.07	OK
S-Co-H/0°	21	380.00	342.37	0.90	OK	
	29	380.00	340.58	0.90	OK	
mixed	N-150/Cs-137	16	6.50	7.42	1.14	OK
		2	6.50	7.45	1.15	OK
NIR	NIR	1		0.22		
	NIR	4		0.15		
	NIR	7		0.35		
	NIR	8		0.14		
	NIR	14		0.25		
	NIR	15		0.15		
	NIR	22		0.19		
	NIR	23		0.19		
	NIR	27		0.21		
	NIR	30		0.18		
	NIR	31		0.22		
	NIR	33		0.24		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.38</b>	1.38	1.41	1.34	4%
N-60/60°	2	<b>1.49</b>	1.49	1.52	1.45	3%
W-110/0°	2	<b>0.92</b>	0.92	0.92	0.92	0%
N-150/60°	2	<b>0.96</b>	0.96	0.98	0.94	3%
S-Cs/0°	6	<b>1.29</b>	1.37	1.57	1.27	10%
S-Co/0°	6	<b>1.06</b>	1.08	1.31	0.90	16%
N-150/Cs-137	2	<b>1.15</b>	1.15	1.15	1.14	1%
<b>All</b>	<b>22</b>	<b>1.25</b>	<b>1.20</b>	<b>1.57</b>	<b>0.90</b>	<b>18%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 8: (Film) for dose quantity Hp(10)

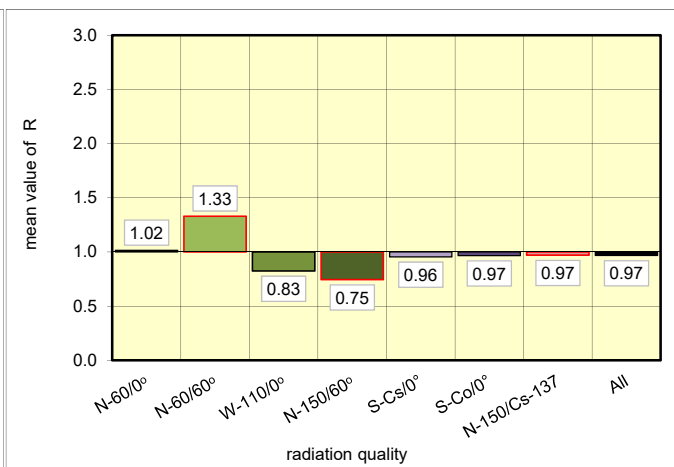
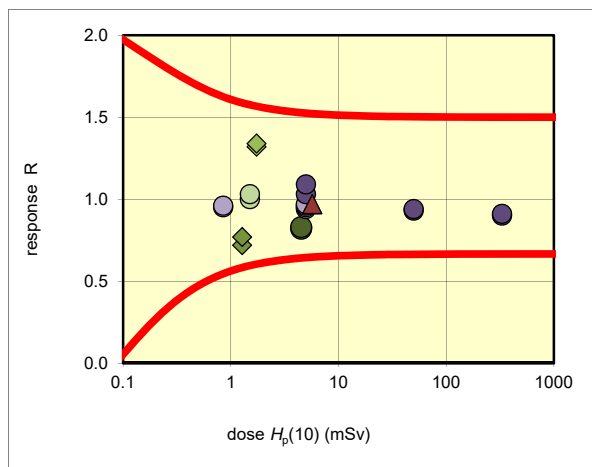
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.51	1.51	1.00	OK
		26	1.51	1.55	1.03	OK
	N-60/60°	34	1.73	2.30	1.32	OK
		3	1.73	2.31	1.34	OK
	W-110/0°	16	4.50	3.68	0.82	OK
		29	4.50	3.72	0.83	OK
	N-150/60°	13	1.28	0.92	0.72	OK
		1	1.28	0.98	0.77	OK
gamma	S-Cs-S/0°	27	0.85	0.81	0.95	OK
		5	0.85	0.81	0.96	OK
	S-Cs-L/0°	28	5.00	4.72	0.94	OK
		7	5.00	4.73	0.95	OK
		22	5.00	4.79	0.96	OK
		32	5.00	4.84	0.97	OK
	S-Co-L/0°	24	5.00	5.17	1.03	OK
		25	5.00	5.43	1.09	OK
	S-Co-M/0°	20	50.00	46.68	0.93	OK
		31	50.00	47.01	0.94	OK
	S-Co-H/0°	15	330.00	297.35	0.90	OK
		4	330.00	298.83	0.91	OK
mixed	N-150/Cs-137	12	5.70	5.54	0.97	OK
		14	5.70	5.53	0.97	OK
NIR	NIR	2		0.00		
	NIR	6		0.01		
	NIR	8		0.00		
	NIR	9		0.02		
	NIR	10		0.00		
	NIR	17		0.01		
	NIR	18		0.00		
	NIR	19		0.01		
	NIR	21		0.00		
	NIR	23		0.01		
	NIR	30		0.00		
	NIR	33		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.02	1.02	1.03	1.00	2%
N-60/60°	2	1.33	1.33	1.34	1.32	1%
W-110/0°	2	0.83	0.83	0.83	0.82	1%
N-150/60°	2	0.75	0.75	0.77	0.72	5%
S-Cs/0°	6	0.96	0.96	0.97	0.94	1%
S-Co/0°	6	0.94	0.97	1.09	0.90	8%
N-150/Cs-137	2	0.97	0.97	0.97	0.97	0%
<b>All</b>	<b>22</b>	<b>0.96</b>	<b>0.97</b>	<b>1.34</b>	<b>0.72</b>	<b>15%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



No dose values for  $H_p(0.07)$  submitted.

## Reporting number 9: (Film) for dose quantity Hp(10)

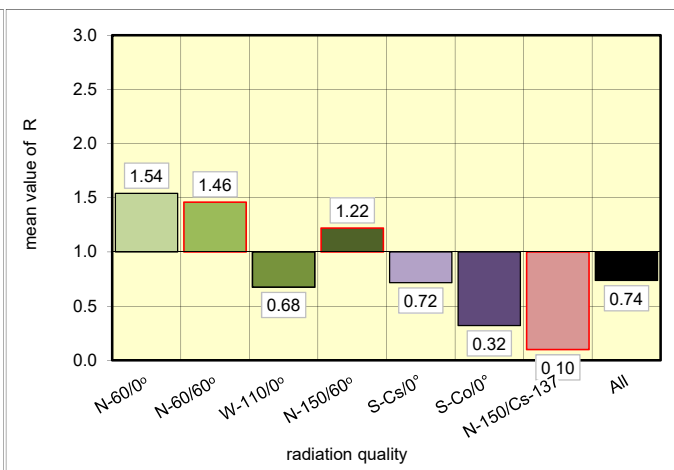
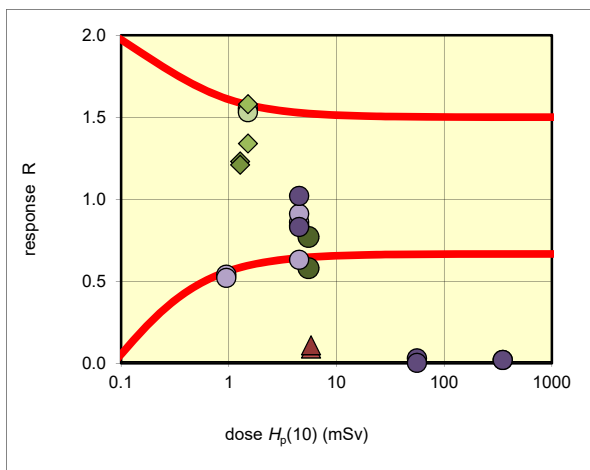
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.51	2.34	1.55	OK
		13	1.51	2.31	1.53	OK
	N-60/60°	22	1.51	2.02	1.34	OK
		34	1.51	2.38	1.58	outlier
	W-110/0°	1	5.50	3.19	0.58	outlier
		10	5.50	4.25	0.77	OK
N-150/60°	12	1.28	1.57	1.23	OK	
	23	1.28	1.54	1.21	OK	
gamma	S-Cs-S/0°	15	0.95	0.51	0.54	outlier
		18	0.95	0.49	0.52	outlier
	S-Cs-L/0°	2	4.50	3.76	0.84	OK
		8	4.50	3.86	0.86	OK
		25	4.50	2.84	0.63	outlier
		30	4.50	4.10	0.91	OK
	S-Co-L/0°	4	4.50	3.72	0.83	OK
		31	4.50	4.58	1.02	OK
	S-Co-M/0°	6	56.00	1.81	0.03	outlier
		33	56.00	0.12	0.00	outlier
S-Co-H/0°	21	350.00	5.68	0.02	outlier	
	24	350.00	5.46	0.02	outlier	
mixed	N-150/Cs-137	3	5.80	0.54	0.09	outlier
		7	5.80	0.64	0.11	outlier
NIR	NIR	5		0.44		
	NIR	9		0.41		
	NIR	14		0.41		
	NIR	16		0.46		
	NIR	17		0.42		
	NIR	19		0.40		
	NIR	20		0.43		
	NIR	26		0.35		
	NIR	27		0.31		
	NIR	28		0.34		
	NIR	29		0.41		
	NIR	32		0.34		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.54	1.54	1.55	1.53	1%
N-60/60°	2	1.46	1.46	1.58	1.34	12%
W-110/0°	2	0.68	0.68	0.77	0.58	20%
N-150/60°	2	1.22	1.22	1.23	1.21	1%
S-Cs/0°	6	0.74	0.72	0.91	0.52	24%
S-Co/0°	6	0.03	0.32	1.02	0.00	147%
N-150/Cs-137	2	0.10	0.10	0.11	0.09	14%
All	22	0.80	0.74	1.58	0.00	72%

outliers: 11 of 22

fraction of outliers: 50%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 10: (OSL) for dose quantity Hp(10)

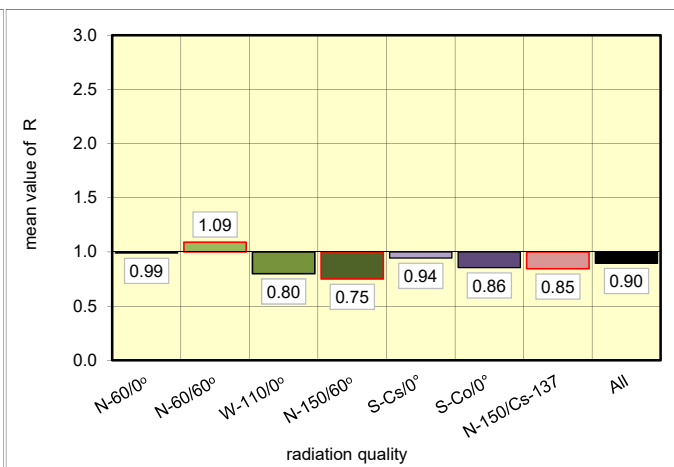
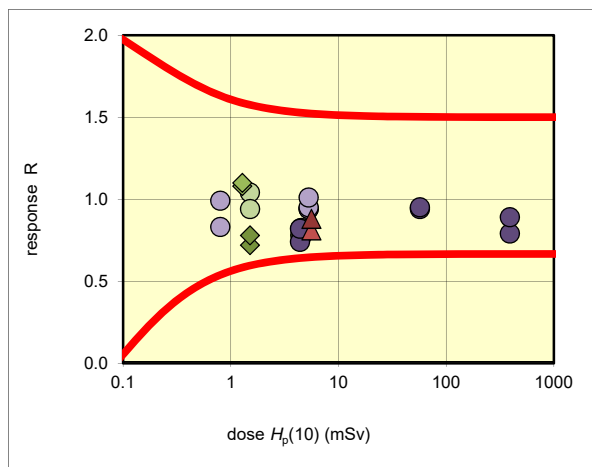
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	19	1.51	1.57	1.04	OK
		7	1.51	1.42	0.94	OK
	N-60/60°	10	1.28	1.38	1.08	OK
		20	1.28	1.41	1.10	OK
	W-110/0°	30	4.50	3.51	0.78	OK
		18	4.50	3.69	0.82	OK
N-150/60°	12	1.51	1.09	0.72	OK	
	28	1.51	1.18	0.78	OK	
gamma	S-Cs-S/0°	34	0.80	0.66	0.83	OK
		31	0.80	0.79	0.99	OK
	S-Cs-L/0°	3	5.30	4.96	0.94	OK
		23	5.30	4.99	0.94	OK
		8	5.30	5.03	0.95	OK
		26	5.30	5.38	1.01	OK
	S-Co-L/0°	32	4.40	3.26	0.74	OK
		33	4.40	3.63	0.82	OK
	S-Co-M/0°	2	57.00	53.39	0.94	OK
		17	57.00	54.24	0.95	OK
S-Co-H/0°	22	390.00	309.43	0.79	OK	
	27	390.00	346.95	0.89	OK	
mixed	N-150/Cs-137	14	5.60	4.54	0.81	OK
		15	5.60	4.91	0.88	OK
NIR	NIR	1		0.24		
	NIR	4		0.30		
	NIR	5		0.30		
	NIR	6		0.25		
	NIR	9		0.24		
	NIR	11		0.28		
	NIR	13		0.23		
	NIR	16		0.24		
	NIR	21		0.25		
	NIR	24		0.30		
	NIR	25		0.25		
NIR	29		0.29			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.99</b>	0.99	1.04	0.94	7%
N-60/60°	2	<b>1.09</b>	1.09	1.10	1.08	1%
W-110/0°	2	<b>0.80</b>	0.80	0.82	0.78	4%
N-150/60°	2	<b>0.75</b>	0.75	0.78	0.72	6%
S-Cs/0°	6	<b>0.95</b>	0.94	1.01	0.83	7%
S-Co/0°	6	<b>0.86</b>	0.86	0.95	0.74	10%
N-150/Cs-137	2	<b>0.85</b>	0.85	0.88	0.81	6%
<b>All</b>	<b>22</b>	<b>0.92</b>	<b>0.90</b>	<b>1.10</b>	<b>0.72</b>	<b>12%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 10: (OSL) for dose quantity Hp(0.07)

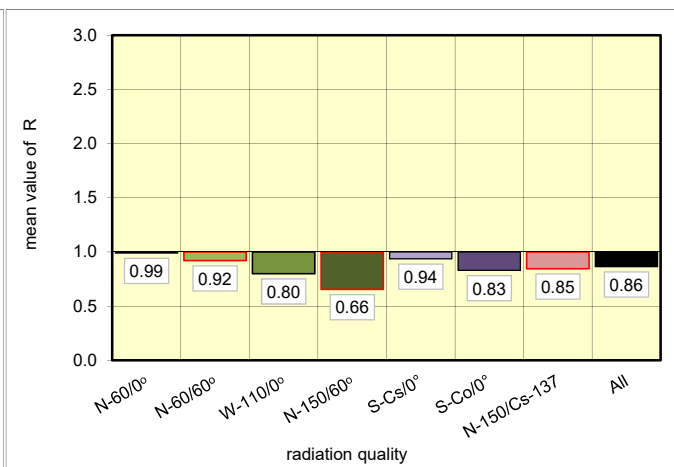
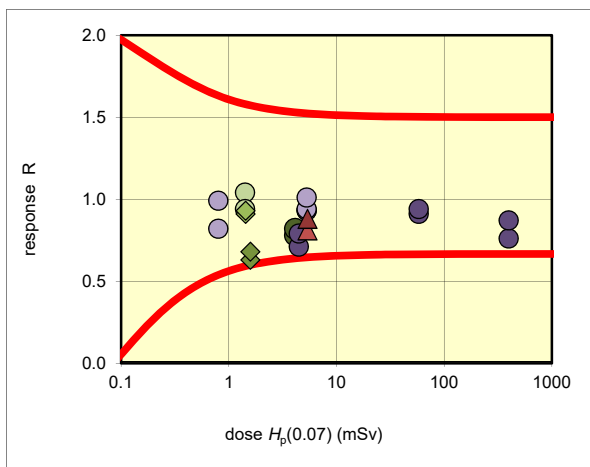
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	19	1.42	1.47	1.04	OK
		7	1.42	1.33	0.94	OK
	N-60/60°	10	1.43	1.30	0.91	OK
		20	1.43	1.33	0.93	OK
	W-110/0°	30	4.12	3.21	0.78	OK
		18	4.12	3.37	0.82	OK
	N-150/60°	12	1.59	0.99	0.63	OK
		28	1.59	1.08	0.68	OK
gamma	S-Cs-S/0°	34	0.80	0.66	0.82	OK
		31	0.80	0.79	0.99	OK
	S-Cs-L/0°	3	5.30	4.91	0.93	OK
		23	5.30	4.94	0.93	OK
		8	5.30	4.99	0.94	OK
		26	5.30	5.34	1.01	OK
	S-Co-L/0°	32	4.48	3.17	0.71	OK
		33	4.48	3.55	0.79	OK
	S-Co-M/0°	2	57.99	52.92	0.91	OK
		17	57.99	54.24	0.94	OK
	S-Co-H/0°	22	397.00	301.32	0.76	OK
		27	397.00	344.72	0.87	OK
mixed	N-150/Cs-137	14	5.39	4.37	0.81	OK
		15	5.39	4.76	0.88	OK
NIR	NIR	1		0.24		
	NIR	4		0.30		
	NIR	5		0.30		
	NIR	6		0.25		
	NIR	9		0.24		
	NIR	11		0.28		
	NIR	13		0.23		
	NIR	16		0.24		
	NIR	21		0.25		
	NIR	24		0.30		
	NIR	25		0.25		
	NIR	29		0.29		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.99</b>	0.99	1.04	0.94	7%
N-60/60°	2	<b>0.92</b>	0.92	0.93	0.91	2%
W-110/0°	2	<b>0.80</b>	0.80	0.82	0.78	4%
N-150/60°	2	<b>0.66</b>	0.66	0.68	0.63	5%
S-Cs/0°	6	<b>0.94</b>	0.94	1.01	0.82	7%
S-Co/0°	6	<b>0.83</b>	0.83	0.94	0.71	11%
N-150/Cs-137	2	<b>0.85</b>	0.85	0.88	0.81	6%
<b>All</b>	<b>22</b>	<b>0.90</b>	<b>0.86</b>	<b>1.04</b>	<b>0.63</b>	<b>13%</b>

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 11: (OSL) for dose quantity $H_p(10)$

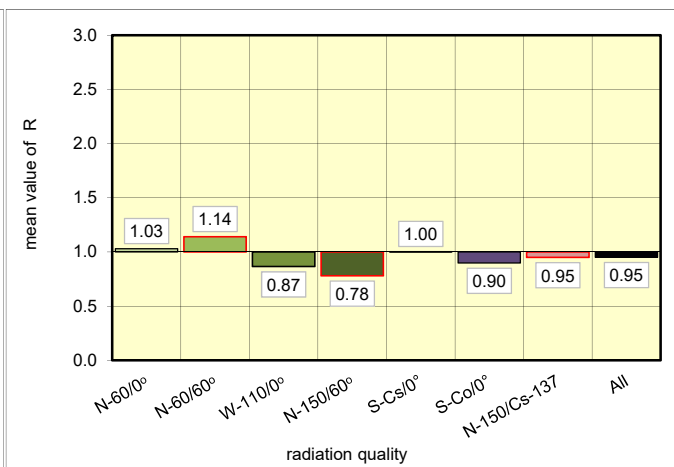
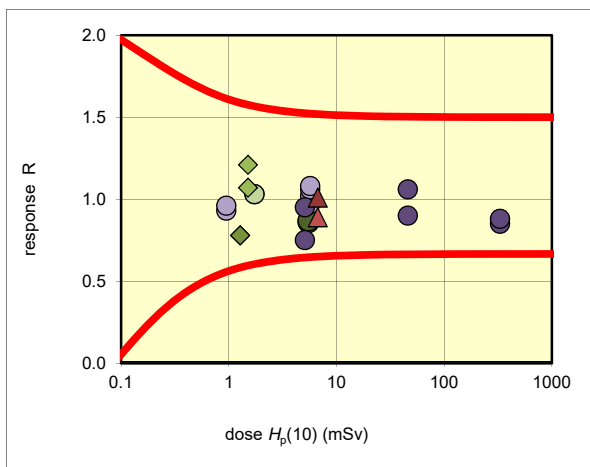
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	3	1.73	1.78	1.03	OK
		31	1.73	1.78	1.03	OK
	N-60/60°	24	1.51	1.61	1.07	OK
		18	1.51	1.83	1.21	OK
	W-110/0°	25	5.50	4.72	0.86	OK
		32	5.50	4.79	0.87	OK
	N-150/60°	9	1.28	0.99	0.78	OK
		4	1.28	1.00	0.78	OK
gamma	S-Cs-S/0°	15	0.95	0.88	0.93	OK
		19	0.95	0.91	0.96	OK
	S-Cs-L/0°	29	5.70	5.54	0.97	OK
		10	5.70	5.84	1.02	OK
		17	5.70	6.04	1.06	OK
		22	5.70	6.14	1.08	OK
	S-Co-L/0°	30	5.10	3.85	0.75	OK
		21	5.10	4.87	0.95	OK
	S-Co-M/0°	2	46.00	41.50	0.90	OK
		5	46.00	48.60	1.06	OK
	S-Co-H/0°	14	330.00	281.00	0.85	OK
		11	330.00	290.00	0.88	OK
mixed	N-150/Cs-137	13	6.70	5.93	0.89	OK
		12	6.70	6.76	1.01	OK
NIR	NIR	1		0.22		
	NIR	6		0.19		
	NIR	7		0.22		
	NIR	8		0.22		
	NIR	16		0.20		
	NIR	20		0.23		
	NIR	23		0.19		
	NIR	26		0.20		
	NIR	27		0.22		
	NIR	28		0.18		
	NIR	33		0.22		
	NIR	34		0.18		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.03	1.03	1.03	1.03	0%
N-60/60°	2	1.14	1.14	1.21	1.07	9%
W-110/0°	2	0.87	0.87	0.87	0.86	1%
N-150/60°	2	0.78	0.78	0.78	0.78	0%
S-Cs/0°	6	1.00	1.00	1.08	0.93	6%
S-Co/0°	6	0.89	0.90	1.06	0.75	12%
N-150/Cs-137	2	0.95	0.95	1.01	0.89	9%
All	22	0.96	0.95	1.21	0.75	12%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 11: (OSL) for dose quantity Hp(0.07)

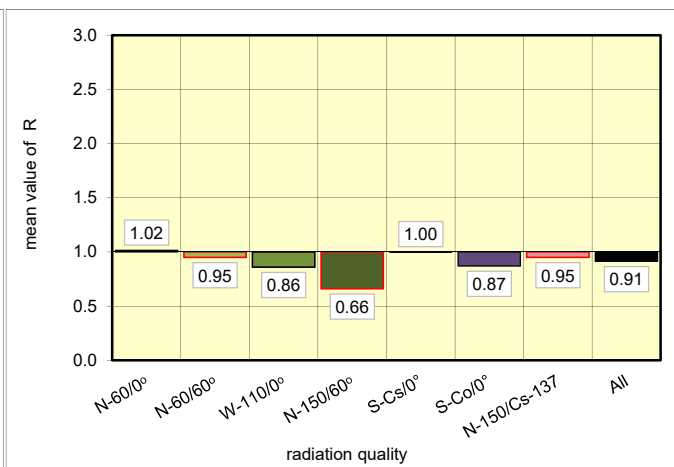
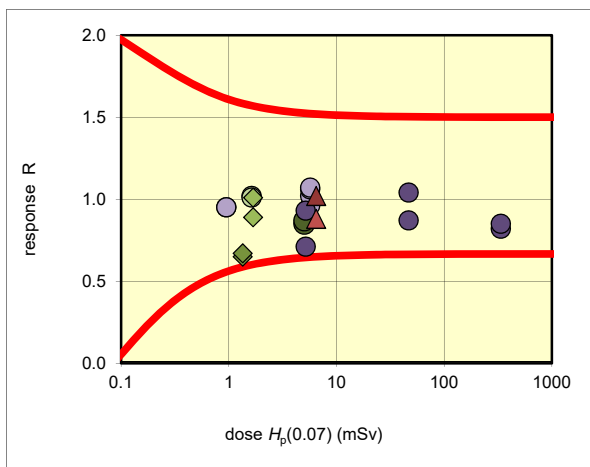
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	3	1.63	1.66	1.02	OK
		31	1.63	1.65	1.01	OK
	N-60/60°	24	1.68	1.50	0.89	OK
		18	1.68	1.70	1.01	OK
	W-110/0°	25	5.03	4.29	0.85	OK
		32	5.03	4.36	0.87	OK
	N-150/60°	9	1.35	0.88	0.65	OK
		4	1.35	0.90	0.67	OK
gamma	S-Cs-S/0°	15	0.95	0.90	0.95	OK
		19	0.95	0.90	0.95	OK
	S-Cs-L/0°	29	5.70	5.50	0.96	OK
		10	5.70	5.79	1.02	OK
		17	5.70	6.02	1.06	OK
		22	5.70	6.10	1.07	OK
	S-Co-L/0°	30	5.19	3.70	0.71	OK
		21	5.19	4.84	0.93	OK
	S-Co-M/0°	2	46.80	40.50	0.87	OK
		5	46.80	48.50	1.04	OK
	S-Co-H/0°	14	336.00	274.00	0.82	OK
		11	336.00	284.00	0.85	OK
mixed	N-150/Cs-137	13	6.48	5.70	0.88	OK
		12	6.48	6.58	1.02	OK
NIR	NIR	1		0.22		
	NIR	6		0.19		
	NIR	7		0.22		
	NIR	8		0.22		
	NIR	16		0.20		
	NIR	20		0.23		
	NIR	23		0.19		
	NIR	26		0.20		
	NIR	27		0.22		
	NIR	28		0.18		
	NIR	33		0.22		
	NIR	34		0.18		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.02	1.02	1.02	1.01	1%
N-60/60°	2	0.95	0.95	1.01	0.89	9%
W-110/0°	2	0.86	0.86	0.87	0.85	2%
N-150/60°	2	0.66	0.66	0.67	0.65	2%
S-Cs/0°	6	0.99	1.00	1.07	0.95	6%
S-Co/0°	6	0.86	0.87	1.04	0.71	13%
N-150/Cs-137	2	0.95	0.95	1.02	0.88	10%
All	22	0.94	0.91	1.07	0.65	13%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 12: (OSL) for dose quantity Hp(10)

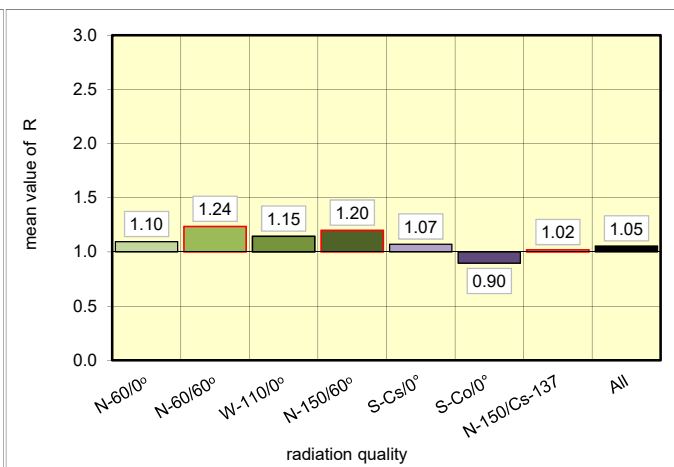
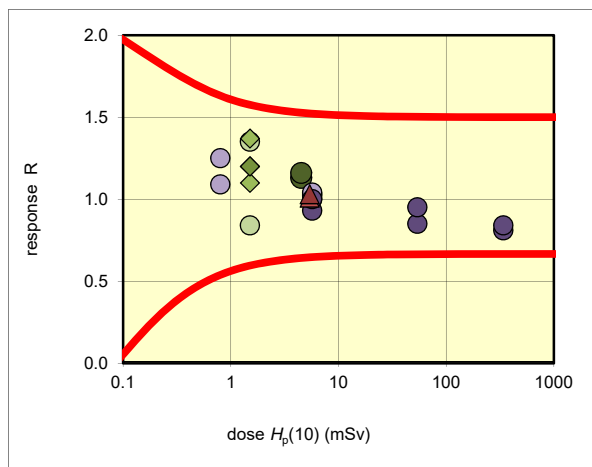
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.51	2.04	1.35	OK
		34	1.51	1.26	0.84	OK
	N-60/60°	9	1.51	1.66	1.10	OK
		22	1.51	2.06	1.37	OK
	W-110/0°	21	4.50	5.10	1.13	OK
		3	4.50	5.24	1.16	OK
	N-150/60°	10	1.51	1.81	1.20	OK
		20	1.51	1.81	1.20	OK
gamma	S-Cs-S/0°	31	0.80	0.87	1.09	OK
		30	0.80	1.00	1.25	OK
	S-Cs-L/0°	7	5.70	5.79	1.02	OK
		13	5.70	5.72	1.00	OK
		19	5.70	5.88	1.03	OK
		2	5.70	5.94	1.04	OK
	S-Co-L/0°	12	5.70	5.31	0.93	OK
		11	5.70	5.69	1.00	OK
	S-Co-M/0°	26	54.00	46.04	0.85	OK
		18	54.00	51.47	0.95	OK
	S-Co-H/0°	15	340.00	274.35	0.81	OK
		5	340.00	284.39	0.84	OK
mixed	N-150/Cs-137	27	5.40	5.46	1.01	OK
		25	5.40	5.57	1.03	OK
NIR	NIR	1		0.72		
	NIR	4		0.74		
	NIR	6		0.82		
	NIR	8		0.78		
	NIR	14		0.64		
	NIR	16		0.87		
	NIR	17		0.75		
	NIR	23		0.70		
	NIR	28		0.76		
	NIR	29		0.62		
	NIR	32		0.69		
	NIR	33		0.87		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.10	1.10	1.35	0.84	33%
N-60/60°	2	1.24	1.24	1.37	1.10	15%
W-110/0°	2	1.15	1.15	1.16	1.13	2%
N-150/60°	2	1.20	1.20	1.20	1.20	0%
S-Cs/0°	6	1.04	1.07	1.25	1.00	9%
S-Co/0°	6	0.89	0.90	1.00	0.81	8%
N-150/Cs-137	2	1.02	1.02	1.03	1.01	1%
All	22	1.03	1.05	1.37	0.81	15%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 12: (OSL) for dose quantity Hp(0.07)

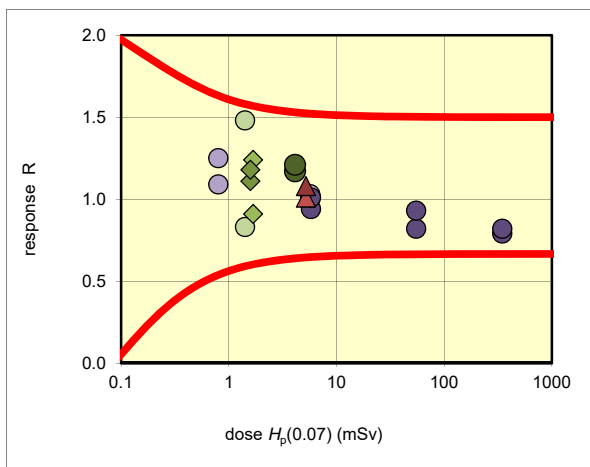
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.42	2.09	1.48	OK
		34	1.42	1.17	0.83	OK
	N-60/60°	9	1.68	1.53	0.91	OK
		22	1.68	2.09	1.24	OK
	W-110/0°	21	4.12	4.81	1.17	OK
		3	4.12	5.00	1.21	OK
	N-150/60°	10	1.59	1.76	1.11	OK
		20	1.59	1.87	1.18	OK
gamma	S-Cs-S/0°	31	0.80	0.87	1.09	OK
		30	0.80	1.00	1.25	OK
	S-Cs-L/0°	7	5.70	5.72	1.00	OK
		13	5.70	5.75	1.01	OK
		19	5.70	5.80	1.02	OK
	S-Co-L/0°	2	5.70	5.87	1.03	OK
		12	5.80	5.46	0.94	OK
	S-Co-M/0°	11	5.80	5.88	1.01	OK
		26	54.90	45.26	0.82	OK
	S-Co-H/0°	18	54.90	51.24	0.93	OK
		15	346.00	274.38	0.79	OK
	mixed	N-150/Cs-137	5	346.00	284.42	0.82
27			5.21	5.25	1.01	OK
NIR	N-150/Cs-137	25	5.21	5.65	1.08	OK
		1		0.68		
		4		0.70		
		6		0.83		
		8		0.80		
		14		0.61		
		16		0.86		
		17		0.76		
		23		0.67		
		28		0.73		
		29		0.58		
		32		0.66		
33		0.86				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

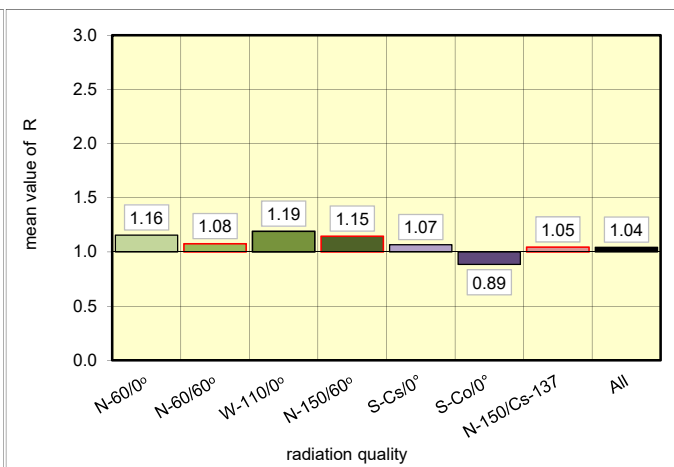
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.16</b>	1.16	1.48	0.83	40%
N-60/60°	2	<b>1.08</b>	1.08	1.24	0.91	22%
W-110/0°	2	<b>1.19</b>	1.19	1.21	1.17	2%
N-150/60°	2	<b>1.15</b>	1.15	1.18	1.11	4%
S-Cs/0°	6	<b>1.03</b>	1.07	1.25	1.00	9%
S-Co/0°	6	<b>0.88</b>	0.89	1.01	0.79	10%
N-150/Cs-137	2	<b>1.05</b>	1.05	1.08	1.01	5%
<b>All</b>	<b>22</b>	<b>1.02</b>	<b>1.04</b>	<b>1.48</b>	<b>0.79</b>	<b>16%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 13: (OSL) for dose quantity Hp(10)

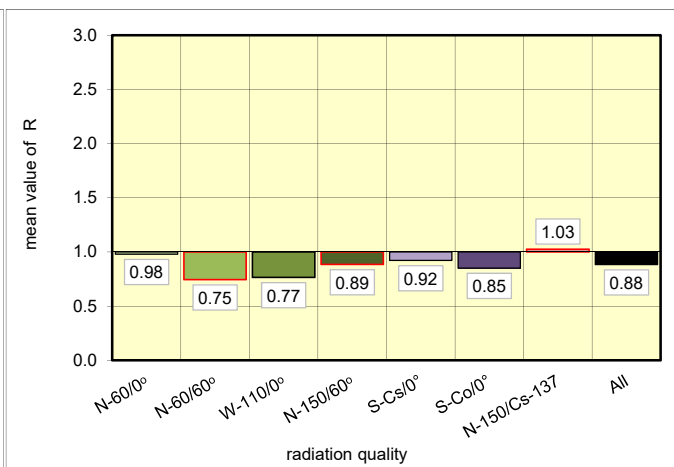
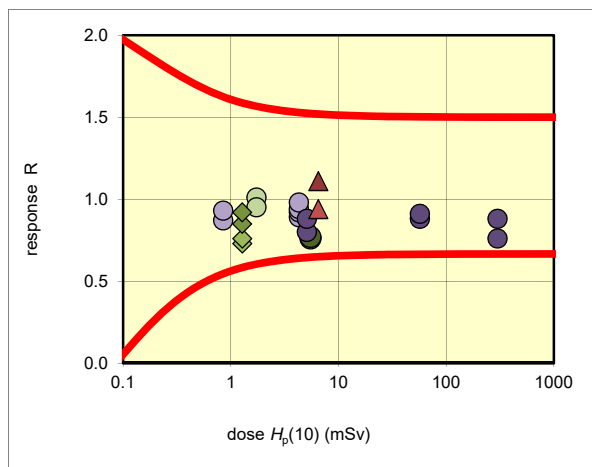
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	7	1.73	1.75	1.01	OK
		17	1.73	1.64	0.95	OK
	N-60/60°	2	1.28	0.94	0.73	OK
		16	1.28	0.97	0.76	OK
	W-110/0°	21	5.50	4.16	0.76	OK
		33	5.50	4.26	0.77	OK
	N-150/60°	19	1.28	1.09	0.85	OK
		11	1.28	1.17	0.92	OK
gamma	S-Cs-S/0°	28	0.85	0.74	0.87	OK
		32	0.85	0.79	0.93	OK
	S-Cs-L/0°	13	4.30	3.83	0.89	OK
		22	4.30	3.97	0.92	OK
		9	4.30	4.05	0.94	OK
		18	4.30	4.20	0.98	OK
	S-Co-L/0°	12	5.10	4.10	0.80	OK
		14	5.10	4.48	0.88	OK
	S-Co-M/0°	10	57.00	50.36	0.88	OK
		15	57.00	52.08	0.91	OK
	S-Co-H/0°	27	300.00	227.74	0.76	OK
		24	300.00	264.51	0.88	OK
mixed	N-150/Cs-137	4	6.50	6.09	0.94	OK
		29	6.50	7.24	1.11	OK
NIR	NIR	1		0.24		
	NIR	3		0.24		
	NIR	5		0.23		
	NIR	6		0.29		
	NIR	8		0.29		
	NIR	20		0.24		
	NIR	23		0.29		
	NIR	25		0.31		
	NIR	26		0.25		
	NIR	30		0.27		
	NIR	31		0.24		
	NIR	34		0.27		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.98</b>	0.98	1.01	0.95	4%
N-60/60°	2	<b>0.75</b>	0.75	0.76	0.73	3%
W-110/0°	2	<b>0.77</b>	0.77	0.77	0.76	1%
N-150/60°	2	<b>0.89</b>	0.89	0.92	0.85	6%
S-Cs/0°	6	<b>0.93</b>	0.92	0.98	0.87	4%
S-Co/0°	6	<b>0.88</b>	0.85	0.91	0.76	7%
N-150/Cs-137	2	<b>1.03</b>	1.03	1.11	0.94	12%
<b>All</b>	<b>22</b>	<b>0.89</b>	<b>0.88</b>	<b>1.11</b>	<b>0.73</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 13: (OSL) for dose quantity Hp(0.07)

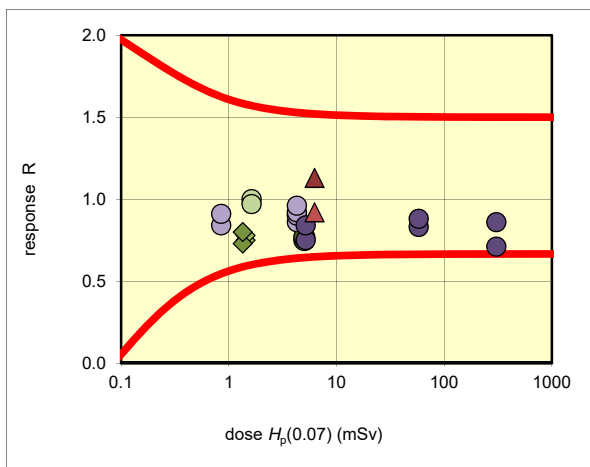
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	7	1.63	1.63	1.00	OK
		17	1.63	1.58	0.97	OK
	N-60/60°	2	1.43	1.08	0.75	OK
		16	1.43	1.11	0.78	OK
	W-110/0°	21	5.03	3.78	0.75	OK
		33	5.03	3.87	0.77	OK
	N-150/60°	19	1.35	0.99	0.73	OK
		11	1.35	1.07	0.80	OK
gamma	S-Cs-S/0°	28	0.85	0.71	0.84	OK
		32	0.85	0.77	0.91	OK
	S-Cs-L/0°	13	4.30	3.71	0.86	OK
		22	4.30	3.85	0.90	OK
		9	4.30	3.97	0.92	OK
		18	4.30	4.15	0.96	OK
	S-Co-L/0°	12	5.19	3.89	0.75	OK
		14	5.19	4.36	0.84	OK
	S-Co-M/0°	10	58.00	48.36	0.83	OK
		15	58.00	51.00	0.88	OK
	S-Co-H/0°	27	305.00	217.04	0.71	OK
		24	305.00	262.03	0.86	OK
mixed	N-150/Cs-137	4	6.26	5.76	0.92	OK
		29	6.26	7.10	1.13	OK
NIR	NIR	1		0.24		
	NIR	3		0.24		
	NIR	5		0.23		
	NIR	6		0.29		
	NIR	8		0.29		
	NIR	20		0.24		
	NIR	23		0.29		
	NIR	25		0.30		
	NIR	26		0.25		
	NIR	30		0.27		
	NIR	31		0.24		
	NIR	34		0.27		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

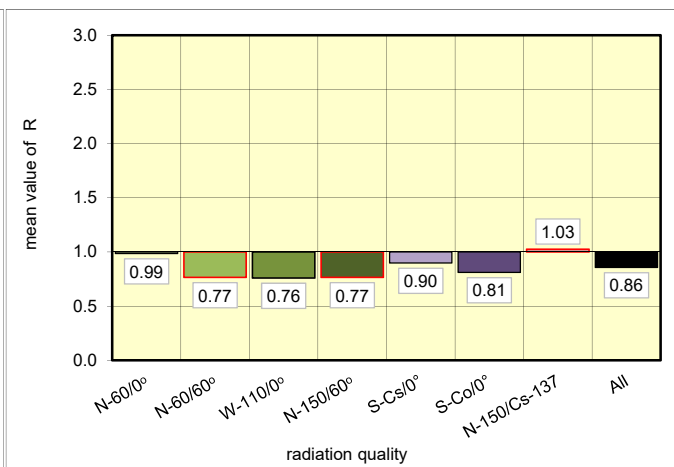
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.99</b>	0.99	1.00	0.97	2%
N-60/60°	2	<b>0.77</b>	0.77	0.78	0.75	3%
W-110/0°	2	<b>0.76</b>	0.76	0.77	0.75	2%
N-150/60°	2	<b>0.77</b>	0.77	0.80	0.73	6%
S-Cs/0°	6	<b>0.91</b>	0.90	0.96	0.84	5%
S-Co/0°	6	<b>0.84</b>	0.81	0.88	0.71	8%
N-150/Cs-137	2	<b>1.03</b>	1.03	1.13	0.92	14%
<b>All</b>	<b>22</b>	<b>0.85</b>	<b>0.86</b>	<b>1.13</b>	<b>0.71</b>	<b>12%</b>

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 14: (OSL) for dose quantity Hp(10)

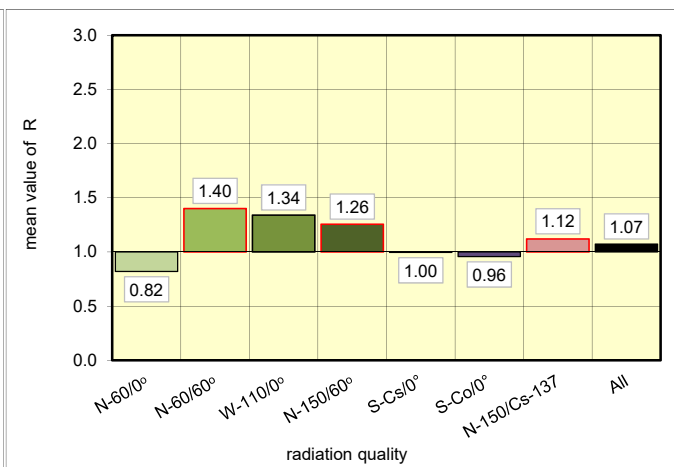
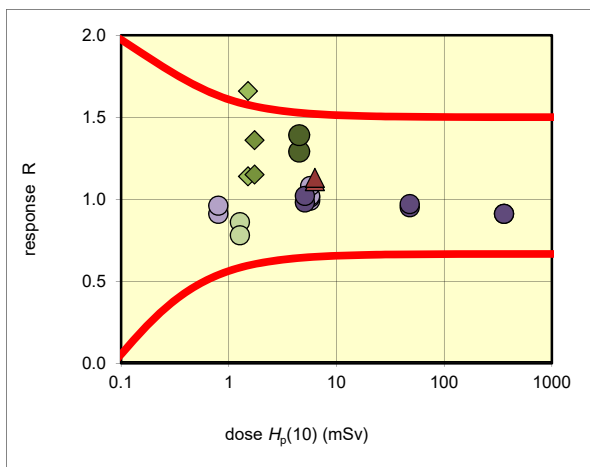
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	1	1.27	1.09	0.86	OK
		32	1.27	0.99	0.78	OK
	N-60/60°	18	1.51	1.71	1.14	OK
		24	1.51	2.50	1.66	outlier
	W-110/0°	19	4.50	5.79	1.29	OK
		16	4.50	6.26	1.39	OK
	N-150/60°	23	1.73	2.00	1.15	OK
		12	1.73	2.36	1.36	OK
gamma	S-Cs-S/0°	9	0.80	0.73	0.91	OK
		28	0.80	0.77	0.96	OK
	S-Cs-L/0°	15	5.70	5.67	0.99	OK
		29	5.70	5.76	1.01	OK
		11	5.70	5.84	1.02	OK
		26	5.70	6.14	1.08	OK
	S-Co-L/0°	3	5.10	5.01	0.98	OK
		7	5.10	5.22	1.02	OK
	S-Co-M/0°	34	48.00	45.63	0.95	OK
		13	48.00	46.63	0.97	OK
	S-Co-H/0°	30	360.00	329.06	0.91	OK
		31	360.00	326.77	0.91	OK
mixed	N-150/Cs-137	22	6.30	6.97	1.11	OK
		17	6.30	7.14	1.13	OK
NIR	NIR	2		1.29		
	NIR	4		1.38		
	NIR	5		1.23		
	NIR	6		1.25		
	NIR	8		1.18		
	NIR	10		1.36		
	NIR	14		1.24		
	NIR	20		1.51		
	NIR	21		1.24		
	NIR	25		1.31		
	NIR	27		1.17		
	NIR	33		1.09		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.82</b>	0.82	0.86	0.78	7%
N-60/60°	2	<b>1.40</b>	1.40	1.66	1.14	26%
W-110/0°	2	<b>1.34</b>	1.34	1.39	1.29	5%
N-150/60°	2	<b>1.26</b>	1.26	1.36	1.15	12%
S-Cs/0°	6	<b>1.00</b>	1.00	1.08	0.91	6%
S-Co/0°	6	<b>0.96</b>	0.96	1.02	0.91	4%
N-150/Cs-137	2	<b>1.12</b>	1.12	1.13	1.11	1%
<b>All</b>	<b>22</b>	<b>1.02</b>	<b>1.07</b>	<b>1.66</b>	<b>0.78</b>	<b>19%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 15: (OSL) for dose quantity Hp(10)

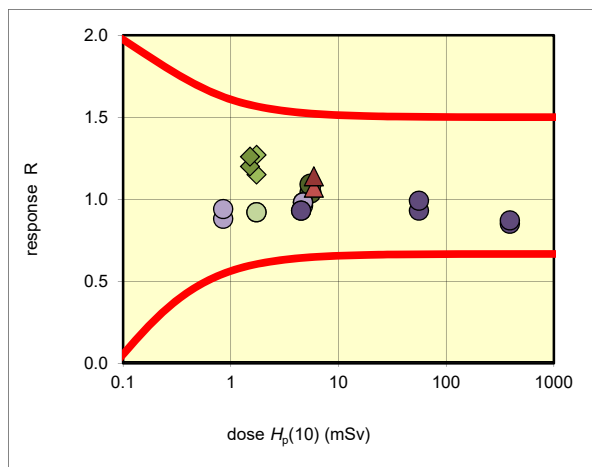
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	4	1.73	1.60	0.92	OK
		31	1.73	1.60	0.92	OK
	N-60/60°	10	1.73	2.00	1.15	OK
		32	1.73	2.20	1.27	OK
	W-110/0°	34	5.50	5.70	1.04	OK
		16	5.50	6.00	1.09	OK
	N-150/60°	19	1.51	1.80	1.20	OK
		5	1.51	1.90	1.26	OK
gamma	S-Cs-S/0°	18	0.85	0.75	0.88	OK
		2	0.85	0.80	0.94	OK
	S-Cs-L/0°	17	4.70	4.60	0.98	OK
		23	4.70	4.50	0.96	OK
		9	4.70	4.60	0.98	OK
		30	4.70	4.60	0.98	OK
	S-Co-L/0°	11	4.50	4.20	0.93	OK
		22	4.50	4.20	0.93	OK
	S-Co-M/0°	12	56.00	52.00	0.93	OK
		26	56.00	55.60	0.99	OK
	S-Co-H/0°	7	390.00	331.00	0.85	OK
		15	390.00	341.00	0.87	OK
mixed	N-150/Cs-137	21	5.90	6.30	1.07	OK
		20	5.90	6.70	1.14	OK
NIR	NIR	1		0.24		
	NIR	3		0.26		
	NIR	6		0.26		
	NIR	8		0.22		
	NIR	13		0.21		
	NIR	14		0.22		
	NIR	24		0.25		
	NIR	25		0.22		
	NIR	27		0.24		
	NIR	28		0.24		
	NIR	29		0.21		
	NIR	33		0.21		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

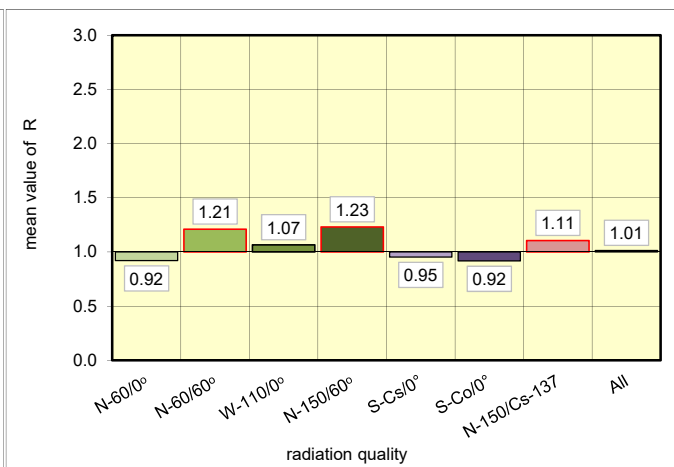
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.92</b>	0.92	0.92	0.92	0%
N-60/60°	2	<b>1.21</b>	1.21	1.27	1.15	7%
W-110/0°	2	<b>1.07</b>	1.07	1.09	1.04	3%
N-150/60°	2	<b>1.23</b>	1.23	1.26	1.20	3%
S-Cs/0°	6	<b>0.97</b>	0.95	0.98	0.88	4%
S-Co/0°	6	<b>0.93</b>	0.92	0.99	0.85	5%
N-150/Cs-137	2	<b>1.11</b>	1.11	1.14	1.07	4%
<b>All</b>	<b>22</b>	<b>0.98</b>	<b>1.01</b>	<b>1.27</b>	<b>0.85</b>	<b>12%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 15: (OSL) for dose quantity Hp(0.07)

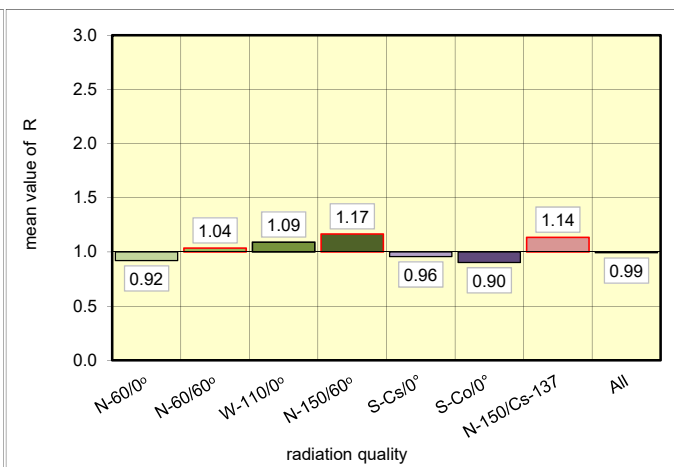
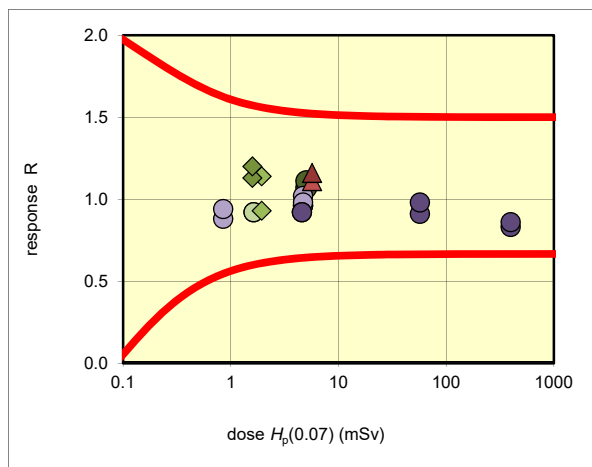
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	4	1.63	1.50	0.92	OK
		31	1.63	1.50	0.92	OK
	N-60/60°	10	1.94	1.80	0.93	OK
		32	1.94	2.20	1.14	OK
	W-110/0°	34	5.03	5.40	1.07	OK
		16	5.03	5.60	1.11	OK
	N-150/60°	19	1.59	1.80	1.13	OK
		5	1.59	1.90	1.20	OK
gamma	S-Cs-S/0°	18	0.85	0.75	0.88	OK
		2	0.85	0.80	0.94	OK
	S-Cs-L/0°	17	4.70	4.50	0.96	OK
		23	4.70	4.50	0.96	OK
		9	4.70	4.80	1.02	OK
		30	4.70	4.60	0.98	OK
	S-Co-L/0°	11	4.58	4.20	0.92	OK
		22	4.58	4.20	0.92	OK
	S-Co-M/0°	12	57.00	52.00	0.91	OK
		26	57.00	55.60	0.98	OK
	S-Co-H/0°	7	397.00	331.00	0.83	OK
		15	397.00	341.00	0.86	OK
mixed	N-150/Cs-137	21	5.68	6.30	1.11	OK
		20	5.68	6.60	1.16	OK
NIR	NIR	1		0.24		
	NIR	3		0.26		
	NIR	6		0.26		
	NIR	8		0.22		
	NIR	13		0.21		
	NIR	14		0.22		
	NIR	24		0.25		
	NIR	25		0.22		
	NIR	27		0.24		
	NIR	28		0.24		
	NIR	29		0.21		
	NIR	33		0.21		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.92</b>	0.92	0.92	0.92	0%
N-60/60°	2	<b>1.04</b>	1.04	1.14	0.93	14%
W-110/0°	2	<b>1.09</b>	1.09	1.11	1.07	3%
N-150/60°	2	<b>1.17</b>	1.17	1.20	1.13	4%
S-Cs/0°	6	<b>0.96</b>	0.96	1.02	0.88	5%
S-Co/0°	6	<b>0.92</b>	0.90	0.98	0.83	6%
N-150/Cs-137	2	<b>1.14</b>	1.14	1.16	1.11	3%
<b>All</b>	<b>22</b>	<b>0.96</b>	<b>0.99</b>	<b>1.20</b>	<b>0.83</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 16: (OSL) for dose quantity Hp(10)

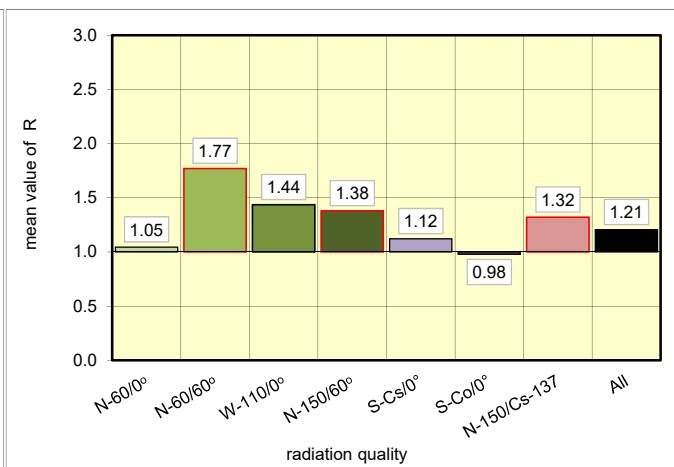
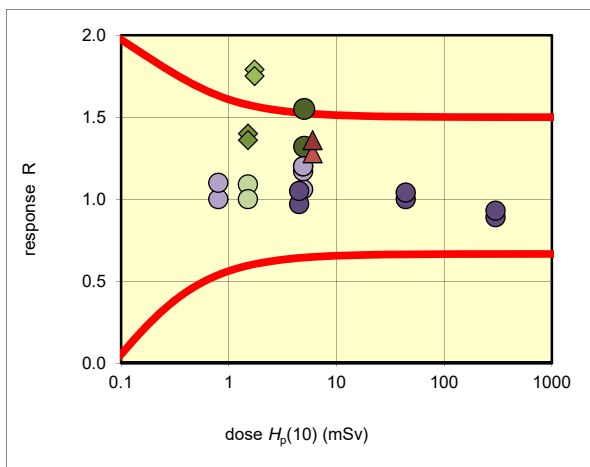
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	18	1.51	1.65	1.09	OK
		9	1.51	1.51	1.00	OK
	N-60/60°	10	1.73	3.11	1.79	outlier
		8	1.73	3.03	1.75	outlier
	W-110/0°	25	5.00	6.59	1.32	OK
		28	5.00	7.77	1.55	outlier
	N-150/60°	14	1.51	2.11	1.40	OK
		32	1.51	2.05	1.36	OK
gamma	S-Cs-S/0°	31	0.80	0.80	1.00	OK
		26	0.80	0.88	1.10	OK
	S-Cs-L/0°	11	4.90	5.20	1.06	OK
		6	4.90	5.76	1.17	OK
		2	4.90	5.89	1.20	OK
		4	4.90	5.89	1.20	OK
	S-Co-L/0°	22	4.50	4.39	0.97	OK
		29	4.50	4.73	1.05	OK
	S-Co-M/0°	24	44.00	44.22	1.00	OK
		20	44.00	45.70	1.04	OK
	S-Co-H/0°	33	300.00	265.53	0.89	OK
		19	300.00	277.60	0.93	OK
mixed	N-150/Cs-137	13	6.00	7.67	1.28	OK
		12	6.00	8.14	1.36	OK
NIR	NIR	1		0.48		
	NIR	3		0.43		
	NIR	5		0.41		
	NIR	7		0.44		
	NIR	15		0.40		
	NIR	16		0.44		
	NIR	17		0.33		
	NIR	21		0.37		
	NIR	23		0.41		
	NIR	27		0.44		
	NIR	30		0.35		
	NIR	34		0.46		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.05	1.05	1.09	1.00	6%
N-60/60°	2	1.77	1.77	1.79	1.75	2%
W-110/0°	2	1.44	1.44	1.55	1.32	11%
N-150/60°	2	1.38	1.38	1.40	1.36	2%
S-Cs/0°	6	1.14	1.12	1.20	1.00	7%
S-Co/0°	6	0.99	0.98	1.05	0.89	6%
N-150/Cs-137	2	1.32	1.32	1.36	1.28	4%
All	22	1.14	1.21	1.79	0.89	21%

outliers: 3 of 22

fraction of outliers: 14%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 16: (OSL) for dose quantity Hp(0.07)

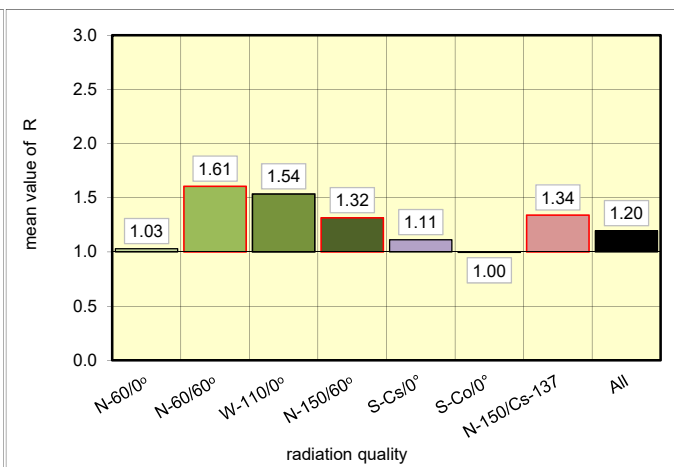
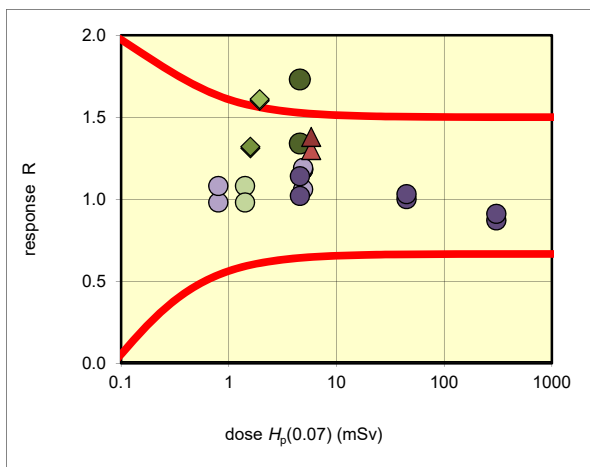
true values reported by the irradiating laboratory				values reported by participant	results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	18	1.42	1.53	1.08	OK
		9	1.42	1.39	0.98	OK
	N-60/60°	10	1.94	3.11	1.60	outlier
		8	1.94	3.12	1.61	outlier
	W-110/0°	25	4.57	6.15	1.34	OK
		28	4.57	7.93	1.73	outlier
	N-150/60°	14	1.59	2.08	1.31	OK
		32	1.59	2.10	1.32	OK
gamma	S-Cs-S/0°	31	0.80	0.79	0.98	OK
		26	0.80	0.87	1.08	OK
	S-Cs-L/0°	11	4.90	5.21	1.06	OK
		6	4.90	5.77	1.18	OK
		2	4.90	5.80	1.18	OK
		4	4.90	5.81	1.19	OK
	S-Co-L/0°	22	4.58	5.23	1.14	OK
		29	4.58	4.66	1.02	OK
	S-Co-M/0°	24	44.80	44.91	1.00	OK
		20	44.80	46.25	1.03	OK
	S-Co-H/0°	33	305.00	265.54	0.87	OK
		19	305.00	277.61	0.91	OK
mixed	N-150/Cs-137	13	5.82	7.56	1.30	OK
		12	5.82	8.04	1.38	OK
NIR	1			0.47		
	3			0.44		
	5			0.41		
	7			0.45		
	15			0.39		
	16			0.43		
	17			0.30		
	21			0.34		
	23			0.41		
	27			0.43		
	30			0.32		
	34			0.45		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.03	1.03	1.08	0.98	7%
N-60/60°	2	1.61	1.61	1.61	1.60	0%
W-110/0°	2	1.54	1.54	1.73	1.34	18%
N-150/60°	2	1.32	1.32	1.32	1.31	1%
S-Cs/0°	6	1.13	1.11	1.19	0.98	8%
S-Co/0°	6	1.01	1.00	1.14	0.87	10%
N-150/Cs-137	2	1.34	1.34	1.38	1.30	4%
<b>All</b>	<b>22</b>	<b>1.16</b>	<b>1.20</b>	<b>1.73</b>	<b>0.87</b>	<b>20%</b>

outliers: 3 of 22

fraction of outliers: 14%



Results: IC2018

## Reporting number 17: (OSL) for dose quantity Hp(10)

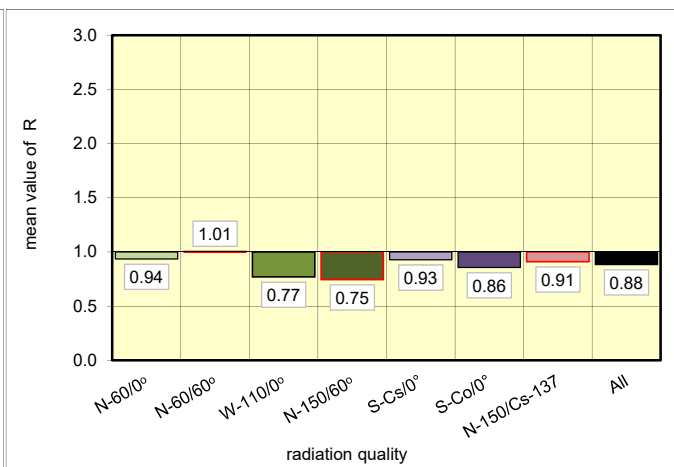
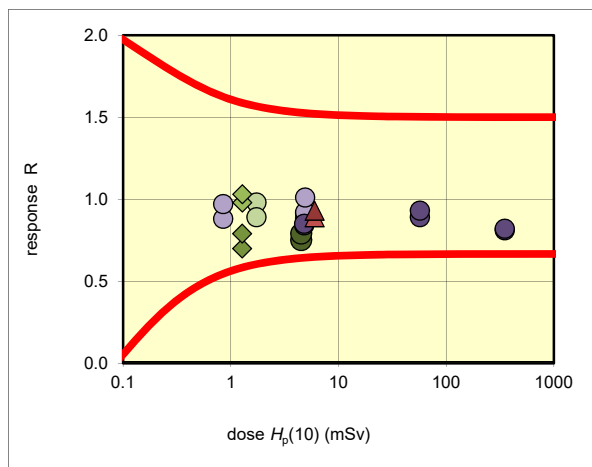
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	2	1.73	1.70	0.98	OK
		32	1.73	1.55	0.89	OK
	N-60/60°	34	1.28	1.26	0.98	OK
		24	1.28	1.31	1.03	OK
	W-110/0°	23	4.50	3.39	0.75	OK
		27	4.50	3.55	0.79	OK
N-150/60°	30	1.28	0.90	0.70	OK	
	1	1.28	1.00	0.79	OK	
gamma	S-Cs-S/0°	28	0.85	0.75	0.88	OK
		22	0.85	0.82	0.97	OK
	S-Cs-L/0°	25	4.90	4.32	0.88	OK
		29	4.90	4.45	0.91	OK
		5	4.90	4.53	0.92	OK
		18	4.90	4.95	1.01	OK
	S-Co-L/0°	26	4.80	4.04	0.84	OK
		13	4.80	4.08	0.85	OK
	S-Co-M/0°	12	57.00	50.69	0.89	OK
		11	57.00	53.21	0.93	OK
	S-Co-H/0°	14	350.00	283.02	0.81	OK
		9	350.00	288.52	0.82	OK
mixed	N-150/Cs-137	4	6.00	5.36	0.89	OK
		3	6.00	5.60	0.93	OK
NIR	NIR	6		0.25		
	NIR	7		0.25		
	NIR	8		0.28		
	NIR	10		0.26		
	NIR	15		0.24		
	NIR	16		0.27		
	NIR	17		0.24		
	NIR	19		0.24		
	NIR	20		0.29		
	NIR	21		0.25		
	NIR	31		0.29		
	NIR	33		0.26		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.94</b>	0.94	0.98	0.89	7%
N-60/60°	2	<b>1.01</b>	1.01	1.03	0.98	4%
W-110/0°	2	<b>0.77</b>	0.77	0.79	0.75	4%
N-150/60°	2	<b>0.75</b>	0.75	0.79	0.70	9%
S-Cs/0°	6	<b>0.92</b>	0.93	1.01	0.88	6%
S-Co/0°	6	<b>0.85</b>	0.86	0.93	0.81	5%
N-150/Cs-137	2	<b>0.91</b>	0.91	0.93	0.89	3%
<b>All</b>	<b>22</b>	<b>0.89</b>	<b>0.88</b>	<b>1.03</b>	<b>0.70</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 17: (OSL) for dose quantity Hp(0.07)

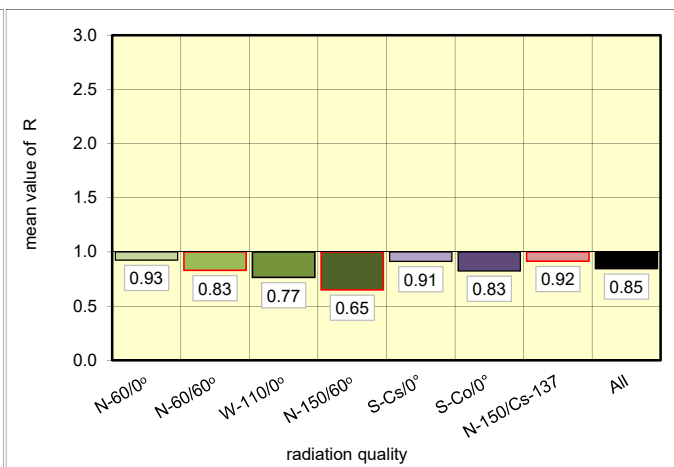
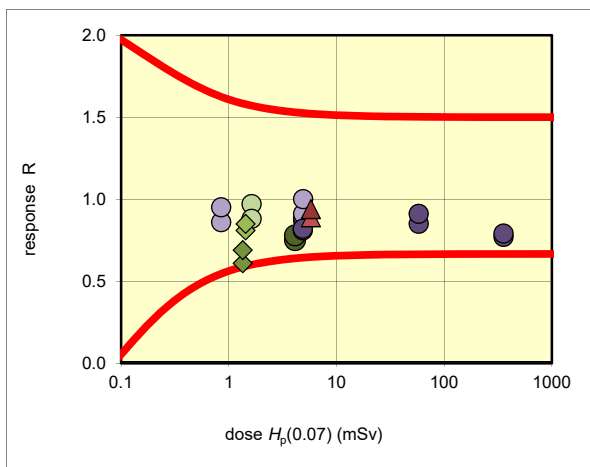
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	2	1.63	1.57	0.97	OK
		32	1.63	1.44	0.88	OK
	N-60/60°	34	1.43	1.16	0.81	OK
		24	1.43	1.22	0.85	OK
	W-110/0°	23	4.12	3.07	0.75	OK
		27	4.12	3.22	0.78	OK
N-150/60°	30	1.35	0.82	0.61	OK	
	1	1.35	0.92	0.69	OK	
gamma	S-Cs-S/0°	28	0.85	0.74	0.86	OK
		22	0.85	0.81	0.95	OK
	S-Cs-L/0°	25	4.90	4.25	0.87	OK
		29	4.90	4.38	0.89	OK
		5	4.90	4.46	0.91	OK
		18	4.90	4.91	1.00	OK
	S-Co-L/0°	26	4.88	3.96	0.81	OK
		13	4.88	4.00	0.82	OK
	S-Co-M/0°	12	58.00	49.58	0.85	OK
		11	58.00	52.60	0.91	OK
S-Co-H/0°	14	356.00	275.21	0.77	OK	
	9	356.00	282.23	0.79	OK	
mixed	N-150/Cs-137	4	5.78	5.16	0.89	OK
		3	5.78	5.45	0.94	OK
NIR	NIR	6		0.25		
	NIR	7		0.25		
	NIR	8		0.28		
	NIR	10		0.26		
	NIR	15		0.24		
	NIR	16		0.27		
	NIR	17		0.24		
	NIR	19		0.24		
	NIR	20		0.29		
	NIR	21		0.25		
	NIR	31		0.29		
	NIR	33		0.26		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.93</b>	0.93	0.97	0.88	7%
N-60/60°	2	<b>0.83</b>	0.83	0.85	0.81	3%
W-110/0°	2	<b>0.77</b>	0.77	0.78	0.75	3%
N-150/60°	2	<b>0.65</b>	0.65	0.69	0.61	9%
S-Cs/0°	6	<b>0.90</b>	0.91	1.00	0.86	6%
S-Co/0°	6	<b>0.82</b>	0.83	0.91	0.77	6%
N-150/Cs-137	2	<b>0.92</b>	0.92	0.94	0.89	4%
<b>All</b>	<b>22</b>	<b>0.86</b>	<b>0.85</b>	<b>1.00</b>	<b>0.61</b>	<b>11%</b>

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 18: (OSL) for dose quantity Hp(10)

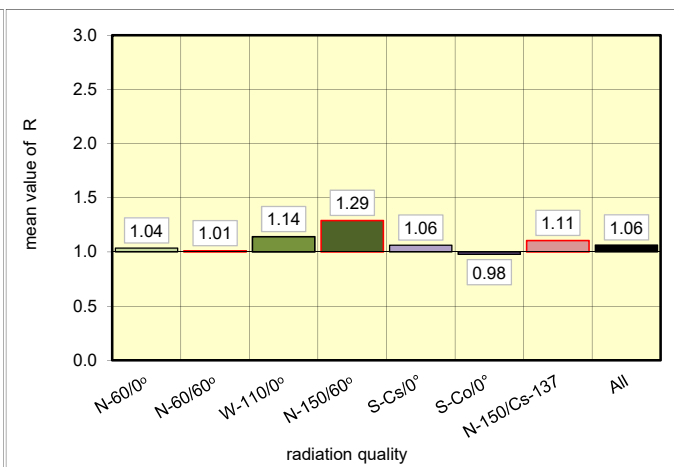
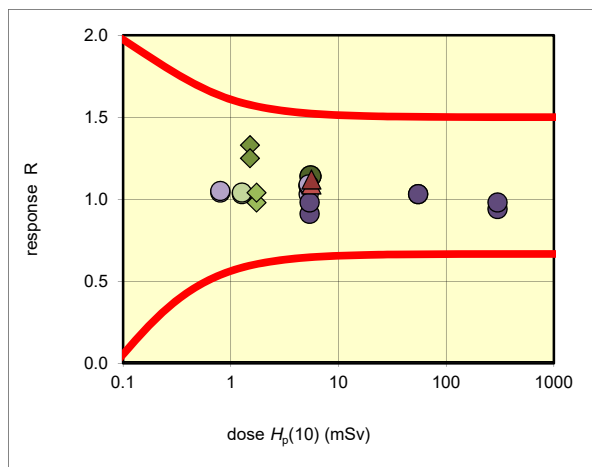
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	17	1.27	1.31	1.03	OK
		15	1.27	1.32	1.04	OK
	N-60/60°	6	1.73	1.70	0.98	OK
		16	1.73	1.81	1.04	OK
	W-110/0°	11	5.50	6.28	1.14	OK
		28	5.50	6.26	1.14	OK
N-150/60°	23	1.51	2.00	1.33	OK	
	1	1.51	1.88	1.25	OK	
gamma	S-Cs-S/0°	25	0.80	0.83	1.04	OK
		30	0.80	0.84	1.05	OK
	S-Cs-L/0°	12	5.30	5.45	1.03	OK
		8	5.30	5.72	1.08	OK
		27	5.30	5.70	1.08	OK
		26	5.30	5.76	1.09	OK
	S-Co-L/0°	19	5.40	4.94	0.91	OK
		22	5.40	5.28	0.98	OK
	S-Co-M/0°	9	55.00	56.42	1.03	OK
		10	55.00	56.92	1.03	OK
	S-Co-H/0°	31	300.00	283.45	0.94	OK
		34	300.00	293.25	0.98	OK
mixed	N-150/Cs-137	24	5.60	6.11	1.09	OK
		21	5.60	6.27	1.12	OK
	WIR	3	-	-	-	-
	WIR	4	-	-	-	-
	WIR	5	-	-	-	-
	WIR	33	-	-	-	-
	NIR	2	-	0.00	-	-
	NIR	7	-	0.00	-	-
	NIR	13	-	0.00	-	-
	NIR	14	-	0.00	-	-
	NIR	18	-	0.00	-	-
	NIR	20	-	0.01	-	-
	NIR	29	-	0.00	-	-
	NIR	32	-	0.00	-	-

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.04	1.04	1.04	1.03	1%
N-60/60°	2	1.01	1.01	1.04	0.98	4%
W-110/0°	2	1.14	1.14	1.14	1.14	0%
N-150/60°	2	1.29	1.29	1.33	1.25	4%
S-Cs/0°	6	1.07	1.06	1.09	1.03	2%
S-Co/0°	6	0.98	0.98	1.03	0.91	5%
N-150/Cs-137	2	1.11	1.11	1.12	1.09	2%
<b>All</b>	<b>22</b>	<b>1.04</b>	<b>1.06</b>	<b>1.33</b>	<b>0.91</b>	<b>9%</b>

outliers: 0 of 22

fraction of outliers: 0%



Results: IC2018

## Reporting number 18: (OSL) for dose quantity Hp(0.07)

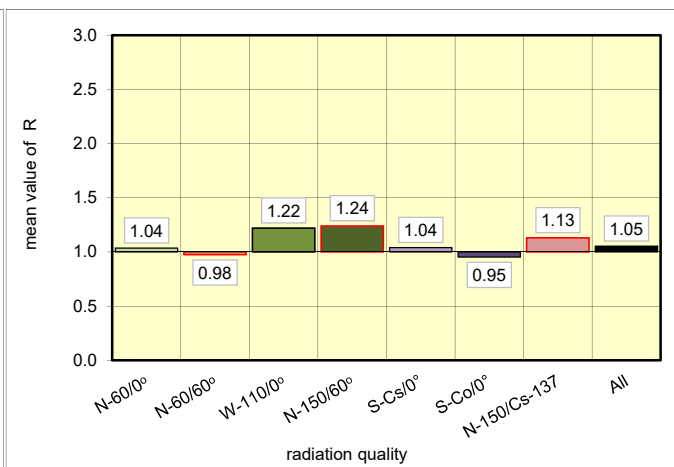
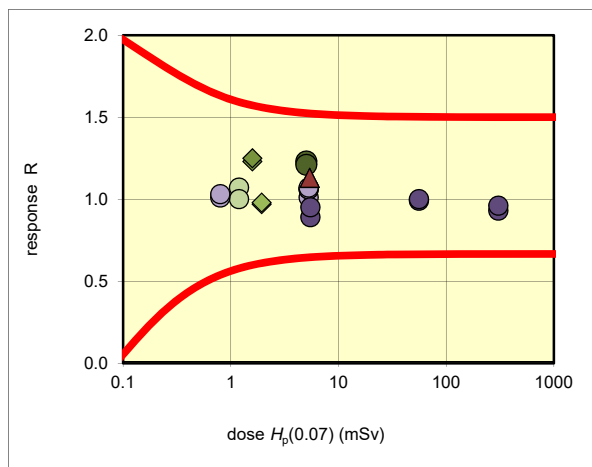
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	17	1.20	1.28	1.07	OK
		15	1.20	1.20	1.00	OK
	N-60/60°	6	1.94	1.88	0.97	OK
		16	1.94	1.89	0.98	OK
	W-110/0°	11	5.03	6.17	1.23	OK
		28	5.03	6.07	1.21	OK
	N-150/60°	23	1.59	1.96	1.23	OK
		1	1.59	1.98	1.25	OK
gamma	S-Cs-S/0°	25	0.80	0.81	1.01	OK
		30	0.80	0.82	1.03	OK
	S-Cs-L/0°	12	5.30	5.36	1.01	OK
		8	5.30	5.63	1.06	OK
		27	5.30	5.61	1.06	OK
		26	5.30	5.66	1.07	OK
	S-Co-L/0°	19	5.49	4.86	0.89	OK
		22	5.49	5.20	0.95	OK
	S-Co-M/0°	9	56.00	55.48	0.99	OK
		10	56.00	55.96	1.00	OK
	S-Co-H/0°	31	305.00	283.45	0.93	OK
		34	305.00	293.25	0.96	OK
mixed	N-150/Cs-137	24	5.41	6.13	1.13	OK
		21	5.41	6.12	1.13	OK
NIR	WIR	3	-	-	-	-
	WIR	4	-	-	-	-
	WIR	5	-	-	-	-
	WIR	33	-	-	-	-
	NIR	2	0.00	0.00	0.00	0.00
	NIR	7	0.00	0.00	0.00	0.00
	NIR	13	0.00	0.00	0.00	0.00
	NIR	14	0.00	0.00	0.00	0.00
	NIR	18	0.00	0.00	0.00	0.00
	NIR	20	0.00	0.00	0.00	0.00
	NIR	29	0.00	0.00	0.00	0.00
	NIR	32	0.00	0.00	0.00	0.00

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.04	1.04	1.07	1.00	5%
N-60/60°	2	0.98	0.98	0.98	0.97	1%
W-110/0°	2	1.22	1.22	1.23	1.21	1%
N-150/60°	2	1.24	1.24	1.25	1.23	1%
S-Cs/0°	6	1.05	1.04	1.07	1.01	3%
S-Co/0°	6	0.96	0.95	1.00	0.89	4%
N-150/Cs-137	2	1.13	1.13	1.13	1.13	0%
All	22	1.02	1.05	1.25	0.89	10%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 19: (OSL) for dose quantity Hp(10)

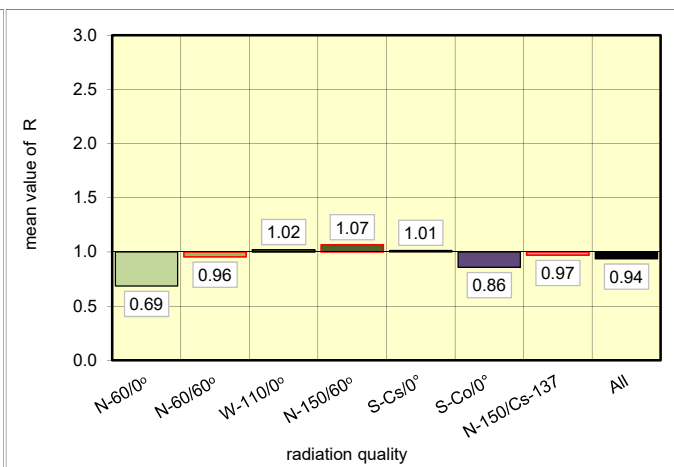
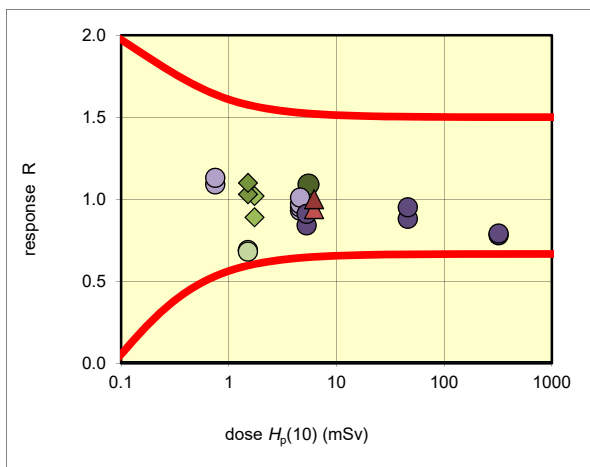
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	8	1.51	1.04	0.69	OK
		23	1.51	1.02	0.68	OK
	N-60/60°	11	1.73	1.55	0.89	OK
		16	1.73	1.77	1.02	OK
	W-110/0°	20	5.50	5.23	0.95	OK
		6	5.50	5.99	1.09	OK
gamma	N-150/60°	10	1.51	1.55	1.03	OK
		18	1.51	1.66	1.10	OK
	S-Cs-S/0°	15	0.75	0.82	1.09	OK
		2	0.75	0.85	1.13	OK
	S-Cs-L/0°	31	4.60	4.27	0.93	OK
		14	4.60	4.35	0.95	OK
		34	4.60	4.47	0.97	OK
	S-Co-L/0°	9	4.60	4.63	1.01	OK
		19	5.30	4.47	0.84	OK
	S-Co-M/0°	17	5.30	4.82	0.91	OK
29		46.00	40.28	0.88	OK	
33		46.00	43.83	0.95	OK	
S-Co-H/0°	22	320.00	250.40	0.78	OK	
	25	320.00	252.56	0.79	OK	
mixed	N-150/Cs-137	3	6.20	5.81	0.94	OK
		1	6.20	6.20	1.00	OK
NIR	NIR	4		0.64		
		5		0.73		
		7		0.65		
		12		0.50		
		13		0.76		
		21		0.62		
		24		0.73		
		26		0.78		
		27		0.70		
		28		0.65		
		30		0.70		
		32		0.73		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.69</b>	0.69	0.69	0.68	1%
N-60/60°	2	<b>0.96</b>	0.96	1.02	0.89	10%
W-110/0°	2	<b>1.02</b>	1.02	1.09	0.95	10%
N-150/60°	2	<b>1.07</b>	1.07	1.10	1.03	5%
S-Cs/0°	6	<b>0.99</b>	1.01	1.13	0.93	8%
S-Co/0°	6	<b>0.86</b>	0.86	0.95	0.78	8%
N-150/Cs-137	2	<b>0.97</b>	0.97	1.00	0.94	4%
<b>All</b>	<b>22</b>	<b>0.95</b>	<b>0.94</b>	<b>1.13</b>	<b>0.68</b>	<b>13%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 19: (OSL) for dose quantity Hp(0.07)

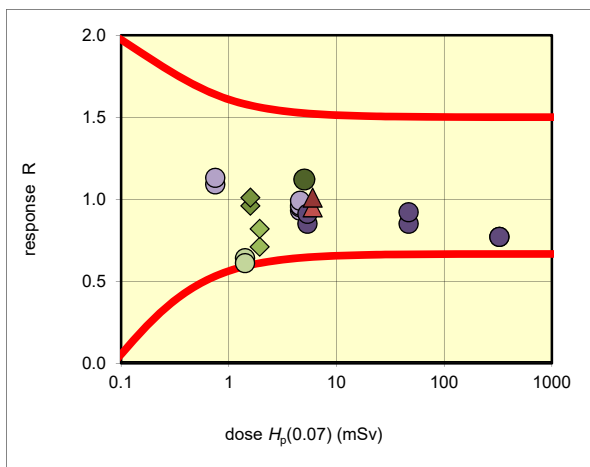
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	8	1.42	0.90	0.64	OK
		23	1.42	0.87	0.61	OK
	N-60/60°	11	1.94	1.37	0.71	OK
		16	1.94	1.59	0.82	OK
	W-110/0°	20	5.03	4.79	0.95	OK
		6	5.03	5.65	1.12	OK
	N-150/60°	10	1.59	1.52	0.96	OK
		18	1.59	1.60	1.01	OK
gamma	S-Cs-S/0°	15	0.75	0.82	1.09	OK
		2	0.75	0.85	1.13	OK
	S-Cs-L/0°	31	4.60	4.27	0.93	OK
		14	4.60	4.35	0.95	OK
		34	4.60	4.41	0.96	OK
		9	4.60	4.57	0.99	OK
	S-Co-L/0°	19	5.39	4.59	0.85	OK
		17	5.39	4.89	0.91	OK
	S-Co-M/0°	29	46.80	39.80	0.85	OK
		33	46.80	43.16	0.92	OK
	S-Co-H/0°	22	326.00	250.40	0.77	OK
		25	326.00	252.56	0.77	OK
mixed	N-150/Cs-137	3	6.01	5.68	0.95	OK
		1	6.01	6.10	1.01	OK
NIR	NIR	4		0.60		
		5		0.72		
		7		0.60		
		12		0.45		
		13		0.80		
		21		0.57		
		24		0.72		
		26		0.77		
		27		0.68		
		28		0.62		
		30		0.68		
		32		0.72		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

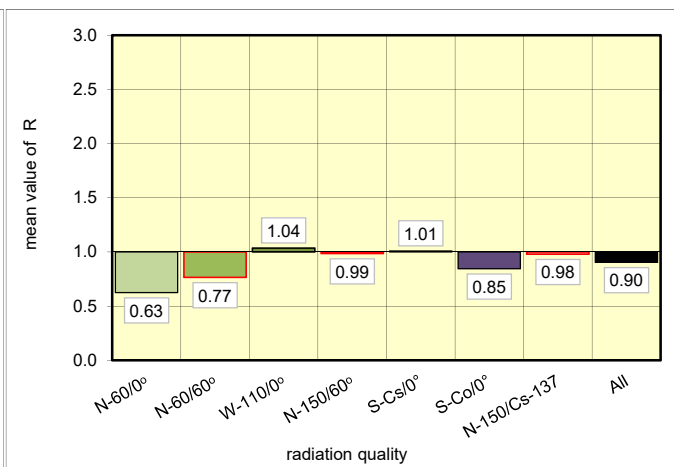
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.63</b>	0.63	0.64	0.61	3%
N-60/60°	2	<b>0.77</b>	0.77	0.82	0.71	10%
W-110/0°	2	<b>1.04</b>	1.04	1.12	0.95	12%
N-150/60°	2	<b>0.99</b>	0.99	1.01	0.96	4%
S-Cs/0°	6	<b>0.98</b>	1.01	1.13	0.93	8%
S-Co/0°	6	<b>0.85</b>	0.85	0.92	0.77	8%
N-150/Cs-137	2	<b>0.98</b>	0.98	1.01	0.95	4%
<b>All</b>	<b>22</b>	<b>0.94</b>	<b>0.90</b>	<b>1.13</b>	<b>0.61</b>	<b>16%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 20: (OSL) for dose quantity Hp(10)

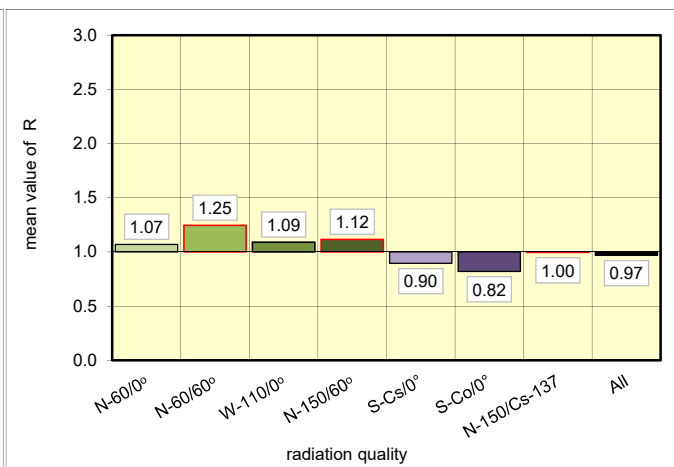
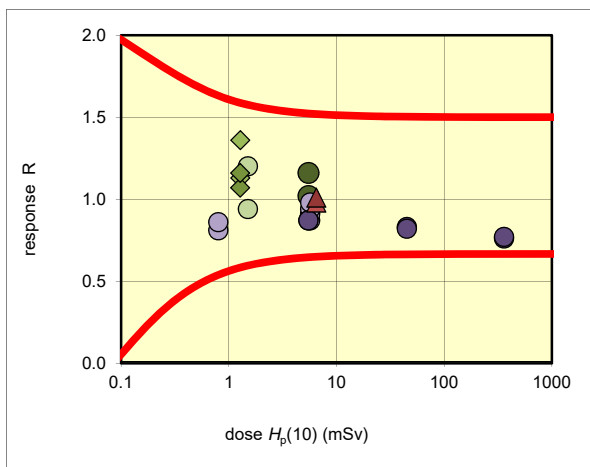
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	21	1.51	1.81	1.20	OK
		13	1.51	1.41	0.94	OK
	N-60/60°	32	1.28	1.44	1.13	OK
		18	1.28	1.74	1.36	OK
	W-110/0°	11	5.50	5.62	1.02	OK
		6	5.50	6.40	1.16	OK
N-150/60°	33	1.28	1.36	1.07	OK	
	22	1.28	1.48	1.16	OK	
gamma	S-Cs-S/0°	12	0.80	0.65	0.81	OK
		24	0.80	0.69	0.86	OK
	S-Cs-L/0°	15	5.70	4.94	0.87	OK
		28	5.70	5.21	0.91	OK
		29	5.70	5.36	0.94	OK
		14	5.70	5.56	0.98	OK
	S-Co-L/0°	5	5.50	4.77	0.87	OK
		9	5.50	4.80	0.87	OK
	S-Co-M/0°	10	45.00	37.45	0.83	OK
		23	45.00	36.94	0.82	OK
S-Co-H/0°	31	360.00	274.81	0.76	OK	
	34	360.00	278.07	0.77	OK	
mixed	N-150/Cs-137	1	6.50	6.37	0.98	OK
		20	6.50	6.58	1.01	OK
NIR	NIR	2		0.25		
	NIR	3		0.36		
	NIR	4		0.33		
	NIR	7		0.34		
	NIR	8		0.34		
	NIR	16		0.39		
	NIR	17		0.27		
	NIR	19		0.28		
	NIR	25		0.36		
	NIR	26		0.30		
	NIR	27		0.37		
NIR	30		0.33			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.07	1.07	1.20	0.94	17%
N-60/60°	2	1.25	1.25	1.36	1.13	13%
W-110/0°	2	1.09	1.09	1.16	1.02	9%
N-150/60°	2	1.12	1.12	1.16	1.07	6%
S-Cs/0°	6	0.89	0.90	0.98	0.81	7%
S-Co/0°	6	0.83	0.82	0.87	0.76	6%
N-150/Cs-137	2	1.00	1.00	1.01	0.98	2%
<b>All</b>	<b>22</b>	<b>0.94</b>	<b>0.97</b>	<b>1.36</b>	<b>0.76</b>	<b>16%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 20: (OSL) for dose quantity Hp(0.07)

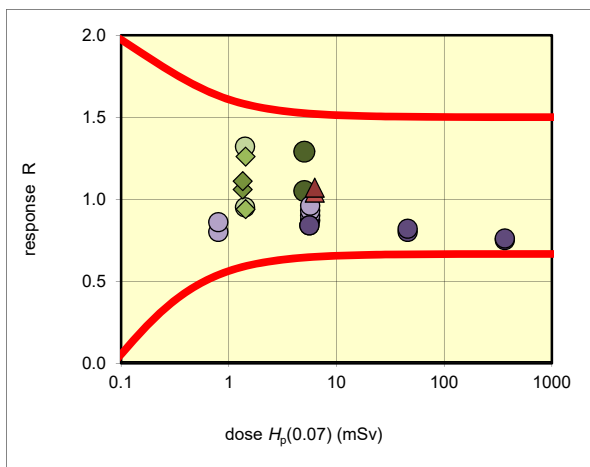
true values reported by the irradiating laboratory				values reported by participant		results	
radiation quality		dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv		response R (reported/true)	
x-ray	N-60/0°	21	1.42	1.87	1.32	OK	
		13	1.42	1.35	0.95	OK	
	N-60/60°	32	1.43	1.34	0.94	OK	
		18	1.43	1.80	1.26	OK	
	W-110/0°	11	5.03	5.27	1.05	OK	
		6	5.03	6.48	1.29	OK	
	N-150/60°	33	1.35	1.43	1.06	OK	
		22	1.35	1.49	1.11	OK	
gamma	S-Cs-S/0°	12	0.80	0.64	0.80	OK	
		24	0.80	0.69	0.86	OK	
	S-Cs-L/0°	15	5.70	4.94	0.87	OK	
		28	5.70	5.13	0.90	OK	
		29	5.70	5.29	0.93	OK	
		14	5.70	5.49	0.96	OK	
	S-Co-L/0°	5	5.60	4.70	0.84	OK	
		9	5.60	4.73	0.84	OK	
	S-Co-M/0°	10	45.80	36.81	0.80	OK	
		23	45.80	37.35	0.82	OK	
	S-Co-H/0°	31	366.00	274.81	0.75	OK	
		34	366.00	278.07	0.76	OK	
mixed	N-150/Cs-137	1	6.27	6.54	1.04	OK	
		20	6.27	6.71	1.07	OK	
NIR	NIR	2		0.24			
	NIR	3		0.35			
	NIR	4		0.33			
	NIR	7		0.34			
	NIR	8		0.34			
	NIR	16		0.38			
	NIR	17		0.27			
	NIR	19		0.27			
	NIR	25		0.35			
	NIR	26		0.30			
	NIR	27		0.36			
	NIR	30		0.33			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

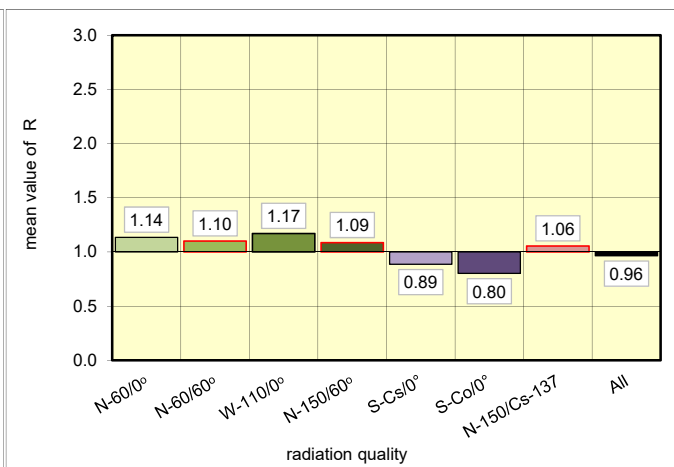
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.14	1.14	1.32	0.95	23%
N-60/60°	2	1.10	1.10	1.26	0.94	21%
W-110/0°	2	1.17	1.17	1.29	1.05	15%
N-150/60°	2	1.09	1.09	1.11	1.06	3%
S-Cs/0°	6	0.89	0.89	0.96	0.80	6%
S-Co/0°	6	0.81	0.80	0.84	0.75	5%
N-150/Cs-137	2	1.06	1.06	1.07	1.04	2%
All	22	0.94	0.96	1.32	0.75	17%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 21: (OSL) for dose quantity Hp(10)

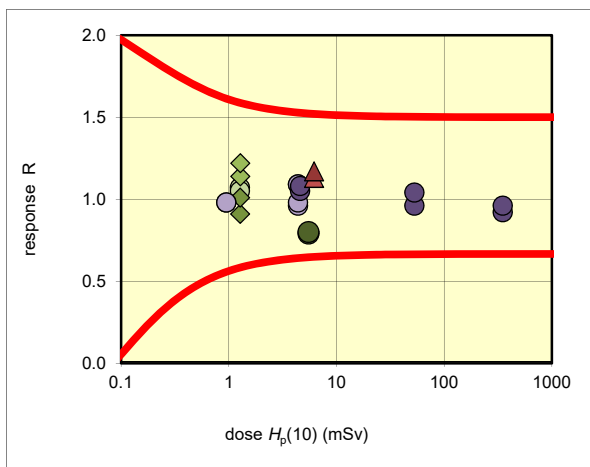
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	30	1.27	1.36	1.07	OK
		23	1.27	1.34	1.05	OK
	N-60/60°	10	1.28	1.46	1.14	OK
		22	1.28	1.56	1.22	OK
	W-110/0°	8	5.50	4.36	0.79	OK
		4	5.50	4.41	0.80	OK
N-150/60°	31	1.28	1.16	0.91	OK	
	28	1.28	1.29	1.01	OK	
gamma	S-Cs-S/0°	5	0.95	0.93	0.98	OK
		7	0.95	0.93	0.98	OK
	S-Cs-L/0°	13	4.40	4.24	0.96	OK
		33	4.40	4.29	0.98	OK
		12	4.40	4.79	1.09	OK
		34	4.40	4.80	1.09	OK
	S-Co-L/0°	18	4.60	4.84	1.05	OK
		17	4.60	4.95	1.08	OK
	S-Co-M/0°	25	53.00	51.14	0.96	OK
		20	53.00	54.90	1.04	OK
S-Co-H/0°	3	350.00	322.39	0.92	OK	
	6	350.00	336.19	0.96	OK	
mixed	N-150/Cs-137	29	6.20	6.99	1.13	OK
		26	6.20	7.24	1.17	OK
NIR	NIR	1		0.94		
	NIR	2		0.93		
	NIR	9		0.99		
	NIR	11		0.92		
	NIR	14		0.92		
	NIR	15		0.94		
	NIR	16		0.93		
	NIR	19		1.04		
	NIR	21		0.89		
	NIR	24		1.03		
	NIR	27		1.05		
	NIR	32		0.98		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

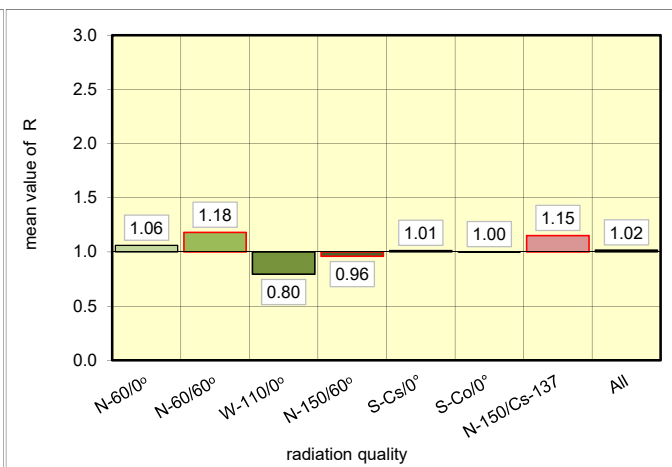
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.06</b>	1.06	1.07	1.05	1%
N-60/60°	2	<b>1.18</b>	1.18	1.22	1.14	5%
W-110/0°	2	<b>0.80</b>	0.80	0.80	0.79	1%
N-150/60°	2	<b>0.96</b>	0.96	1.01	0.91	7%
S-Cs/0°	6	<b>0.98</b>	1.01	1.09	0.96	6%
S-Co/0°	6	<b>1.00</b>	1.00	1.08	0.92	6%
N-150/Cs-137	2	<b>1.15</b>	1.15	1.17	1.13	2%
<b>All</b>	<b>22</b>	<b>1.03</b>	<b>1.02</b>	<b>1.22</b>	<b>0.79</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 21: (OSL) for dose quantity Hp(0.07)

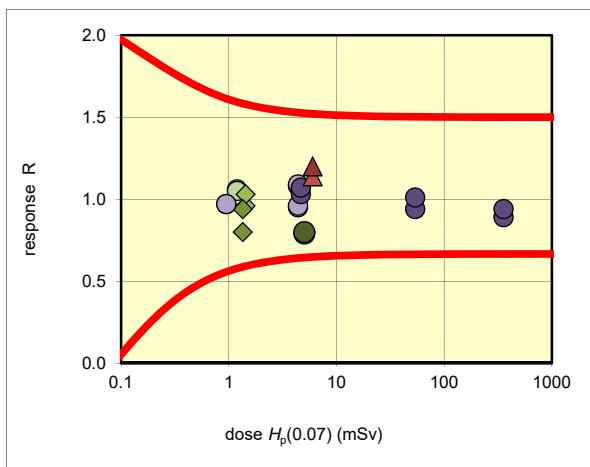
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	30	1.20	1.27	1.06	OK
		23	1.20	1.26	1.05	OK
	N-60/60°	10	1.43	1.37	0.96	OK
		22	1.43	1.47	1.03	OK
	W-110/0°	8	5.03	3.99	0.79	OK
		4	5.03	4.02	0.80	OK
	N-150/60°	31	1.35	1.08	0.80	OK
		28	1.35	1.27	0.94	OK
gamma	S-Cs-S/0°	5	0.95	0.92	0.97	OK
		7	0.95	0.92	0.97	OK
	S-Cs-L/0°	13	4.40	4.17	0.95	OK
		33	4.40	4.24	0.96	OK
		12	4.40	4.74	1.08	OK
		34	4.40	4.81	1.09	OK
	S-Co-L/0°	18	4.68	4.82	1.03	OK
		17	4.68	4.99	1.07	OK
	S-Co-M/0°	25	53.90	50.45	0.94	OK
		20	53.90	54.44	1.01	OK
	S-Co-H/0°	3	356.00	315.86	0.89	OK
		6	356.00	333.01	0.94	OK
mixed	N-150/Cs-137	29	6.01	6.87	1.14	OK
		26	6.01	7.24	1.20	OK
NIR	NIR	1		0.87		
	NIR	2		1.07		
	NIR	9		0.97		
	NIR	11		1.10		
	NIR	14		0.98		
	NIR	15		1.04		
	NIR	16		1.23		
	NIR	19		1.28		
	NIR	21		0.83		
	NIR	24		1.30		
	NIR	27		1.03		
	NIR	32		1.23		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

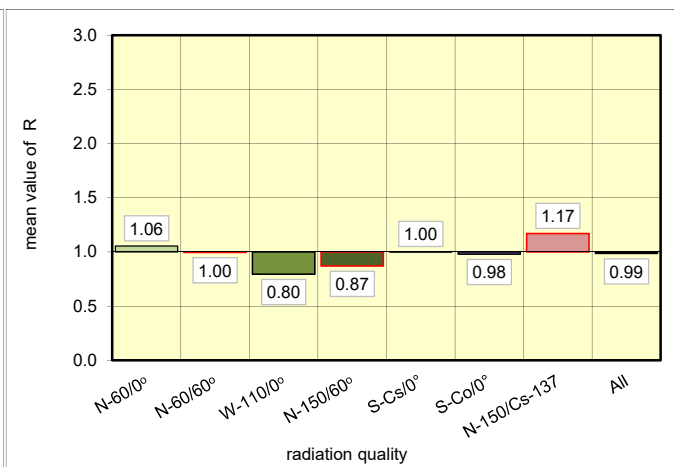
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.06</b>	1.06	1.06	1.05	1%
N-60/60°	2	<b>1.00</b>	1.00	1.03	0.96	5%
W-110/0°	2	<b>0.80</b>	0.80	0.80	0.79	1%
N-150/60°	2	<b>0.87</b>	0.87	0.94	0.80	11%
S-Cs/0°	6	<b>0.97</b>	1.00	1.09	0.95	6%
S-Co/0°	6	<b>0.98</b>	0.98	1.07	0.89	7%
N-150/Cs-137	2	<b>1.17</b>	1.17	1.20	1.14	4%
<b>All</b>	<b>22</b>	<b>0.97</b>	<b>0.99</b>	<b>1.20</b>	<b>0.79</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 22: (OSL) for dose quantity Hp(10)

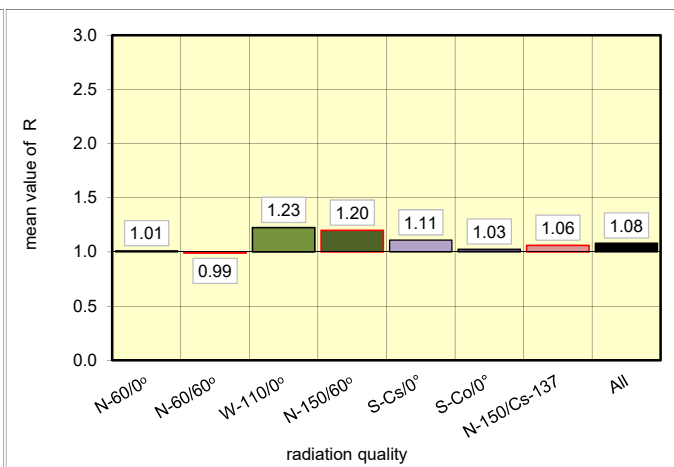
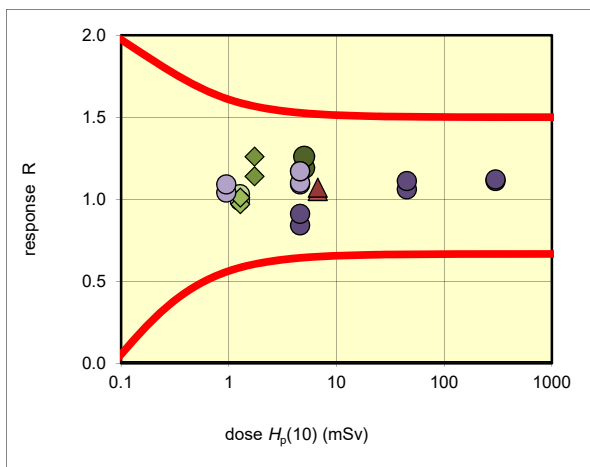
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.27	1.31	1.03	OK
		14	1.27	1.26	0.99	OK
	N-60/60°	22	1.28	1.24	0.97	OK
		33	1.28	1.29	1.01	OK
	W-110/0°	11	5.00	5.93	1.19	OK
		8	5.00	6.32	1.26	OK
N-150/60°	20	1.73	1.97	1.14	OK	
	9	1.73	2.18	1.26	OK	
gamma	S-Cs-S/0°	3	0.95	0.99	1.04	OK
		13	0.95	1.04	1.09	OK
	S-Cs-L/0°	32	4.60	5.02	1.09	OK
		31	4.60	5.07	1.10	OK
		23	4.60	5.37	1.17	OK
		24	4.60	5.38	1.17	OK
	S-Co-L/0°	5	4.60	3.88	0.84	OK
		6	4.60	4.20	0.91	OK
	S-Co-M/0°	28	45.00	47.82	1.06	OK
		4	45.00	49.84	1.11	OK
S-Co-H/0°	30	300.00	333.76	1.11	OK	
	15	300.00	335.32	1.12	OK	
mixed	N-150/Cs-137	2	6.70	7.06	1.05	OK
		1	6.70	7.20	1.07	OK
NIR	NIR	7		0.00		
	NIR	12		0.00		
	NIR	16		0.00		
	NIR	17		0.00		
	NIR	18		0.00		
	NIR	19		0.00		
	NIR	21		0.00		
	NIR	25		0.00		
	NIR	26		0.00		
	NIR	27		0.00		
	NIR	29		0.00		
	NIR	34		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.01	1.01	1.03	0.99	3%
N-60/60°	2	0.99	0.99	1.01	0.97	3%
W-110/0°	2	1.23	1.23	1.26	1.19	4%
N-150/60°	2	1.20	1.20	1.26	1.14	7%
S-Cs/0°	6	1.10	1.11	1.17	1.04	5%
S-Co/0°	6	1.09	1.03	1.12	0.84	12%
N-150/Cs-137	2	1.06	1.06	1.07	1.05	1%
<b>All</b>	<b>22</b>	<b>1.09</b>	<b>1.08</b>	<b>1.26</b>	<b>0.84</b>	<b>9%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 22: (OSL) for dose quantity Hp(0.07)

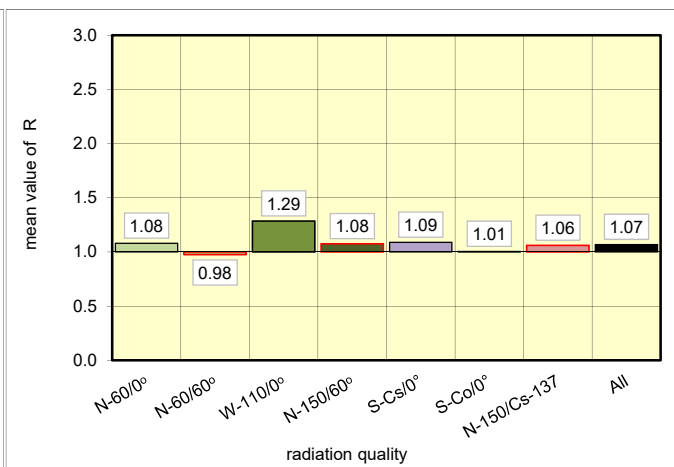
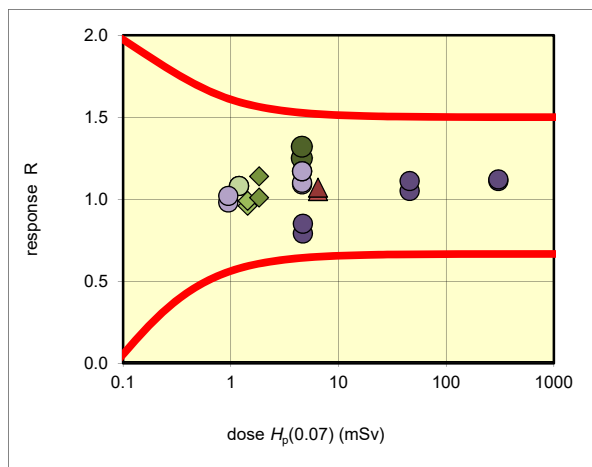
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.20	1.29	1.08	OK
		14	1.20	1.29	1.08	OK
	N-60/60°	22	1.43	1.38	0.96	OK
		33	1.43	1.42	0.99	OK
	W-110/0°	11	4.57	5.71	1.25	OK
		8	4.57	6.02	1.32	OK
N-150/60°	20	1.83	1.85	1.01	OK	
	9	1.83	2.08	1.14	OK	
gamma	S-Cs-S/0°	3	0.95	0.93	0.98	OK
		13	0.95	0.97	1.02	OK
	S-Cs-L/0°	32	4.60	5.02	1.09	OK
		31	4.60	5.07	1.10	OK
		23	4.60	5.37	1.17	OK
		24	4.60	5.38	1.17	OK
	S-Co-L/0°	5	4.68	3.72	0.79	OK
		6	4.68	4.00	0.85	OK
	S-Co-M/0°	28	45.80	48.01	1.05	OK
		4	45.80	50.66	1.11	OK
S-Co-H/0°	30	305.00	339.02	1.11	OK	
	15	305.00	340.08	1.12	OK	
mixed	N-150/Cs-137	2	6.46	6.76	1.05	OK
		1	6.46	6.89	1.07	OK
NIR	NIR	7		0.00		
	NIR	12		0.00		
	NIR	16		0.00		
	NIR	17		0.00		
	NIR	18		0.00		
	NIR	19		0.00		
	NIR	21		0.00		
	NIR	25		0.00		
	NIR	26		0.00		
	NIR	27		0.00		
	NIR	29		0.00		
	NIR	34		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.08	1.08	1.08	1.08	0%
N-60/60°	2	0.98	0.98	0.99	0.96	2%
W-110/0°	2	1.29	1.29	1.32	1.25	4%
N-150/60°	2	1.08	1.08	1.14	1.01	9%
S-Cs/0°	6	1.10	1.09	1.17	0.98	7%
S-Co/0°	6	1.08	1.01	1.12	0.79	15%
N-150/Cs-137	2	1.06	1.06	1.07	1.05	1%
<b>All</b>	<b>22</b>	<b>1.08</b>	<b>1.07</b>	<b>1.32</b>	<b>0.79</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 23: (OSL) for dose quantity Hp(10)

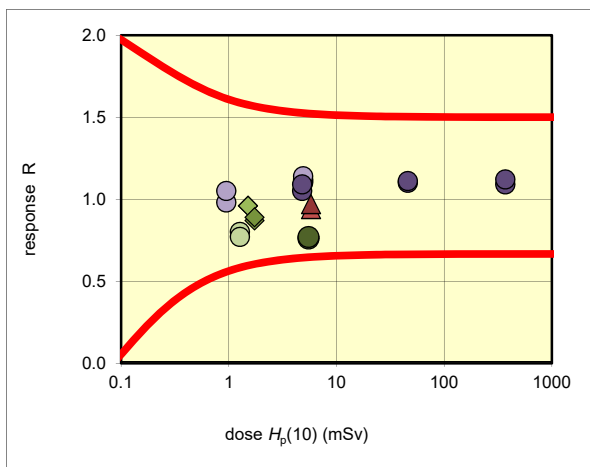
true values reported by the irradiating laboratory			values reported by participant		results		
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)			
x-ray	N-60/0°	32	1.27	1.02	0.80	OK	
		10	1.27	0.99	0.77	OK	
	N-60/60°	14	1.51	1.45	0.96	OK	
		17	1.51	1.45	0.96	OK	
	W-110/0°	11	5.50	4.16	0.76	OK	
		7	5.50	4.24	0.77	OK	
N-150/60°	N-150/60°	29	1.73	1.51	0.87	OK	
		4	1.73	1.54	0.89	OK	
	gamma	S-Cs-S/0°	19	0.95	0.93	0.98	OK
			26	0.95	1.00	1.05	OK
		S-Cs-L/0°	9	4.90	5.40	1.10	OK
			22	4.90	5.42	1.11	OK
25			4.90	5.48	1.12	OK	
S-Co-L/0°		13	4.90	5.61	1.14	OK	
	2	4.80	5.06	1.05	OK		
S-Co-M/0°	1	4.80	5.23	1.09	OK		
	21	46.00	50.80	1.10	OK		
S-Co-H/0°	5	46.00	50.90	1.11	OK		
	34	370.00	405.00	1.09	OK		
mixed	N-150/Cs-137	30	370.00	414.00	1.12	OK	
		27	5.80	5.46	0.94	OK	
NIR	N-150/Cs-137	28	5.80	5.62	0.97	OK	
		3		0.54			
		6		0.55			
		8		0.53			
		12		0.57			
		15		0.47			
		16		0.44			
		18		0.43			
		20		0.49			
		23		0.54			
24		0.54					
31		0.53					
33		0.54					

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

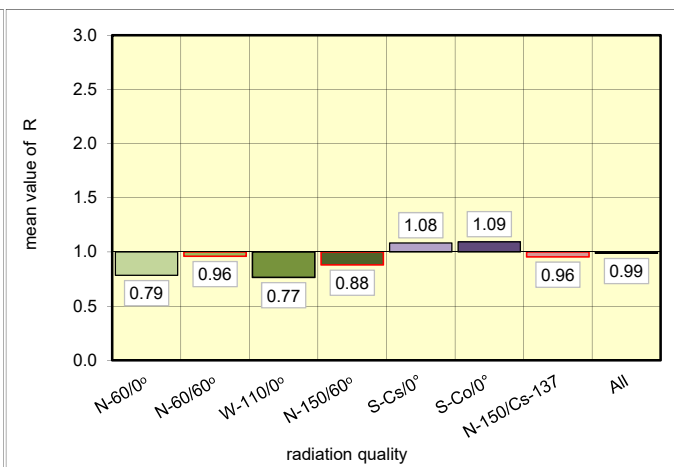
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.79</b>	0.79	0.80	0.77	3%
N-60/60°	2	<b>0.96</b>	0.96	0.96	0.96	0%
W-110/0°	2	<b>0.77</b>	0.77	0.77	0.76	1%
N-150/60°	2	<b>0.88</b>	0.88	0.89	0.87	2%
S-Cs/0°	6	<b>1.11</b>	1.08	1.14	0.98	5%
S-Co/0°	6	<b>1.10</b>	1.09	1.12	1.05	2%
N-150/Cs-137	2	<b>0.96</b>	0.96	0.97	0.94	2%
<b>All</b>	<b>22</b>	<b>1.02</b>	<b>0.99</b>	<b>1.14</b>	<b>0.76</b>	<b>13%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 23: (OSL) for dose quantity Hp(0.07)

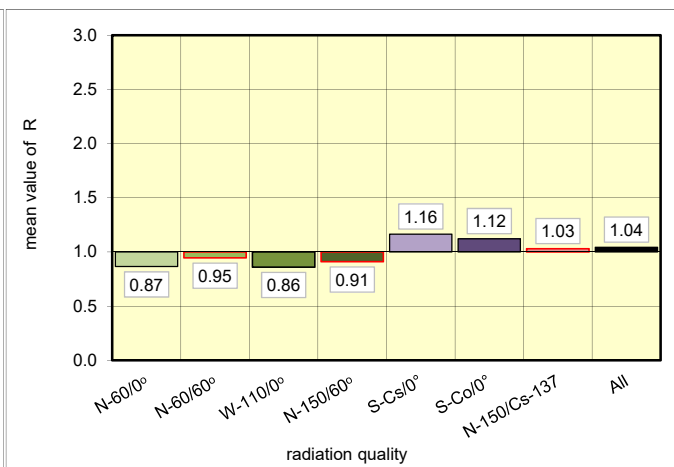
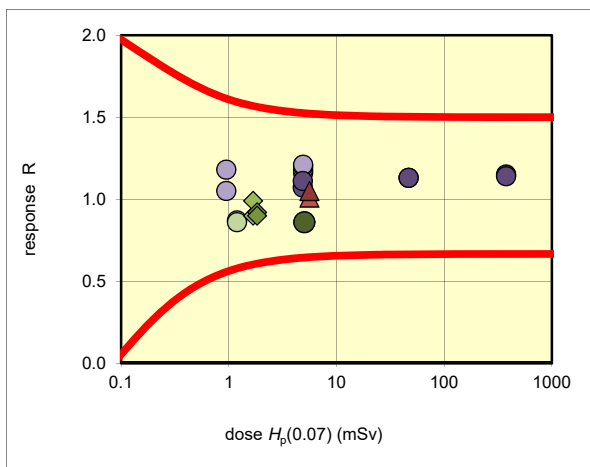
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	32	1.20	1.04	0.87	OK
		10	1.20	1.03	0.86	OK
	N-60/60°	14	1.68	1.52	0.90	OK
		17	1.68	1.66	0.99	OK
	W-110/0°	11	5.03	4.34	0.86	OK
		7	5.03	4.34	0.86	OK
	N-150/60°	29	1.83	1.69	0.92	OK
		4	1.83	1.64	0.90	OK
gamma	S-Cs-S/0°	19	0.95	1.00	1.05	OK
		26	0.95	1.12	1.18	OK
	S-Cs-L/0°	9	4.90	5.69	1.16	OK
		22	4.90	5.76	1.18	OK
		25	4.90	5.87	1.20	OK
	S-Co-L/0°	13	4.90	5.93	1.21	OK
		2	4.88	5.23	1.07	OK
	S-Co-M/0°	1	4.88	5.44	1.11	OK
		21	46.80	52.90	1.13	OK
	S-Co-H/0°	5	46.80	53.10	1.13	OK
		34	376.00	432.00	1.15	OK
	mixed	N-150/Cs-137	30	376.00	429.00	1.14
27			5.61	5.68	1.01	OK
NIR	N-150/Cs-137	28	5.61	5.90	1.05	OK
		3		0.65		
		6		0.56		
		8		0.58		
		12		0.60		
		15		0.51		
		16		0.51		
		18		0.49		
		20		0.54		
		23		0.62		
		24		0.61		
31		0.57				
33		0.63				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.87</b>	0.87	0.87	0.86	1%
N-60/60°	2	<b>0.95</b>	0.95	0.99	0.90	7%
W-110/0°	2	<b>0.86</b>	0.86	0.86	0.86	0%
N-150/60°	2	<b>0.91</b>	0.91	0.92	0.90	2%
S-Cs/0°	6	<b>1.18</b>	1.16	1.21	1.05	5%
S-Co/0°	6	<b>1.13</b>	1.12	1.15	1.07	3%
N-150/Cs-137	2	<b>1.03</b>	1.03	1.05	1.01	3%
<b>All</b>	<b>22</b>	<b>1.06</b>	<b>1.04</b>	<b>1.21</b>	<b>0.86</b>	<b>12%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 24: (OSL) for dose quantity Hp(10)

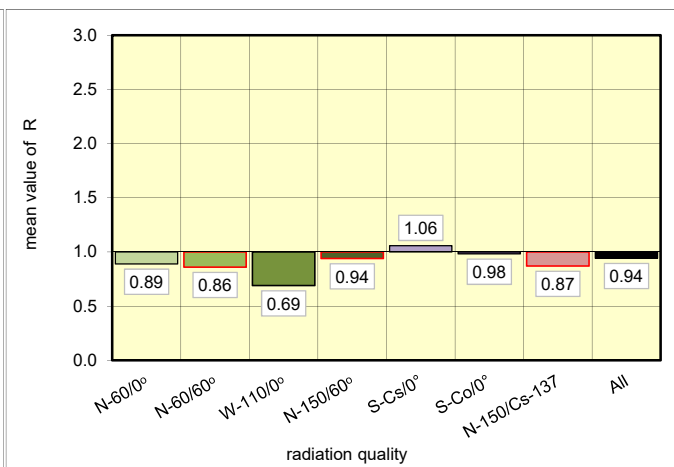
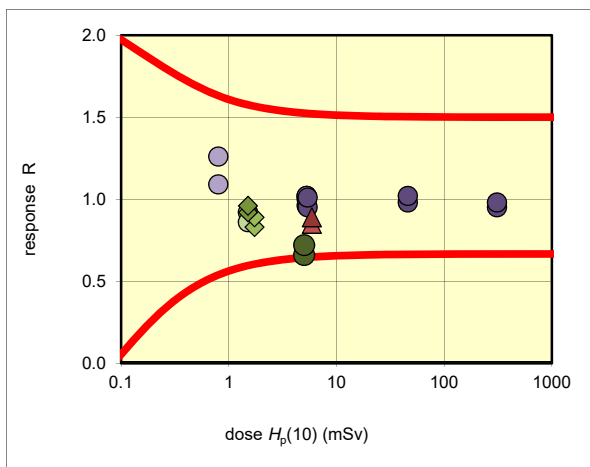
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	18	1.51	1.39	0.92	OK
		29	1.51	1.30	0.86	OK
	N-60/60°	9	1.73	1.44	0.83	OK
		33	1.73	1.55	0.89	OK
	W-110/0°	15	5.00	3.31	0.66	OK
		16	5.00	3.62	0.72	OK
N-150/60°	30	1.51	1.38	0.92	OK	
	6	1.51	1.44	0.96	OK	
gamma	S-Cs-S/0°	8	0.80	0.87	1.09	OK
		14	0.80	1.01	1.26	OK
	S-Cs-L/0°	2	5.30	5.07	0.96	OK
		19	5.30	5.32	1.00	OK
		21	5.30	5.42	1.02	OK
		22	5.30	5.42	1.02	OK
	S-Co-L/0°	11	5.40	5.14	0.95	OK
		7	5.40	5.48	1.01	OK
	S-Co-M/0°	23	46.00	45.23	0.98	OK
		26	46.00	46.80	1.02	OK
S-Co-H/0°	10	310.00	295.24	0.95	OK	
	20	310.00	303.71	0.98	OK	
mixed	N-150/Cs-137	13	5.90	5.04	0.85	OK
		34	5.90	5.24	0.89	OK
NIR	NIR	1		0.12		
	NIR	3		0.00		
	NIR	4		0.00		
	NIR	5		0.00		
	NIR	12		0.00		
	NIR	17		0.00		
	NIR	24		0.00		
	NIR	25		0.00		
	NIR	27		0.00		
	NIR	28		0.00		
	NIR	31		0.00		
	NIR	32		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.89</b>	0.89	0.92	0.86	5%
N-60/60°	2	<b>0.86</b>	0.86	0.89	0.83	5%
W-110/0°	2	<b>0.69</b>	0.69	0.72	0.66	6%
N-150/60°	2	<b>0.94</b>	0.94	0.96	0.92	3%
S-Cs/0°	6	<b>1.02</b>	1.06	1.26	0.96	10%
S-Co/0°	6	<b>0.98</b>	0.98	1.02	0.95	3%
N-150/Cs-137	2	<b>0.87</b>	0.87	0.89	0.85	3%
<b>All</b>	<b>22</b>	<b>0.96</b>	<b>0.94</b>	<b>1.26</b>	<b>0.66</b>	<b>13%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 24: (OSL) for dose quantity Hp(0.07)

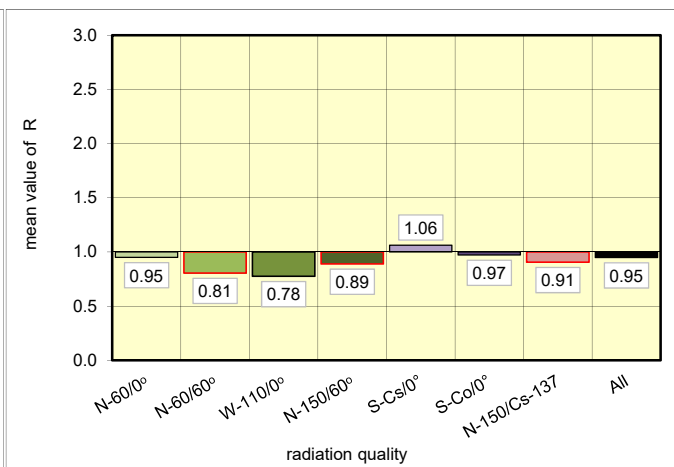
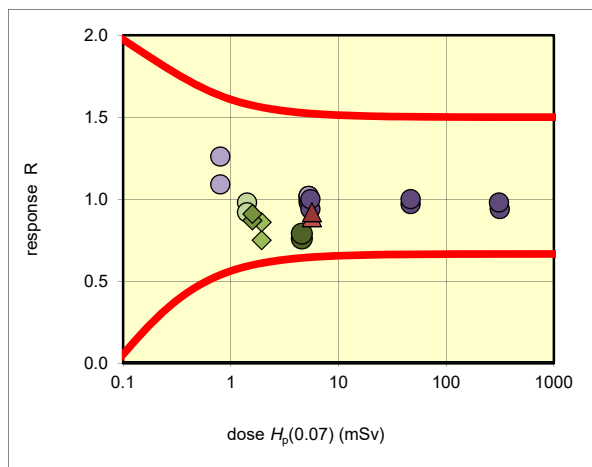
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	18	1.42	1.39	0.98	OK
		29	1.42	1.30	0.92	OK
	N-60/60°	9	1.94	1.46	0.75	OK
		33	1.94	1.66	0.86	OK
	W-110/0°	15	4.57	3.47	0.76	OK
		16	4.57	3.62	0.79	OK
	N-150/60°	30	1.59	1.38	0.87	OK
		6	1.59	1.44	0.91	OK
gamma	S-Cs-S/0°	8	0.80	0.87	1.09	OK
		14	0.80	1.01	1.26	OK
	S-Cs-L/0°	2	5.30	5.20	0.98	OK
		19	5.30	5.32	1.00	OK
		21	5.30	5.42	1.02	OK
		22	5.30	5.42	1.02	OK
	S-Co-L/0°	11	5.49	5.14	0.94	OK
		7	5.49	5.48	1.00	OK
	S-Co-M/0°	23	46.80	45.23	0.97	OK
		26	46.80	46.80	1.00	OK
	S-Co-H/0°	10	315.00	295.24	0.94	OK
		20	310.00	303.71	0.98	OK
mixed	N-150/Cs-137	13	5.67	5.04	0.89	OK
		34	5.67	5.24	0.92	OK
NIR	NIR	1		0.12		
	NIR	3		0.00		
	NIR	4		0.00		
	NIR	5		0.00		
	NIR	12		0.00		
	NIR	17		0.00		
	NIR	24		0.00		
	NIR	25		0.00		
	NIR	27		0.00		
	NIR	28		0.00		
	NIR	31		0.00		
	NIR	32		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.95</b>	0.95	0.98	0.92	4%
N-60/60°	2	<b>0.81</b>	0.81	0.86	0.75	10%
W-110/0°	2	<b>0.78</b>	0.78	0.79	0.76	3%
N-150/60°	2	<b>0.89</b>	0.89	0.91	0.87	3%
S-Cs/0°	6	<b>1.02</b>	1.06	1.26	0.98	10%
S-Co/0°	6	<b>0.98</b>	0.97	1.00	0.94	3%
N-150/Cs-137	2	<b>0.91</b>	0.91	0.92	0.89	2%
<b>All</b>	<b>22</b>	<b>0.96</b>	<b>0.95</b>	<b>1.26</b>	<b>0.75</b>	<b>12%</b>

outliers: 0 of 22

fraction of outliers: 0%



Results: IC2018

## Reporting number 25: (OSL) for dose quantity Hp(10)

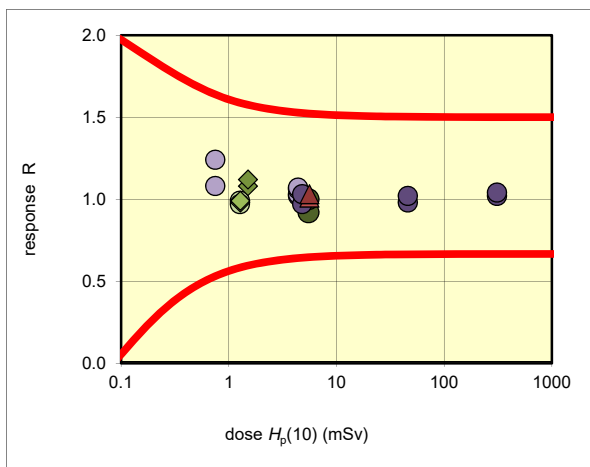
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	4	1.27	1.26	0.99	OK
		6	1.27	1.24	0.97	OK
	N-60/60°	10	1.28	1.26	0.98	OK
		16	1.28	1.27	0.99	OK
	W-110/0°	25	5.50	5.08	0.92	OK
		13	5.50	5.49	1.00	OK
N-150/60°	24	1.51	1.62	1.08	OK	
	17	1.51	1.68	1.12	OK	
gamma	S-Cs-S/0°	20	0.75	0.81	1.08	OK
		26	0.75	0.93	1.24	OK
	S-Cs-L/0°	9	4.40	4.48	1.02	OK
		30	4.40	4.55	1.03	OK
		34	4.40	4.66	1.06	OK
	S-Co-L/0°	3	4.40	4.72	1.07	OK
		15	4.80	4.64	0.97	OK
	S-Co-M/0°	21	4.80	4.94	1.03	OK
		27	46.00	44.88	0.98	OK
	S-Co-H/0°	29	46.00	47.08	1.02	OK
		11	310.00	315.78	1.02	OK
	mixed	N-150/Cs-137	14	310.00	321.78	1.04
1			5.60	5.64	1.01	OK
NIR	N-150/Cs-137	8	5.60	5.78	1.03	OK
		2		0.50		
		5		0.59		
		7		0.45		
		12		0.45		
		18		0.49		
		19		0.49		
		22		0.47		
		23		0.43		
		28		0.44		
31		0.53				
32		0.46				
33		0.47				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

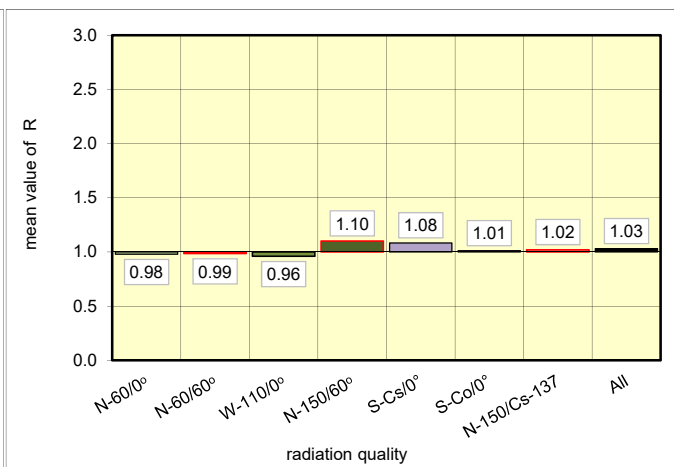
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.98</b>	0.98	0.99	0.97	1%
N-60/60°	2	<b>0.99</b>	0.99	0.99	0.98	1%
W-110/0°	2	<b>0.96</b>	0.96	1.00	0.92	6%
N-150/60°	2	<b>1.10</b>	1.10	1.12	1.08	3%
S-Cs/0°	6	<b>1.07</b>	1.08	1.24	1.02	7%
S-Co/0°	6	<b>1.02</b>	1.01	1.04	0.97	3%
N-150/Cs-137	2	<b>1.02</b>	1.02	1.03	1.01	1%
<b>All</b>	<b>22</b>	<b>1.02</b>	<b>1.03</b>	<b>1.24</b>	<b>0.92</b>	<b>6%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 25: (OSL) for dose quantity Hp(0.07)

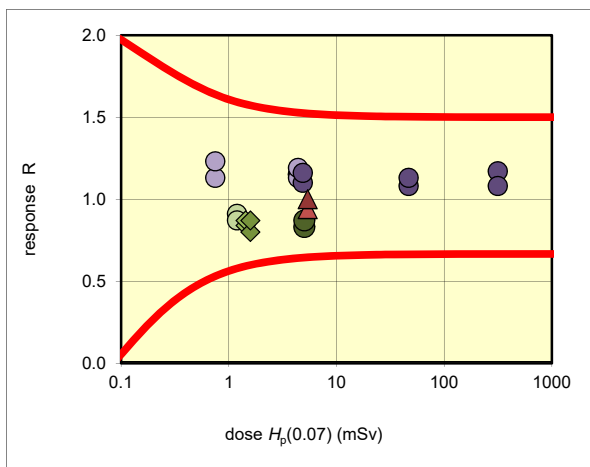
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	4	1.20	1.09	0.91	OK
		6	1.20	1.04	0.87	OK
	N-60/60°	10	1.43	1.20	0.84	OK
		16	1.43	1.24	0.87	OK
	W-110/0°	25	5.03	4.16	0.83	OK
		13	5.03	4.37	0.87	OK
	N-150/60°	24	1.59	1.27	0.80	OK
		17	1.59	1.38	0.87	OK
gamma	S-Cs-S/0°	20	0.75	0.85	1.13	OK
		26	0.75	0.92	1.23	OK
	S-Cs-L/0°	9	4.40	5.07	1.15	OK
		30	4.40	5.06	1.15	OK
		34	4.40	4.97	1.13	OK
	S-Co-L/0°	3	4.40	5.22	1.19	OK
		15	4.88	5.35	1.10	OK
	S-Co-M/0°	21	4.88	5.64	1.16	OK
		27	46.80	50.57	1.08	OK
	S-Co-H/0°	29	46.80	52.87	1.13	OK
		11	315.00	368.77	1.17	OK
	mixed	N-150/Cs-137	14	315.00	340.77	1.08
1			5.40	5.06	0.94	OK
NIR	N-150/Cs-137	8	5.40	5.40	1.00	OK
		2		0.55		
		5		0.63		
		7		0.53		
		12		0.53		
		18		0.49		
		19		0.54		
		22		0.48		
		23		0.48		
		28		0.47		
		31		0.59		
32		0.53				
33		0.48				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

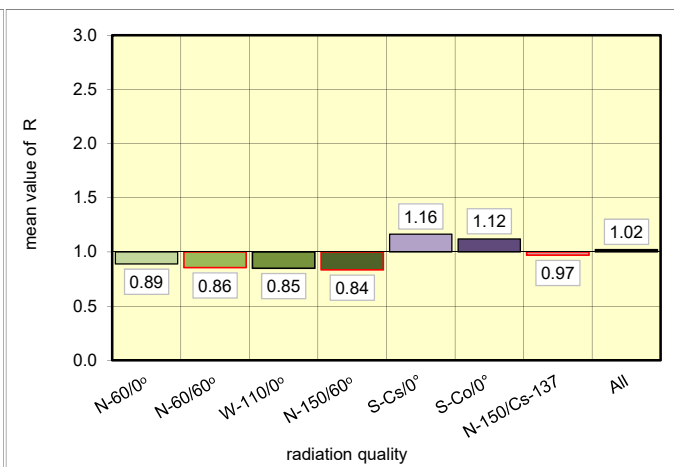
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.89</b>	0.89	0.91	0.87	3%
N-60/60°	2	<b>0.86</b>	0.86	0.87	0.84	2%
W-110/0°	2	<b>0.85</b>	0.85	0.87	0.83	3%
N-150/60°	2	<b>0.84</b>	0.84	0.87	0.80	6%
S-Cs/0°	6	<b>1.15</b>	1.16	1.23	1.13	3%
S-Co/0°	6	<b>1.12</b>	1.12	1.17	1.08	4%
N-150/Cs-137	2	<b>0.97</b>	0.97	1.00	0.94	4%
<b>All</b>	<b>22</b>	<b>1.08</b>	<b>1.02</b>	<b>1.23</b>	<b>0.80</b>	<b>14%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 26: (OSL) for dose quantity Hp(10)

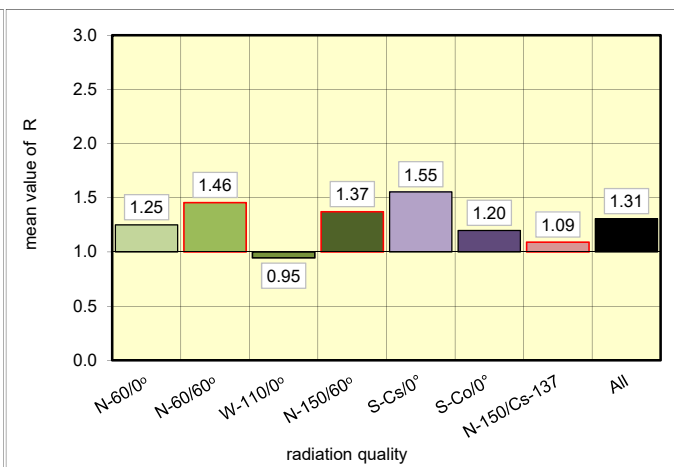
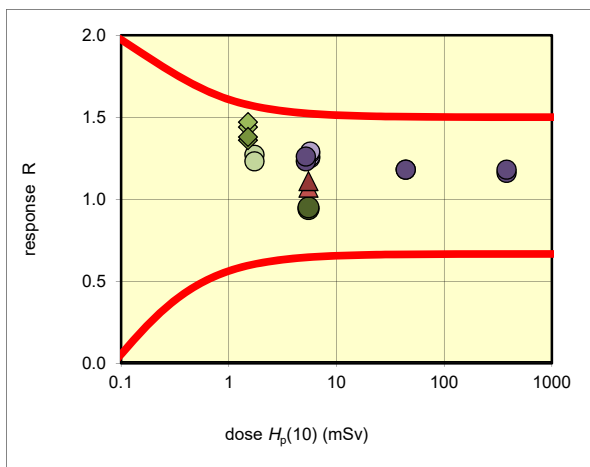
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	19	1.73	2.20	1.27	OK
		25	1.73	2.13	1.23	OK
	N-60/60°	27	1.51	2.17	1.44	OK
		2	1.51	2.21	1.47	OK
	W-110/0°	15	5.50	5.17	0.94	OK
		20	5.50	5.20	0.95	OK
	N-150/60°	10	1.51	2.04	1.36	OK
		28	1.51	2.08	1.38	OK
gamma	S-Cs-S/0°	17	0.70	1.47	2.10	outlier
		30	0.70	1.50	2.14	outlier
	S-Cs-L/0°	8	5.70	7.10	1.25	OK
		9	5.70	7.17	1.26	OK
		23	5.70	7.28	1.28	OK
		24	5.70	7.37	1.29	OK
	S-Co-L/0°	26	5.20	6.40	1.23	OK
		14	5.20	6.57	1.26	OK
	S-Co-M/0°	4	44.00	52.10	1.18	OK
		6	44.00	51.70	1.18	OK
	S-Co-H/0°	1	380.00	439.00	1.16	OK
		3	380.00	448.00	1.18	OK
mixed	N-150/Cs-137	33	5.50	5.91	1.07	OK
		29	5.50	6.10	1.11	OK
NIR	NIR	5		0.69		
	NIR	7		0.68		
	NIR	11		0.71		
	NIR	12		0.64		
	NIR	13		0.69		
	NIR	16		0.67		
	NIR	18		0.70		
	NIR	21		0.67		
	NIR	22		0.70		
	NIR	31		0.69		
	NIR	32		0.74		
	NIR	34		0.70		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.25	1.25	1.27	1.23	2%
N-60/60°	2	1.46	1.46	1.47	1.44	1%
W-110/0°	2	0.95	0.95	0.95	0.94	1%
N-150/60°	2	1.37	1.37	1.38	1.36	1%
S-Cs/0°	6	1.29	1.55	2.14	1.25	28%
S-Co/0°	6	1.18	1.20	1.26	1.16	3%
N-150/Cs-137	2	1.09	1.09	1.11	1.07	3%
All	22	1.26	1.31	2.14	0.94	23%

outliers: 2 of 22

Fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

2 points outside diagramme (> 2)

Results: IC2018

## Reporting number 26: (OSL) for dose quantity Hp(0.07)

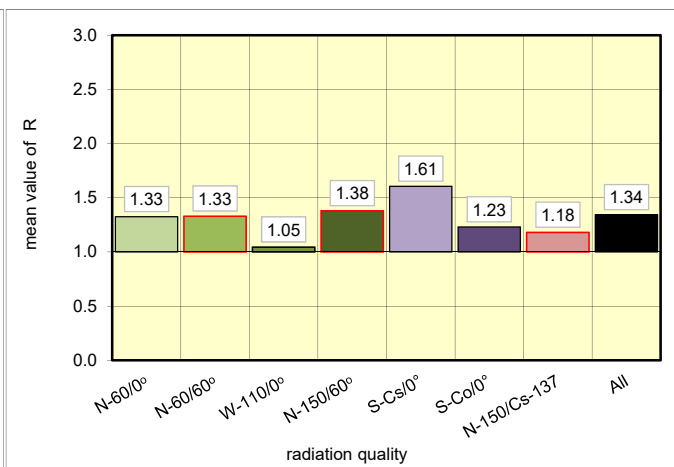
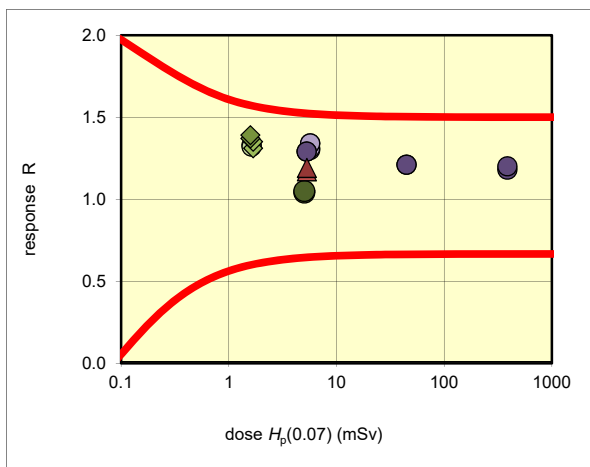
true values reported by the irradiating laboratory				values reported by participant		results	
radiation quality		dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv		response R (reported/true)	
x-ray	N-60/0°	19	1.63	2.17	1.33	OK	
		25	1.63	2.15	1.32	OK	
	N-60/60°	27	1.68	2.20	1.31	OK	
		2	1.68	2.28	1.35	OK	
	W-110/0°	15	5.03	5.23	1.04	OK	
		20	5.03	5.30	1.05	OK	
	N-150/60°	10	1.59	2.17	1.37	OK	
		28	1.59	2.21	1.39	OK	
gamma	S-Cs-S/0°	17	0.70	1.49	2.13	outlier	
		30	0.70	1.55	2.21	outlier	
	S-Cs-L/0°	8	5.70	7.40	1.30	OK	
		9	5.70	7.46	1.31	OK	
		23	5.70	7.63	1.34	OK	
		24	5.70	7.64	1.34	OK	
	S-Co-L/0°	26	5.29	6.82	1.29	OK	
		14	5.29	6.84	1.29	OK	
	S-Co-M/0°	4	44.80	54.40	1.21	OK	
		6	44.80	54.30	1.21	OK	
	S-Co-H/0°	1	387.00	455.00	1.18	OK	
		3	387.00	464.00	1.20	OK	
mixed	N-150/Cs-137	33	5.31	6.19	1.17	OK	
		29	5.31	6.32	1.19	OK	
NIR	NIR	5		0.68			
	NIR	7		0.70			
	NIR	11		0.72			
	NIR	12		0.68			
	NIR	13		0.64			
	NIR	16		0.63			
	NIR	18		0.71			
	NIR	21		0.67			
	NIR	22		0.69			
	NIR	31		0.69			
	NIR	32		0.74			
	NIR	34		0.71			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.33	1.33	1.33	1.32	1%
N-60/60°	2	1.33	1.33	1.35	1.31	2%
W-110/0°	2	1.05	1.05	1.05	1.04	1%
N-150/60°	2	1.38	1.38	1.39	1.37	1%
S-Cs/0°	6	1.34	1.61	2.21	1.30	27%
S-Co/0°	6	1.21	1.23	1.29	1.18	4%
N-150/Cs-137	2	1.18	1.18	1.19	1.17	1%
All	22	1.31	1.34	2.21	1.04	21%

outliers: 2 of 22

Fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

2 points outside diagramme (> 2)

Results: IC2018

## Reporting number 27: (OSL) for dose quantity Hp(10)

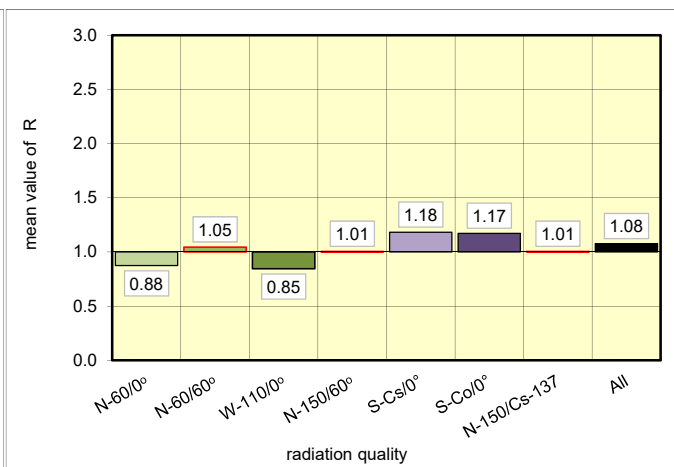
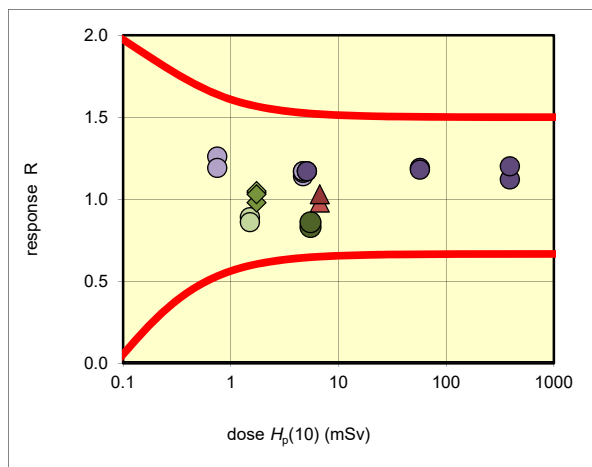
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	21	1.51	1.34	0.89	OK
		31	1.51	1.29	0.86	OK
	N-60/60°	13	1.73	1.80	1.04	OK
		30	1.73	1.81	1.05	OK
	W-110/0°	3	5.50	4.58	0.83	OK
		18	5.50	4.73	0.86	OK
N-150/60°	10	1.73	1.70	0.98	OK	
	5	1.73	1.78	1.03	OK	
gamma	S-Cs-S/0°	32	0.75	0.94	1.26	OK
		11	0.75	0.89	1.19	OK
	S-Cs-L/0°	12	4.70	5.36	1.14	OK
		2	4.70	5.45	1.16	OK
		7	4.70	5.52	1.17	OK
		8	4.70	5.51	1.17	OK
	S-Co-L/0°	17	5.10	5.99	1.17	OK
		26	5.10	5.98	1.17	OK
	S-Co-M/0°	25	57.00	68.11	1.19	OK
		28	57.00	67.31	1.18	OK
S-Co-H/0°	4	390.00	436.70	1.12	OK	
	23	390.00	466.70	1.20	OK	
mixed	N-150/Cs-137	33	6.70	6.59	0.98	OK
		34	6.70	6.92	1.03	OK
NIR	WIR	9	-	-	-	-
	WIR	14	-	-	-	-
	NIR	1	-	0.00	-	-
	NIR	6	-	0.00	-	-
	NIR	15	-	0.00	-	-
	NIR	16	-	0.00	-	-
	NIR	19	-	0.00	-	-
	NIR	20	-	0.00	-	-
	NIR	22	-	0.00	-	-
	NIR	24	-	0.00	-	-
NIR	27	-	0.00	-	-	
NIR	29	-	0.00	-	-	

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.88</b>	0.88	0.89	0.86	2%
N-60/60°	2	<b>1.05</b>	1.05	1.05	1.04	1%
W-110/0°	2	<b>0.85</b>	0.85	0.86	0.83	3%
N-150/60°	2	<b>1.01</b>	1.01	1.03	0.98	4%
S-Cs/0°	6	<b>1.17</b>	1.18	1.26	1.14	4%
S-Co/0°	6	<b>1.18</b>	1.17	1.20	1.12	2%
N-150/Cs-137	2	<b>1.01</b>	1.01	1.03	0.98	4%
<b>All</b>	<b>22</b>	<b>1.13</b>	<b>1.08</b>	<b>1.26</b>	<b>0.83</b>	<b>12%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 27: (OSL) for dose quantity Hp(0.07)

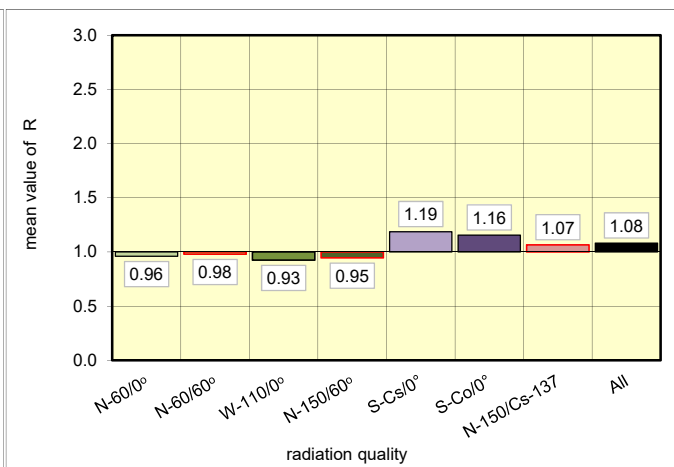
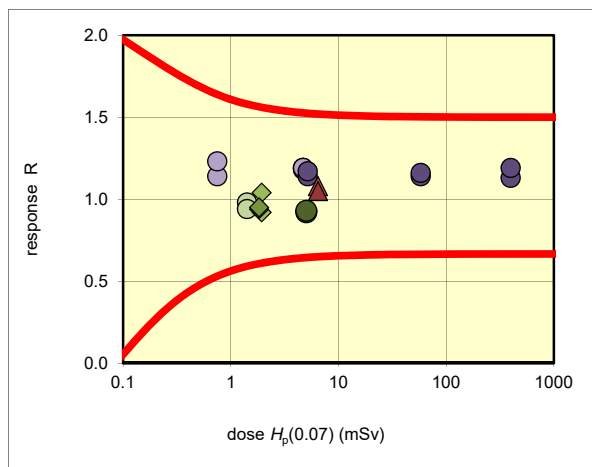
true values reported by the irradiating laboratory				values reported by participant	results	
radiation quality		dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)	
x-ray	N-60/0°	21	1.42	1.39	0.98	OK
		31	1.42	1.33	0.94	OK
	N-60/60°	13	1.94	1.77	0.92	OK
		30	1.94	2.01	1.04	OK
	W-110/0°	3	5.03	4.64	0.92	OK
		18	5.03	4.70	0.93	OK
	N-150/60°	10	1.83	1.72	0.94	OK
		5	1.83	1.74	0.95	OK
gamma	S-Cs-S/0°	32	0.75	0.85	1.14	OK
		11	0.75	0.92	1.23	OK
	S-Cs-L/0°	12	4.70	5.59	1.19	OK
		2	4.70	5.61	1.19	OK
		7	4.70	5.54	1.18	OK
		8	4.70	5.60	1.19	OK
	S-Co-L/0°	17	5.19	5.92	1.14	OK
		26	5.19	6.09	1.17	OK
	S-Co-M/0°	25	58.00	66.00	1.14	OK
		28	58.00	67.20	1.16	OK
	S-Co-H/0°	4	397.00	448.70	1.13	OK
		23	397.00	472.70	1.19	OK
mixed	N-150/Cs-137	33	6.46	7.00	1.08	OK
		34	6.46	6.76	1.05	OK
NIR	WIR	9		-		
	WIR	14		-		
	NIR	1		0.00		
	NIR	6		0.00		
	NIR	15		0.00		
	NIR	16		0.00		
	NIR	19		0.00		
	NIR	20		0.00		
	NIR	22		0.00		
	NIR	24		0.00		
	NIR	27		0.00		
NIR	29		0.00			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.96</b>	0.96	0.98	0.94	3%
N-60/60°	2	<b>0.98</b>	0.98	1.04	0.92	9%
W-110/0°	2	<b>0.93</b>	0.93	0.93	0.92	1%
N-150/60°	2	<b>0.95</b>	0.95	0.95	0.94	1%
S-Cs/0°	6	<b>1.19</b>	1.19	1.23	1.14	2%
S-Co/0°	6	<b>1.15</b>	1.16	1.19	1.13	2%
N-150/Cs-137	2	<b>1.07</b>	1.07	1.08	1.05	2%
<b>All</b>	<b>22</b>	<b>1.14</b>	<b>1.08</b>	<b>1.23</b>	<b>0.92</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 28: (TL) for dose quantity Hp(10)

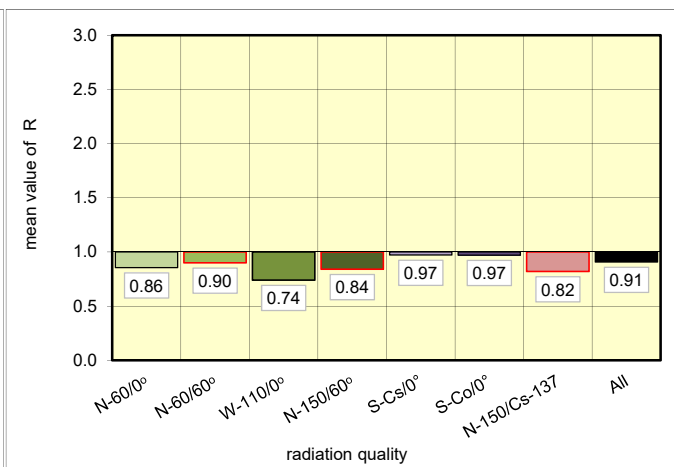
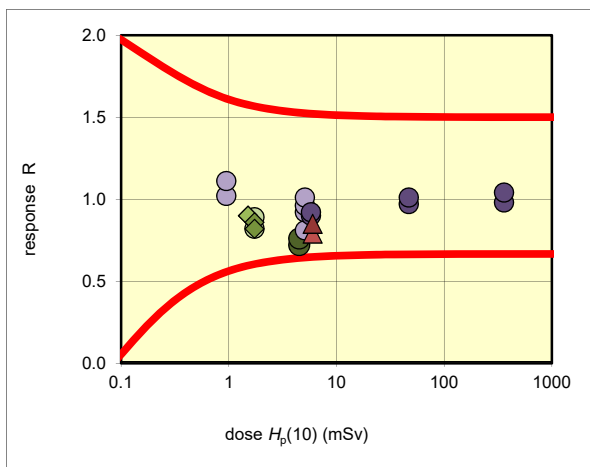
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	19	1.73	1.55	0.89	OK
		7	1.73	1.43	0.82	OK
	N-60/60°	12	1.51	1.35	0.90	OK
		18	1.51	1.35	0.90	OK
	W-110/0°	20	4.50	3.23	0.72	OK
		29	4.50	3.43	0.76	OK
	N-150/60°	25	1.73	1.49	0.86	OK
		28	1.73	1.41	0.82	OK
gamma	S-Cs-S/0°	21	0.95	0.97	1.02	OK
		17	0.95	1.05	1.11	OK
	S-Cs-L/0°	11	5.10	4.15	0.81	OK
		16	5.10	4.71	0.92	OK
		3	5.10	4.88	0.96	OK
		2	5.10	5.17	1.01	OK
	S-Co-L/0°	30	5.80	5.19	0.90	OK
		33	5.80	5.32	0.92	OK
	S-Co-M/0°	4	47.00	45.77	0.97	OK
		15	47.00	47.25	1.01	OK
	S-Co-H/0°	34	360.00	352.08	0.98	OK
		24	360.00	373.58	1.04	OK
mixed	N-150/Cs-137	5	6.00	4.77	0.79	OK
		6	6.00	5.10	0.85	OK
	WIR	13		-		
	WIR	32		-		
	NIR	1		0.29		
	NIR	8		0.25		
	NIR	9		0.28		
	NIR	10		0.30		
	NIR	14		0.27		
	NIR	22		0.25		
	NIR	23		0.18		
	NIR	26		0.28		
	NIR	27		0.25		
NIR	31		0.24			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.86</b>	0.86	0.89	0.82	6%
N-60/60°	2	<b>0.90</b>	0.90	0.90	0.90	0%
W-110/0°	2	<b>0.74</b>	0.74	0.76	0.72	4%
N-150/60°	2	<b>0.84</b>	0.84	0.86	0.82	3%
S-Cs/0°	6	<b>0.99</b>	0.97	1.11	0.81	10%
S-Co/0°	6	<b>0.98</b>	0.97	1.04	0.90	5%
N-150/Cs-137	2	<b>0.82</b>	0.82	0.85	0.79	5%
<b>All</b>	<b>22</b>	<b>0.90</b>	<b>0.91</b>	<b>1.11</b>	<b>0.72</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 28: (TL) for dose quantity Hp(0.07)

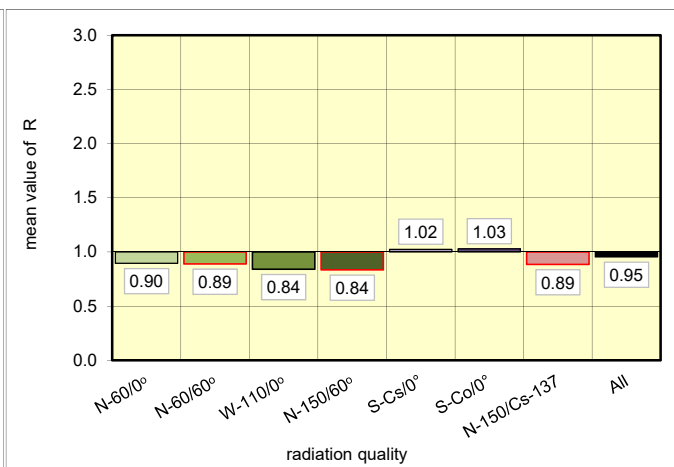
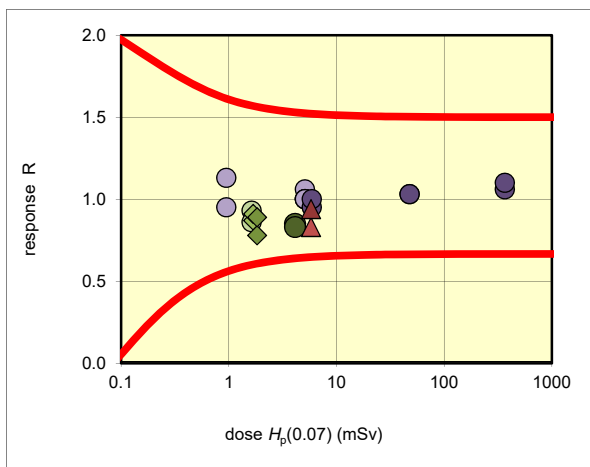
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	19	1.63	1.51	0.93	OK
		7	1.63	1.40	0.86	OK
	N-60/60°	12	1.68	1.46	0.87	OK
		18	1.68	1.54	0.91	OK
	W-110/0°	20	4.12	3.50	0.85	OK
		29	4.12	3.42	0.83	OK
	N-150/60°	25	1.83	1.43	0.78	OK
		28	1.83	1.63	0.89	OK
gamma	S-Cs-S/0°	21	0.95	0.90	0.95	OK
		17	0.95	1.08	1.13	OK
	S-Cs-L/0°	11	5.10	5.42	1.06	OK
		16	5.10	5.11	1.00	OK
		3	5.10	5.12	1.00	OK
		2	5.10	5.11	1.00	OK
	S-Co-L/0°	30	5.90	5.62	0.95	OK
		33	5.90	5.91	1.00	OK
	S-Co-M/0°	4	47.80	49.02	1.03	OK
		15	47.80	49.15	1.03	OK
	S-Co-H/0°	34	366.00	389.03	1.06	OK
		24	366.00	403.94	1.10	OK
mixed	N-150/Cs-137	5	5.81	4.82	0.83	OK
		6	5.81	5.47	0.94	OK
NIR	WIR	13	-	-	-	-
	WIR	32	-	-	-	-
	NIR	1	-	0.28	-	-
	NIR	8	-	0.31	-	-
	NIR	9	-	0.28	-	-
	NIR	10	-	0.28	-	-
	NIR	14	-	0.22	-	-
	NIR	22	-	0.29	-	-
	NIR	23	-	0.22	-	-
	NIR	26	-	0.31	-	-
	NIR	27	-	0.28	-	-
NIR	31	-	0.25	-	-	

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.90</b>	0.90	0.93	0.86	6%
N-60/60°	2	<b>0.89</b>	0.89	0.91	0.87	3%
W-110/0°	2	<b>0.84</b>	0.84	0.85	0.83	2%
N-150/60°	2	<b>0.84</b>	0.84	0.89	0.78	9%
S-Cs/0°	6	<b>1.00</b>	1.02	1.13	0.95	6%
S-Co/0°	6	<b>1.03</b>	1.03	1.10	0.95	5%
N-150/Cs-137	2	<b>0.89</b>	0.89	0.94	0.83	9%
<b>All</b>	<b>22</b>	<b>0.95</b>	<b>0.95</b>	<b>1.13</b>	<b>0.78</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 29: (TL) for dose quantity $H_p(10)$

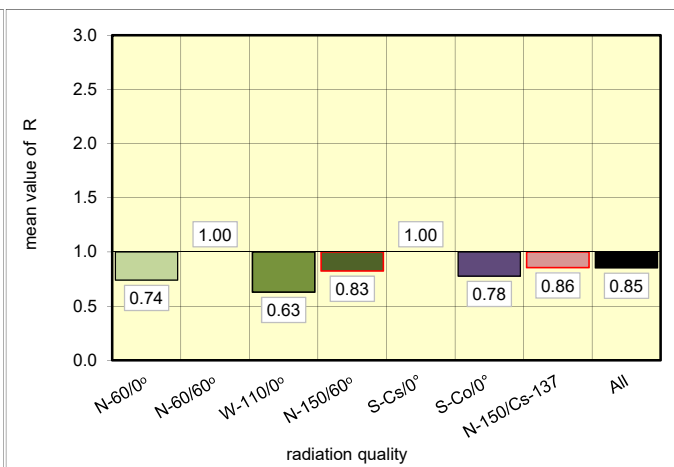
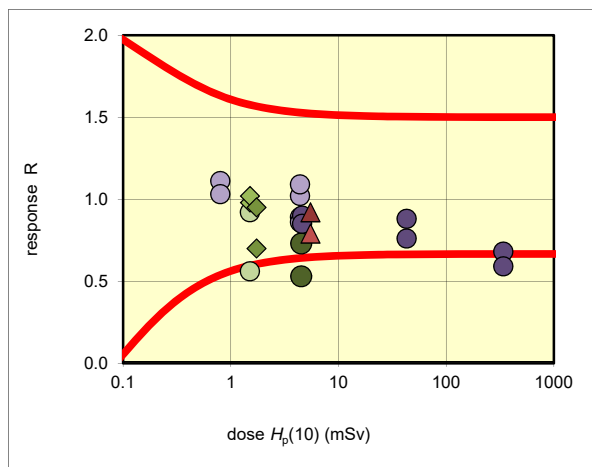
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.51	1.39	0.92	OK
		21	1.51	0.85	0.56	outlier
	N-60/60°	24	1.51	1.48	0.98	OK
		4	1.51	1.54	1.02	OK
	W-110/0°	26	4.50	2.37	0.53	outlier
		3	4.50	3.28	0.73	OK
	N-150/60°	17	1.73	1.22	0.70	OK
		9	1.73	1.64	0.95	OK
gamma	S-Cs-S/0°	2	0.80	0.89	1.11	OK
		5	0.80	0.82	1.03	OK
	S-Cs-L/0°	32	4.40	3.93	0.89	OK
		8	4.40	4.49	1.02	OK
		33	4.40	3.78	0.86	OK
		10	4.40	4.80	1.09	OK
	S-Co-L/0°	31	4.60	4.13	0.90	OK
		30	4.60	3.90	0.85	OK
	S-Co-M/0°	25	43.00	32.76	0.76	OK
		27	43.00	38.01	0.88	OK
	S-Co-H/0°	19	340.00	231.90	0.68	OK
		18	340.00	201.00	0.59	outlier
mixed	N-150/Cs-137	6	5.50	4.34	0.79	OK
		7	5.50	5.06	0.92	OK
		7	5.50	5.06	0.92	OK
NIR	WIR	12	-	-	-	-
	WIR	23	-	-	-	-
	NIR	1	-	0.67	-	-
	NIR	13	-	0.51	-	-
	NIR	14	-	0.46	-	-
	NIR	15	-	0.59	-	-
	NIR	16	-	0.34	-	-
	NIR	20	-	0.42	-	-
	NIR	22	-	0.38	-	-
	NIR	28	-	0.38	-	-
	NIR	29	-	0.44	-	-
	NIR	34	-	0.57	-	-

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.74</b>	0.74	0.92	0.56	34%
N-60/60°	2	<b>1.00</b>	1.00	1.02	0.98	3%
W-110/0°	2	<b>0.63</b>	0.63	0.73	0.53	22%
N-150/60°	2	<b>0.83</b>	0.83	0.95	0.70	21%
S-Cs/0°	6	<b>1.03</b>	1.00	1.11	0.86	10%
S-Co/0°	6	<b>0.81</b>	0.78	0.90	0.59	16%
N-150/Cs-137	2	<b>0.86</b>	0.86	0.92	0.79	11%
<b>All</b>	<b>22</b>	<b>0.89</b>	<b>0.85</b>	<b>1.11</b>	<b>0.53</b>	<b>20%</b>

outliers: 3 of 22

fraction of outliers: 14%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 29: (TL) for dose quantity Hp(0.07)

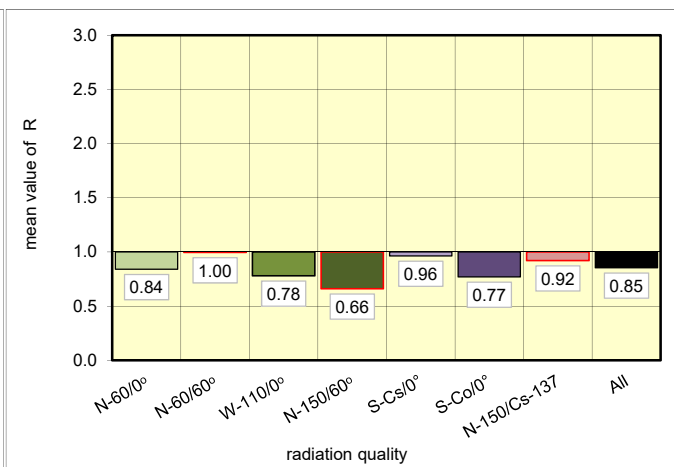
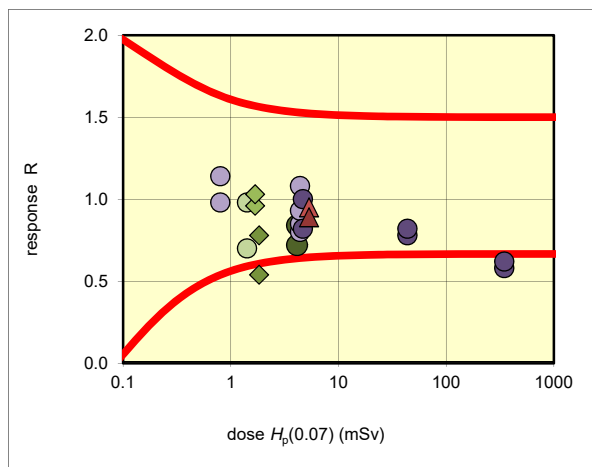
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.42	1.39	0.98	OK
		21	1.42	0.99	0.70	OK
	N-60/60°	24	1.68	1.62	0.96	OK
		4	1.68	1.74	1.03	OK
	W-110/0°	26	4.12	2.95	0.72	OK
		3	4.12	3.46	0.84	OK
	N-150/60°	17	1.83	0.99	0.54	outlier
		9	1.83	1.42	0.78	OK
gamma	S-Cs-S/0°	2	0.80	0.78	0.98	OK
		5	0.80	0.91	1.14	OK
	S-Cs-L/0°	32	4.40	3.50	0.80	OK
		8	4.40	3.74	0.85	OK
		33	4.40	4.10	0.93	OK
	S-Co-L/0°	10	4.40	4.75	1.08	OK
		31	4.68	3.86	0.82	OK
	S-Co-M/0°	30	4.68	4.66	1.00	OK
		25	43.70	34.13	0.78	OK
	S-Co-H/0°	27	43.70	35.70	0.82	OK
		19	346.00	202.40	0.58	outlier
	mixed	N-150/Cs-137	18	346.00	212.90	0.62
6			5.32	5.03	0.95	OK
NIR	N-150/Cs-137	7	5.32	4.72	0.89	OK
		12	-	-	-	-
	WIR	23	-	-	-	-
	NIR	1	-	0.54	-	-
	NIR	13	-	0.49	-	-
	NIR	14	-	0.43	-	-
	NIR	15	-	0.41	-	-
	NIR	16	-	0.48	-	-
	NIR	20	-	0.37	-	-
	NIR	22	-	0.48	-	-
	NIR	28	-	0.59	-	-
	NIR	29	-	0.63	-	-
	NIR	34	-	0.51	-	-

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.84</b>	0.84	0.98	0.70	24%
N-60/60°	2	<b>1.00</b>	1.00	1.03	0.96	5%
W-110/0°	2	<b>0.78</b>	0.78	0.84	0.72	11%
N-150/60°	2	<b>0.66</b>	0.66	0.78	0.54	26%
S-Cs/0°	6	<b>0.96</b>	0.96	1.14	0.80	14%
S-Co/0°	6	<b>0.80</b>	0.77	1.00	0.58	20%
N-150/Cs-137	2	<b>0.92</b>	0.92	0.95	0.89	5%
<b>All</b>	<b>22</b>	<b>0.85</b>	<b>0.85</b>	<b>1.14</b>	<b>0.54</b>	<b>19%</b>

outliers: 3 of 22

fraction of outliers: 14%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 30: (TL) for dose quantity Hp(10)

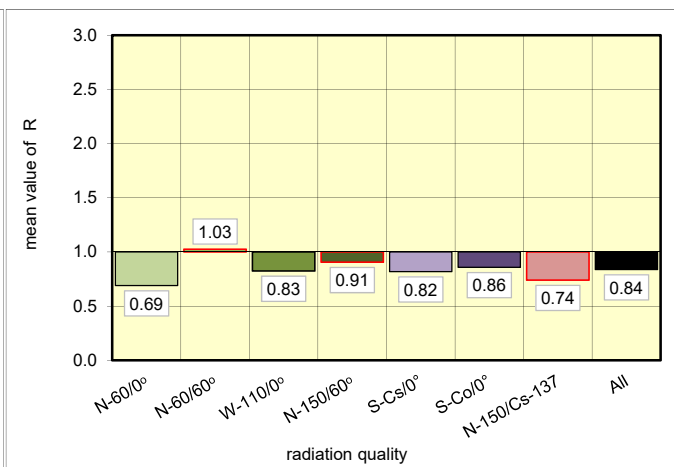
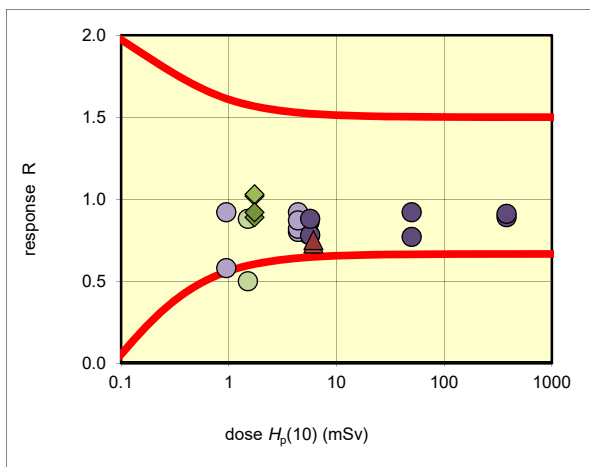
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	19	1.51	1.32	0.88	OK
		16	1.51	0.76	0.50	outlier
	N-60/60°	7	1.73	1.76	1.02	OK
		14	1.73	1.78	1.03	OK
	W-110/0°	21	5.50	4.74	0.86	OK
		5	5.50	4.32	0.79	OK
N-150/60°	22	1.73	1.55	0.89	OK	
	2	1.73	1.59	0.92	OK	
gamma	S-Cs-S/0°	3	0.95	0.55	0.58	OK
		9	0.95	0.87	0.92	OK
	S-Cs-L/0°	6	4.40	4.04	0.92	OK
		33	4.40	3.54	0.80	OK
		18	4.40	3.61	0.82	OK
	S-Co-L/0°	10	4.40	3.81	0.87	OK
		31	5.70	4.42	0.78	OK
	S-Co-M/0°	30	5.70	5.00	0.88	OK
		17	50.00	38.54	0.77	OK
	S-Co-H/0°	24	50.00	45.98	0.92	OK
27		380.00	336.39	0.89	OK	
mixed	N-150/Cs-137	29	380.00	344.82	0.91	OK
		28	6.10	4.47	0.73	OK
		26	6.10	4.59	0.75	OK
NIR	NIR	1		0.58		
	NIR	4		0.58		
	NIR	8		0.55		
	NIR	11		0.56		
	NIR	12		0.58		
	NIR	13		0.61		
	NIR	15		0.66		
	NIR	20		0.54		
	NIR	23		0.61		
	NIR	25		0.57		
	NIR	32		0.70		
	NIR	34		0.57		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.69</b>	0.69	0.88	0.50	39%
N-60/60°	2	<b>1.03</b>	1.03	1.03	1.02	1%
W-110/0°	2	<b>0.83</b>	0.83	0.86	0.79	6%
N-150/60°	2	<b>0.91</b>	0.91	0.92	0.89	2%
S-Cs/0°	6	<b>0.85</b>	0.82	0.92	0.58	16%
S-Co/0°	6	<b>0.89</b>	0.86	0.92	0.77	8%
N-150/Cs-137	2	<b>0.74</b>	0.74	0.75	0.73	2%
<b>All</b>	<b>22</b>	<b>0.88</b>	<b>0.84</b>	<b>1.03</b>	<b>0.50</b>	<b>15%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 30: (TL) for dose quantity Hp(0.07)

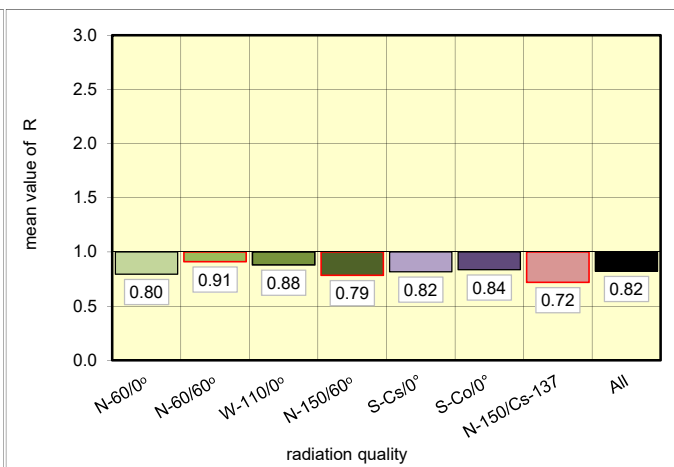
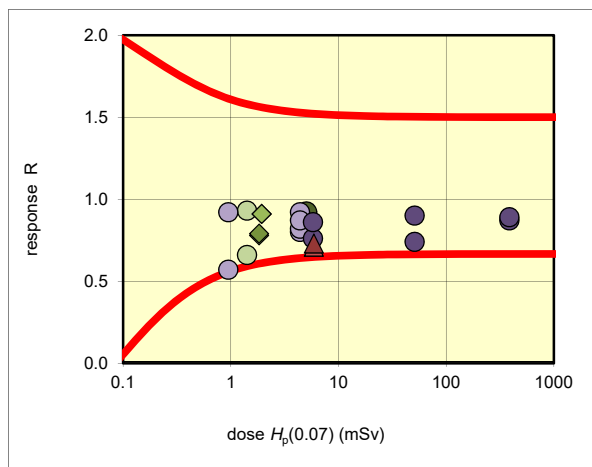
true values reported by the irradiating laboratory				values reported by participant		results	
radiation quality		dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv		response R (reported/true)	
x-ray	N-60/0°	19	1.42	1.32	0.93	OK	
		16	1.42	0.94	0.66	OK	
	N-60/60°	7	1.94	1.76	0.91	OK	
		14	1.94	1.76	0.91	OK	
	W-110/0°	21	5.03	4.64	0.92	OK	
		5	5.03	4.25	0.84	OK	
	N-150/60°	22	1.83	1.42	0.78	OK	
		2	1.83	1.45	0.79	OK	
gamma	S-Cs-S/0°	3	0.95	0.54	0.57	OK	
		9	0.95	0.87	0.92	OK	
	S-Cs-L/0°	6	4.40	4.04	0.92	OK	
		33	4.40	3.54	0.80	OK	
		18	4.40	3.61	0.82	OK	
		10	4.40	3.81	0.87	OK	
	S-Co-L/0°	31	5.80	4.42	0.76	OK	
		30	5.80	5.00	0.86	OK	
	S-Co-M/0°	17	50.90	37.69	0.74	OK	
		24	50.90	45.98	0.90	OK	
	S-Co-H/0°	27	387.00	336.39	0.87	OK	
		29	387.00	344.82	0.89	OK	
mixed	N-150/Cs-137	28	5.91	4.18	0.71	OK	
		26	5.91	4.33	0.73	OK	
NIR	NIR	1		0.52			
	NIR	4		0.53			
	NIR	8		0.50			
	NIR	11		0.52			
	NIR	12		0.52			
	NIR	13		0.56			
	NIR	15		0.60			
	NIR	20		0.50			
	NIR	23		0.55			
	NIR	25		0.52			
	NIR	32		0.64			
	NIR	34		0.52			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.80</b>	0.80	0.93	0.66	24%
N-60/60°	2	<b>0.91</b>	0.91	0.91	0.91	0%
W-110/0°	2	<b>0.88</b>	0.88	0.92	0.84	6%
N-150/60°	2	<b>0.79</b>	0.79	0.79	0.78	1%
S-Cs/0°	6	<b>0.85</b>	0.82	0.92	0.57	16%
S-Co/0°	6	<b>0.87</b>	0.84	0.90	0.74	8%
N-150/Cs-137	2	<b>0.72</b>	0.72	0.73	0.71	2%
<b>All</b>	<b>22</b>	<b>0.85</b>	<b>0.82</b>	<b>0.93</b>	<b>0.57</b>	<b>12%</b>

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 31: (TL) for dose quantity Hp(10)

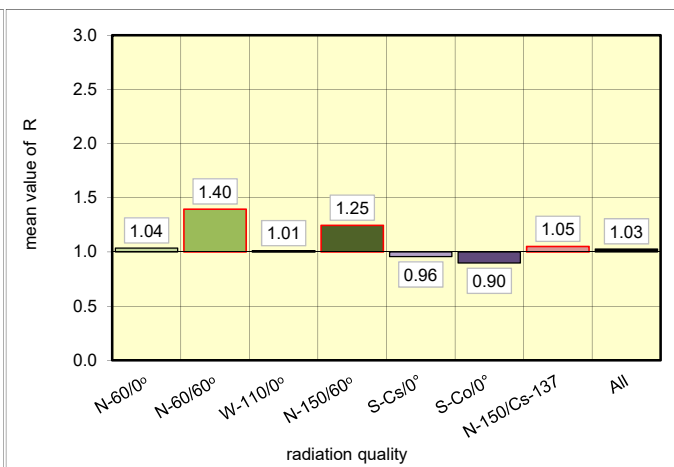
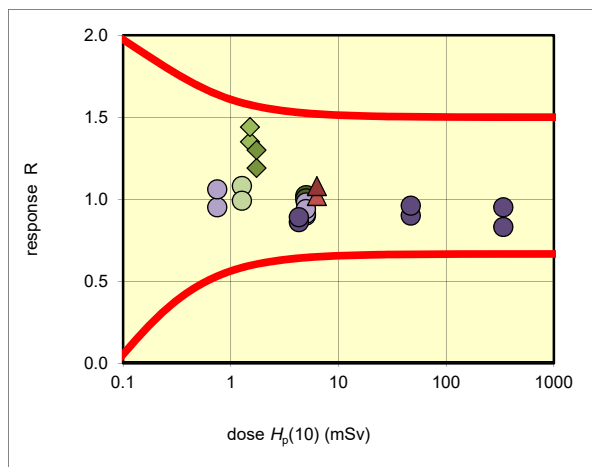
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	32	1.27	1.37	1.08	OK
		15	1.27	1.26	0.99	OK
	N-60/60°	34	1.51	2.03	1.35	OK
		25	1.51	2.17	1.44	OK
	W-110/0°	21	5.00	5.13	1.02	OK
		30	5.00	4.99	1.00	OK
	N-150/60°	16	1.73	2.06	1.19	OK
		19	1.73	2.25	1.30	OK
gamma	S-Cs-S/0°	22	0.75	0.71	0.95	OK
		29	0.75	0.80	1.06	OK
	S-Cs-L/0°	13	5.00	4.91	0.98	OK
		18	5.00	4.52	0.90	OK
		14	5.00	4.53	0.91	OK
		8	5.00	4.69	0.94	OK
	S-Co-L/0°	9	4.30	3.70	0.86	OK
		12	4.30	3.81	0.89	OK
	S-Co-M/0°	6	47.00	42.29	0.90	OK
		3	47.00	45.19	0.96	OK
	S-Co-H/0°	33	340.00	322.40	0.95	OK
		27	340.00	283.42	0.83	OK
mixed	N-150/Cs-137	1	6.30	6.42	1.02	OK
		2	6.30	6.81	1.08	OK
NIR	NIR	23		0.24		
	NIR	28		0.22		
	NIR	5		0.24		
	NIR	4		0.25		
	NIR	7		0.24		
	NIR	10		0.26		
	NIR	11		0.28		
	NIR	17		0.18		
	NIR	20		0.30		
	NIR	24		0.24		
	NIR	26		0.28		
	NIR	31		0.24		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.04	1.04	1.08	0.99	6%
N-60/60°	2	1.40	1.40	1.44	1.35	5%
W-110/0°	2	1.01	1.01	1.02	1.00	1%
N-150/60°	2	1.25	1.25	1.30	1.19	6%
S-Cs/0°	6	0.95	0.96	1.06	0.90	6%
S-Co/0°	6	0.90	0.90	0.96	0.83	6%
N-150/Cs-137	2	1.05	1.05	1.08	1.02	4%
<b>All</b>	<b>22</b>	<b>0.99</b>	<b>1.03</b>	<b>1.44</b>	<b>0.83</b>	<b>16%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 32: (TL) for dose quantity Hp(10)

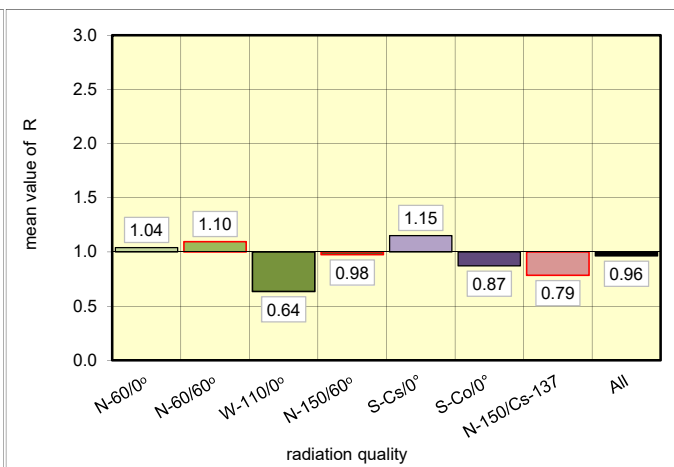
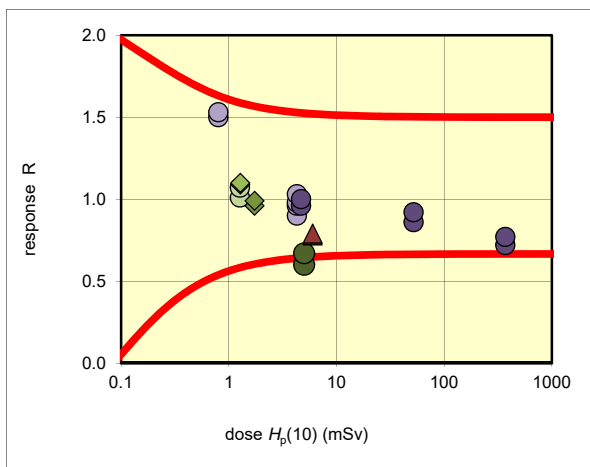
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	16	1.27	1.29	1.01	OK
		26	1.27	1.36	1.07	OK
	N-60/60°	30	1.28	1.40	1.09	OK
		18	1.28	1.41	1.10	OK
	W-110/0°	33	5.00	3.01	0.60	outlier
		34	5.00	3.37	0.67	OK
	N-150/60°	32	1.73	1.66	0.96	OK
		12	1.73	1.72	0.99	OK
gamma	S-Cs-S/0°	17	0.80	1.20	1.50	OK
		24	0.80	1.22	1.53	OK
	S-Cs-L/0°	5	4.30	3.89	0.90	OK
		31	4.30	4.11	0.96	OK
		13	4.30	4.20	0.98	OK
	S-Co-L/0°	27	4.30	4.42	1.03	OK
		1	4.70	4.53	0.96	OK
	S-Co-M/0°	7	4.70	4.70	1.00	OK
		20	52.00	44.59	0.86	OK
	S-Co-H/0°	23	52.00	47.84	0.92	OK
		29	370.00	267.53	0.72	OK
	3	370.00	284.77	0.77	OK	
mixed		N-150/Cs-137	15	6.00	4.70	0.78
	14		6.00	4.75	0.79	OK
NIR	NIR	2		0.46		
	NIR	4		0.53		
	NIR	6		0.48		
	NIR	8		0.48		
	NIR	9		0.43		
	NIR	10		0.49		
	NIR	11		0.50		
	NIR	19		0.49		
	NIR	21		0.41		
	NIR	22		0.57		
	NIR	25		0.55		
	NIR	28		0.45		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.04	1.04	1.07	1.01	4%
N-60/60°	2	1.10	1.10	1.10	1.09	1%
W-110/0°	2	0.64	0.64	0.67	0.60	8%
N-150/60°	2	0.98	0.98	0.99	0.96	2%
S-Cs/0°	6	1.01	1.15	1.53	0.90	25%
S-Co/0°	6	0.89	0.87	1.00	0.72	13%
N-150/Cs-137	2	0.79	0.79	0.79	0.78	1%
All	22	0.96	0.96	1.53	0.60	23%

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



No dose values for  $H_p(0.07)$  submitted.

## Reporting number 33: (TL) for dose quantity Hp(10)

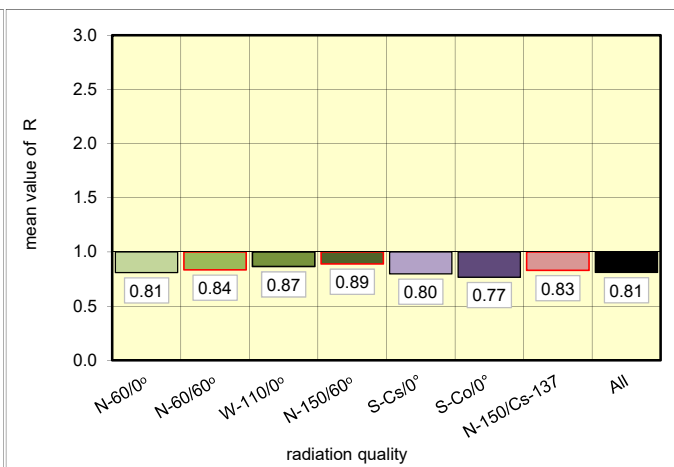
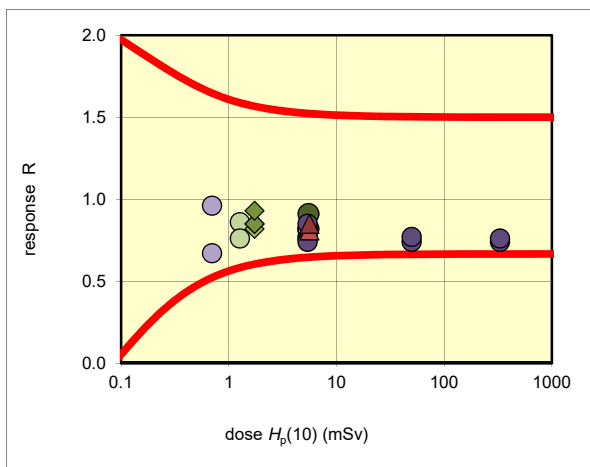
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	26	1.27	1.09	0.86	OK
		17	1.27	0.97	0.76	OK
	N-60/60°	24	1.73	1.42	0.82	OK
		19	1.73	1.47	0.85	OK
	W-110/0°	13	5.50	4.53	0.82	OK
		14	5.50	5.03	0.91	OK
N-150/60°	1	1.73	1.48	0.85	OK	
	34	1.73	1.61	0.93	OK	
gamma	S-Cs-S/0°	5	0.70	0.47	0.67	OK
		3	0.70	0.67	0.96	OK
	S-Cs-L/0°	21	5.40	4.09	0.76	OK
		11	5.40	4.16	0.77	OK
		32	5.40	4.37	0.81	OK
		4	5.40	4.45	0.82	OK
	S-Co-L/0°	23	5.40	4.00	0.74	OK
		22	5.40	4.60	0.85	OK
	S-Co-M/0°	18	50.00	37.05	0.74	OK
		12	50.00	38.67	0.77	OK
S-Co-H/0°	29	330.00	243.88	0.74	OK	
	9	330.00	252.11	0.76	OK	
mixed	N-150/Cs-137	31	5.60	4.52	0.81	OK
		30	5.60	4.77	0.85	OK
NIR	NIR	2		0.98		
	NIR	6		0.97		
	NIR	7		1.01		
	NIR	8		0.96		
	NIR	10		1.07		
	NIR	15		1.09		
	NIR	16		1.12		
	NIR	20		1.06		
	NIR	25		0.89		
	NIR	27		1.03		
	NIR	28		1.19		
	NIR	33		1.06		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.81</b>	0.81	0.86	0.76	9%
N-60/60°	2	<b>0.84</b>	0.84	0.85	0.82	3%
W-110/0°	2	<b>0.87</b>	0.87	0.91	0.82	7%
N-150/60°	2	<b>0.89</b>	0.89	0.93	0.85	6%
S-Cs/0°	6	<b>0.79</b>	0.80	0.96	0.67	12%
S-Co/0°	6	<b>0.75</b>	0.77	0.85	0.74	6%
N-150/Cs-137	2	<b>0.83</b>	0.83	0.85	0.81	3%
<b>All</b>	<b>22</b>	<b>0.82</b>	<b>0.81</b>	<b>0.96</b>	<b>0.67</b>	<b>9%</b>

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 33: (TL) for dose quantity Hp(0.07)

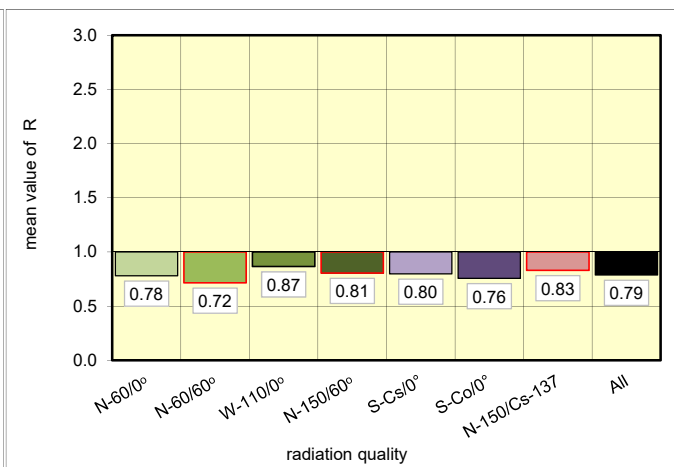
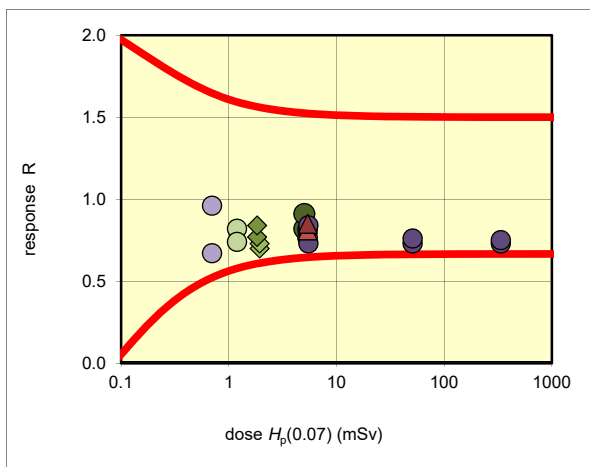
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	26	1.20	0.98	0.82	OK
		17	1.20	0.88	0.74	OK
	N-60/60°	24	1.94	1.35	0.70	OK
		19	1.94	1.41	0.73	OK
	W-110/0°	13	5.03	4.13	0.82	OK
		14	5.03	4.59	0.91	OK
	N-150/60°	1	1.83	1.40	0.77	OK
		34	1.83	1.54	0.84	OK
gamma	S-Cs-S/0°	5	0.70	0.47	0.67	OK
		3	0.70	0.67	0.96	OK
	S-Cs-L/0°	21	5.40	4.09	0.76	OK
		11	5.40	4.16	0.77	OK
		32	5.40	4.37	0.81	OK
		4	5.40	4.45	0.82	OK
	S-Co-L/0°	23	5.49	4.00	0.73	OK
		22	5.49	4.60	0.84	OK
	S-Co-M/0°	18	50.90	37.05	0.73	OK
		12	50.90	38.67	0.76	OK
	S-Co-H/0°	29	336.00	243.88	0.73	OK
		9	336.00	252.11	0.75	OK
mixed	N-150/Cs-137	31	5.41	4.38	0.81	OK
		30	5.41	4.60	0.85	OK
NIR	NIR	2		0.94		
	NIR	6		0.93		
	NIR	7		0.98		
	NIR	8		0.92		
	NIR	10		1.01		
	NIR	15		1.05		
	NIR	16		1.06		
	NIR	20		1.00		
	NIR	25		0.84		
	NIR	27		0.99		
	NIR	28		1.13		
	NIR	33		1.01		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.78</b>	0.78	0.82	0.74	7%
N-60/60°	2	<b>0.72</b>	0.72	0.73	0.70	3%
W-110/0°	2	<b>0.87</b>	0.87	0.91	0.82	7%
N-150/60°	2	<b>0.81</b>	0.81	0.84	0.77	6%
S-Cs/0°	6	<b>0.79</b>	0.80	0.96	0.67	12%
S-Co/0°	6	<b>0.74</b>	0.76	0.84	0.73	6%
N-150/Cs-137	2	<b>0.83</b>	0.83	0.85	0.81	3%
<b>All</b>	<b>22</b>	<b>0.77</b>	<b>0.79</b>	<b>0.96</b>	<b>0.67</b>	<b>9%</b>

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 34: (TL) for dose quantity Hp(10)

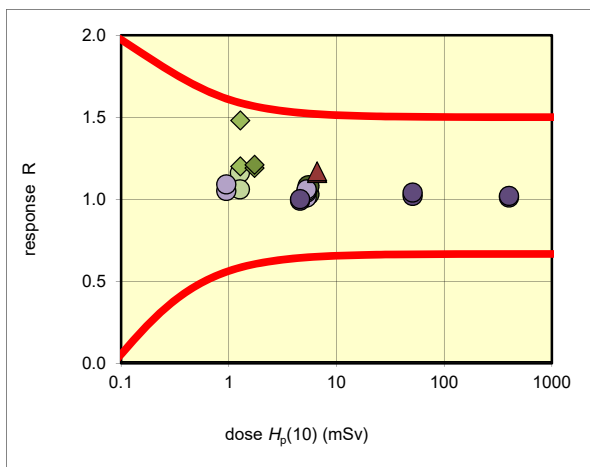
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	3	1.27	1.47	1.16	OK
		5	1.27	1.35	1.06	OK
	N-60/60°	16	1.28	1.54	1.20	OK
		23	1.28	1.90	1.48	OK
	W-110/0°	2	5.50	5.65	1.03	OK
		30	5.50	5.96	1.08	OK
N-150/60°	12	1.73	2.06	1.19	OK	
	18	1.73	2.10	1.21	OK	
gamma	S-Cs-S/0°	11	0.95	1.00	1.05	OK
		14	0.95	1.04	1.09	OK
	S-Cs-L/0°	25	5.30	5.33	1.01	OK
		24	5.30	5.50	1.04	OK
		15	5.30	5.54	1.05	OK
		17	5.30	5.61	1.06	OK
	S-Co-L/0°	31	4.60	4.55	0.99	OK
		29	4.60	4.58	1.00	OK
	S-Co-M/0°	33	51.00	51.94	1.02	OK
		32	51.00	52.90	1.04	OK
	S-Co-H/0°	21	400.00	402.56	1.01	OK
		19	400.00	408.59	1.02	OK
mixed	N-150/Cs-137	27	6.60	7.63	1.16	OK
		26	6.60	7.69	1.17	OK
NIR	NIR	1		0.89		
	NIR	4		0.85		
	NIR	6		0.76		
	NIR	7		0.68		
	NIR	8		0.89		
	NIR	9		0.78		
	NIR	10		0.81		
	NIR	13		0.77		
	NIR	20		0.94		
	NIR	22		0.72		
	NIR	28		0.87		
	NIR	34		0.81		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

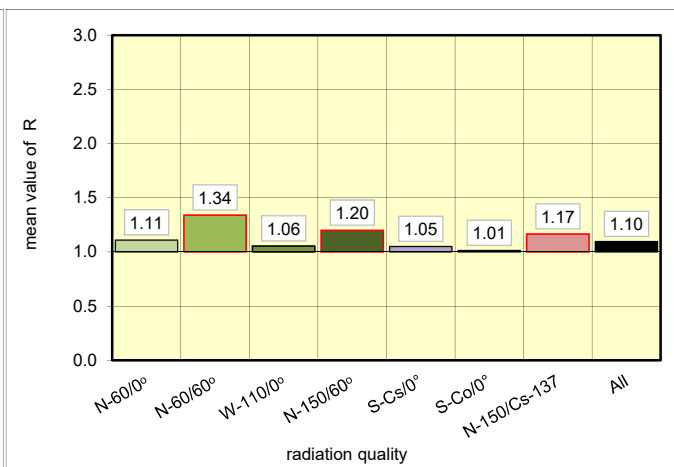
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.11	1.11	1.16	1.06	6%
N-60/60°	2	1.34	1.34	1.48	1.20	15%
W-110/0°	2	1.06	1.06	1.08	1.03	3%
N-150/60°	2	1.20	1.20	1.21	1.19	1%
S-Cs/0°	6	1.05	1.05	1.09	1.01	2%
S-Co/0°	6	1.02	1.01	1.04	0.99	2%
N-150/Cs-137	2	1.17	1.17	1.17	1.16	1%
<b>All</b>	<b>22</b>	<b>1.06</b>	<b>1.10</b>	<b>1.48</b>	<b>0.99</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 34: (TL) for dose quantity Hp(0.07)

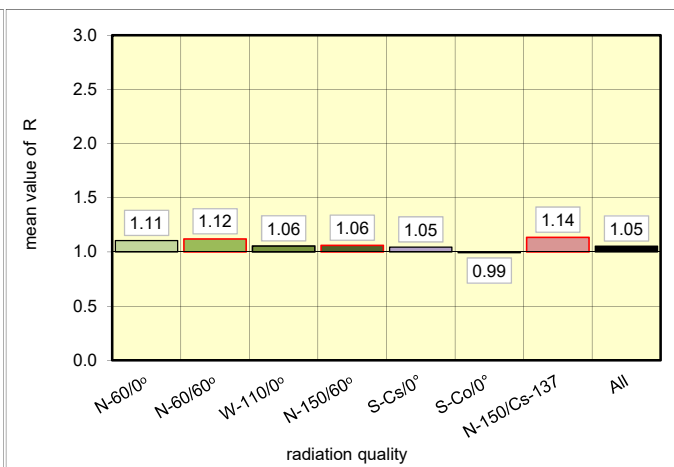
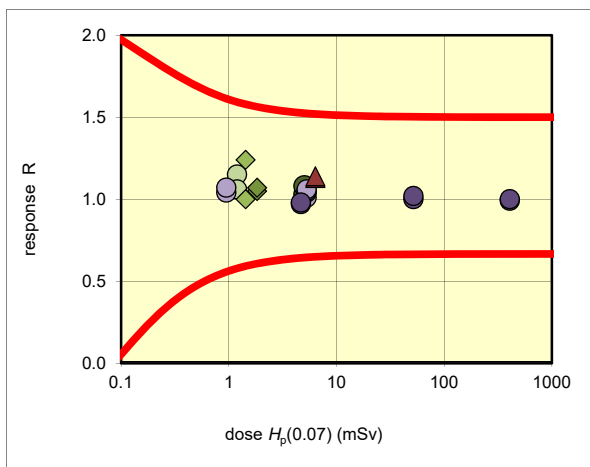
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	3	1.20	1.37	1.15	OK
		5	1.20	1.27	1.06	OK
	N-60/60°	16	1.43	1.43	1.00	OK
		23	1.43	1.77	1.24	OK
	W-110/0°	2	5.03	5.19	1.03	OK
		30	5.03	5.45	1.08	OK
gamma	N-150/60°	12	1.83	1.92	1.05	OK
		18	1.83	1.96	1.07	OK
	S-Cs-S/0°	11	0.95	0.99	1.04	OK
		14	0.95	1.02	1.07	OK
	S-Cs-L/0°	25	5.30	5.33	1.01	OK
		24	5.30	5.50	1.04	OK
		15	5.30	5.54	1.05	OK
		17	5.30	5.61	1.06	OK
	S-Co-L/0°	31	4.68	4.55	0.97	OK
		29	4.68	4.58	0.98	OK
	S-Co-M/0°	33	51.90	51.94	1.00	OK
		32	51.90	52.90	1.02	OK
S-Co-H/0°	21	407.00	402.07	0.99	OK	
	19	407.00	407.60	1.00	OK	
mixed	N-150/Cs-137	27	6.36	7.18	1.13	OK
		26	6.36	7.23	1.14	OK
NIR	NIR	1		0.82		
		4		0.79		
		6		0.70		
		7		0.63		
		8		0.83		
		9		0.72		
		10		0.75		
		13		0.71		
		20		0.87		
		22		0.66		
		28		0.80		
		34		0.75		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.11	1.11	1.15	1.06	6%
N-60/60°	2	1.12	1.12	1.24	1.00	15%
W-110/0°	2	1.06	1.06	1.08	1.03	3%
N-150/60°	2	1.06	1.06	1.07	1.05	1%
S-Cs/0°	6	1.05	1.05	1.07	1.01	2%
S-Co/0°	6	1.00	0.99	1.02	0.97	2%
N-150/Cs-137	2	1.14	1.14	1.14	1.13	1%
<b>All</b>	<b>22</b>	<b>1.05</b>	<b>1.05</b>	<b>1.24</b>	<b>0.97</b>	<b>6%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 35: (TL) for dose quantity Hp(10)

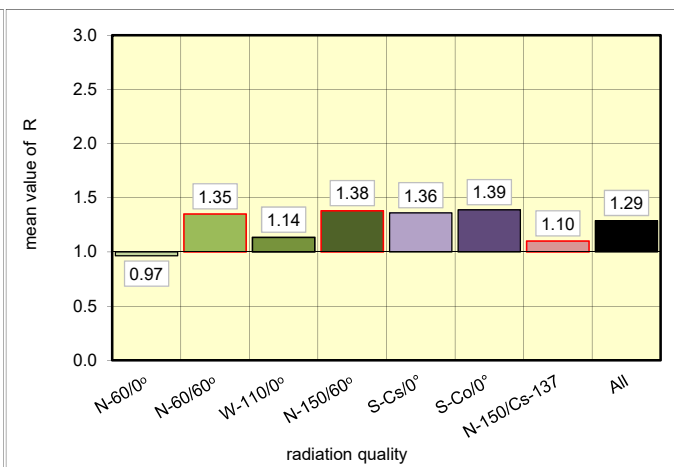
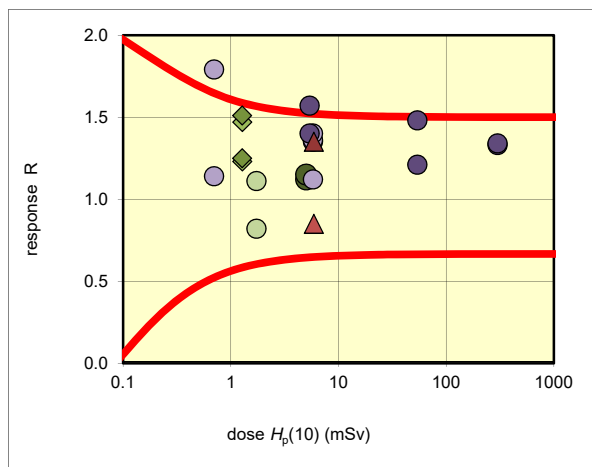
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	2	1.73	1.92	1.11	OK
		33	1.73	1.41	0.82	OK
	N-60/60°	25	1.28	1.57	1.23	OK
		22	1.28	1.88	1.47	OK
	W-110/0°	29	5.00	5.62	1.12	OK
		20	5.00	5.77	1.15	OK
	N-150/60°	7	1.28	1.59	1.25	OK
		11	1.28	1.93	1.51	OK
gamma	S-Cs-S/0°	31	0.70	0.80	1.14	OK
		27	0.70	1.25	1.79	outlier
	S-Cs-L/0°	32	5.80	6.48	1.12	OK
		3	5.80	7.81	1.35	OK
		26	5.80	7.91	1.36	OK
	S-Co-L/0°	5	5.80	8.11	1.40	OK
		4	5.40	7.58	1.40	OK
	S-Co-M/0°	15	5.40	8.50	1.57	outlier
		18	54.00	65.20	1.21	OK
	S-Co-H/0°	19	54.00	79.65	1.48	OK
		23	300.00	397.66	1.33	OK
	mixed	N-150/Cs-137	24	300.00	402.00	1.34
34			5.90	4.99	0.85	OK
		16	5.90	7.97	1.35	OK
		10		-		
		17		-		
		28		0.30		
		1		0.20		
		6		0.32		
		8		0.30		
		9		0.30		
		12		0.30		
		13		0.39		
14		0.43				
21		0.21				
30		0.34				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.97</b>	0.97	1.11	0.82	21%
N-60/60°	2	<b>1.35</b>	1.35	1.47	1.23	13%
W-110/0°	2	<b>1.14</b>	1.14	1.15	1.12	2%
N-150/60°	2	<b>1.38</b>	1.38	1.51	1.25	13%
S-Cs/0°	6	<b>1.36</b>	1.36	1.79	1.12	18%
S-Co/0°	6	<b>1.37</b>	1.39	1.57	1.21	9%
N-150/Cs-137	2	<b>1.10</b>	1.10	1.35	0.85	32%
<b>All</b>	<b>22</b>	<b>1.34</b>	<b>1.29</b>	<b>1.79</b>	<b>0.82</b>	<b>17%</b>

outliers: 2 of 22

Fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 36: (TL) for dose quantity Hp(10)

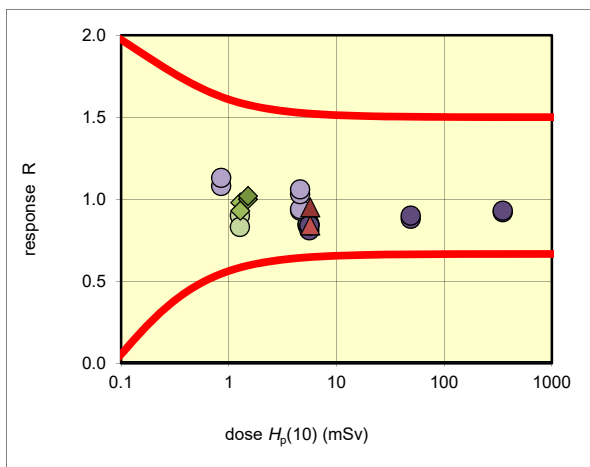
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	23	1.27	1.14	0.90	OK
		22	1.27	1.05	0.83	OK
	N-60/60°	7	1.28	1.25	0.98	OK
		33	1.28	1.19	0.93	OK
	W-110/0°	24	5.50	4.63	0.84	OK
		26	5.50	4.69	0.85	OK
N-150/60°	10	1.51	1.50	1.00	OK	
	20	1.51	1.54	1.02	OK	
gamma	S-Cs-S/0°	8	0.85	0.92	1.08	OK
		13	0.85	0.96	1.13	OK
	S-Cs-L/0°	4	4.60	4.30	0.93	OK
		6	4.60	4.31	0.94	OK
		1	4.60	4.75	1.03	OK
	S-Co-L/0°	3	4.60	4.87	1.06	OK
		30	5.60	4.52	0.81	OK
	S-Co-M/0°	29	5.60	4.69	0.84	OK
		27	49.00	43.09	0.88	OK
	S-Co-H/0°	25	49.00	44.29	0.90	OK
18		350.00	323.13	0.92	OK	
mixed	N-150/Cs-137	19	350.00	326.43	0.93	OK
		2	5.70	4.78	0.84	OK
	NIR	5	5.70	5.40	0.95	OK
		9		0.67		
	NIR	11		0.52		
	NIR	12		0.70		
	NIR	14		0.54		
	NIR	15		0.65		
	NIR	16		0.57		
	NIR	17		0.78		
	NIR	21		0.57		
	NIR	28		0.64		
NIR	31		0.47			
NIR	32		0.73			
NIR	34		0.50			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

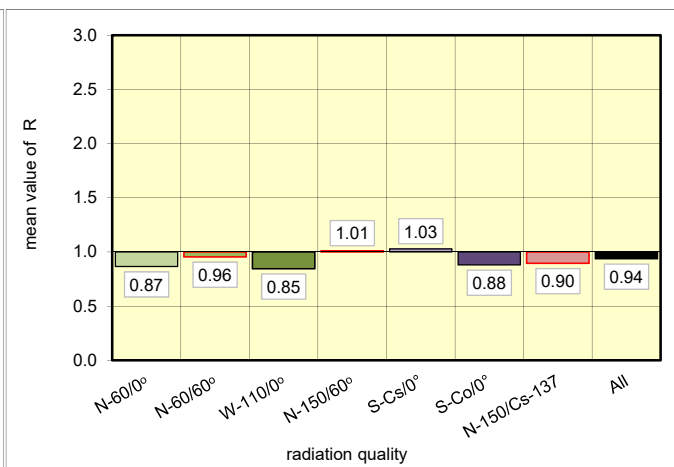
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.87</b>	0.87	0.90	0.83	6%
N-60/60°	2	<b>0.96</b>	0.96	0.98	0.93	4%
W-110/0°	2	<b>0.85</b>	0.85	0.85	0.84	1%
N-150/60°	2	<b>1.01</b>	1.01	1.02	1.00	1%
S-Cs/0°	6	<b>1.05</b>	1.03	1.13	0.93	8%
S-Co/0°	6	<b>0.89</b>	0.88	0.93	0.81	5%
N-150/Cs-137	2	<b>0.90</b>	0.90	0.95	0.84	9%
<b>All</b>	<b>22</b>	<b>0.93</b>	<b>0.94</b>	<b>1.13</b>	<b>0.81</b>	<b>9%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018



## Reporting number 36: (TL) for dose quantity Hp(0.07)

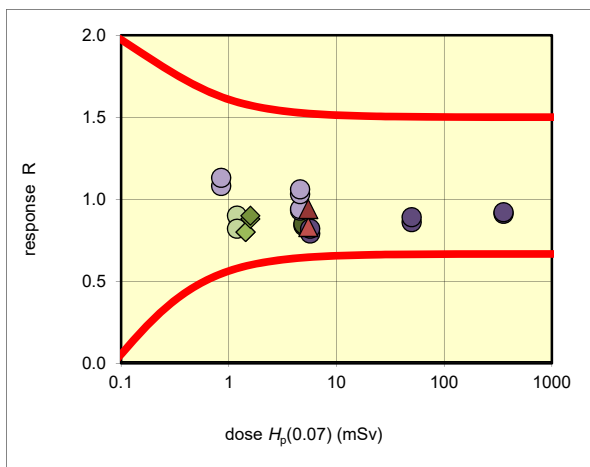
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	23	1.20	1.07	0.90	OK
		22	1.20	0.98	0.82	OK
	N-60/60°	7	1.43	1.15	0.80	OK
		33	1.43	1.14	0.80	OK
	W-110/0°	24	5.03	4.21	0.84	OK
		26	5.03	4.27	0.85	OK
	N-150/60°	10	1.59	1.39	0.88	OK
		20	1.59	1.43	0.90	OK
gamma	S-Cs-S/0°	8	0.85	0.92	1.08	OK
		13	0.85	0.96	1.13	OK
	S-Cs-L/0°	4	4.60	4.30	0.93	OK
		6	4.60	4.31	0.94	OK
		1	4.60	4.75	1.03	OK
		3	4.60	4.87	1.06	OK
	S-Co-L/0°	30	5.70	4.52	0.79	OK
		29	5.70	4.69	0.82	OK
	S-Co-M/0°	27	49.90	43.09	0.86	OK
		25	49.90	44.29	0.89	OK
	S-Co-H/0°	18	356.00	323.13	0.91	OK
		19	356.00	326.43	0.92	OK
mixed	N-150/Cs-137	2	5.48	4.57	0.83	OK
		5	5.48	5.16	0.94	OK
		9	5.48	5.16	0.94	OK
NIR	11			0.50		
	12			0.67		
	14			0.51		
	15			0.60		
	16			0.53		
	17			0.72		
	21			0.55		
	28			0.59		
	31			0.45		
	32			0.67		
	34			0.48		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

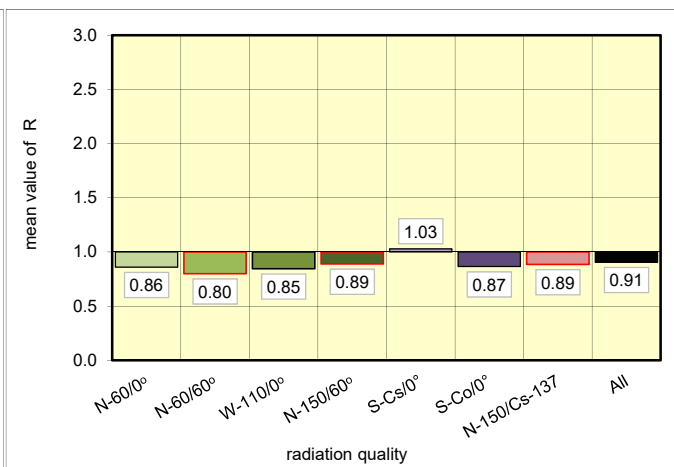
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.86</b>	0.86	0.90	0.82	7%
N-60/60°	2	<b>0.80</b>	0.80	0.80	0.80	0%
W-110/0°	2	<b>0.85</b>	0.85	0.85	0.84	1%
N-150/60°	2	<b>0.89</b>	0.89	0.90	0.88	2%
S-Cs/0°	6	<b>1.05</b>	1.03	1.13	0.93	8%
S-Co/0°	6	<b>0.88</b>	0.87	0.92	0.79	6%
N-150/Cs-137	2	<b>0.89</b>	0.89	0.94	0.83	9%
<b>All</b>	<b>22</b>	<b>0.90</b>	<b>0.91</b>	<b>1.13</b>	<b>0.79</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 37: (TL) for dose quantity Hp(10)

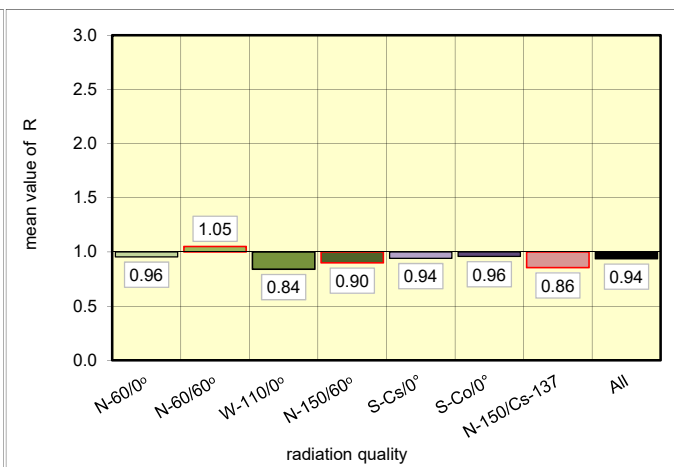
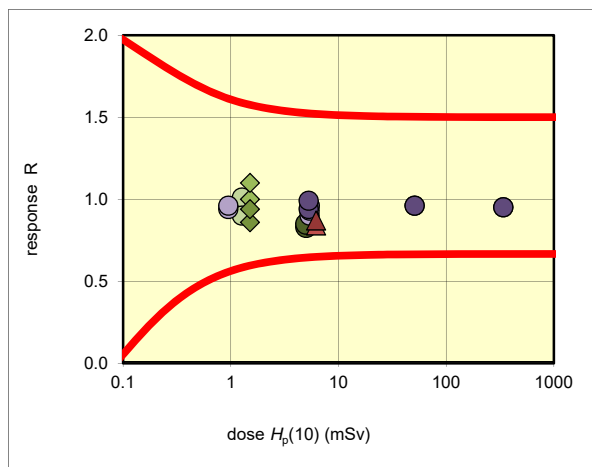
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	23	1.27	1.29	1.01	OK
		29	1.27	1.14	0.90	OK
	N-60/60°	2	1.51	1.50	1.00	OK
		15	1.51	1.66	1.10	OK
	W-110/0°	32	5.00	4.14	0.83	OK
		19	5.00	4.24	0.85	OK
	N-150/60°	17	1.51	1.30	0.86	OK
		11	1.51	1.42	0.94	OK
gamma	S-Cs-S/0°	14	0.95	0.89	0.94	OK
		6	0.95	0.91	0.96	OK
	S-Cs-L/0°	21	5.40	4.88	0.90	OK
		25	5.40	5.04	0.93	OK
		9	5.40	5.18	0.96	OK
		12	5.40	5.19	0.96	OK
	S-Co-L/0°	26	5.30	4.97	0.94	OK
		27	5.30	5.24	0.99	OK
	S-Co-M/0°	8	51.00	48.79	0.96	OK
		33	51.00	48.72	0.96	OK
	S-Co-H/0°	16	340.00	321.76	0.95	OK
		20	340.00	324.08	0.95	OK
mixed	N-150/Cs-137	31	6.20	5.21	0.84	OK
		30	6.20	5.42	0.87	OK
	WIR	13		-		
	WIR	22		-		
	NIR	1		0.26		
	NIR	3		0.19		
	NIR	4		0.21		
	NIR	5		0.21		
	NIR	7		0.19		
	NIR	10		0.22		
	NIR	18		0.26		
	NIR	24		0.28		
	NIR	28		0.22		
	NIR	34		0.23		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.96</b>	0.96	1.01	0.90	8%
N-60/60°	2	<b>1.05</b>	1.05	1.10	1.00	7%
W-110/0°	2	<b>0.84</b>	0.84	0.85	0.83	2%
N-150/60°	2	<b>0.90</b>	0.90	0.94	0.86	6%
S-Cs/0°	6	<b>0.95</b>	0.94	0.96	0.90	3%
S-Co/0°	6	<b>0.96</b>	0.96	0.99	0.94	2%
N-150/Cs-137	2	<b>0.86</b>	0.86	0.87	0.84	2%
<b>All</b>	<b>22</b>	<b>0.95</b>	<b>0.94</b>	<b>1.10</b>	<b>0.83</b>	<b>7%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 38: (TL) for dose quantity Hp(10)

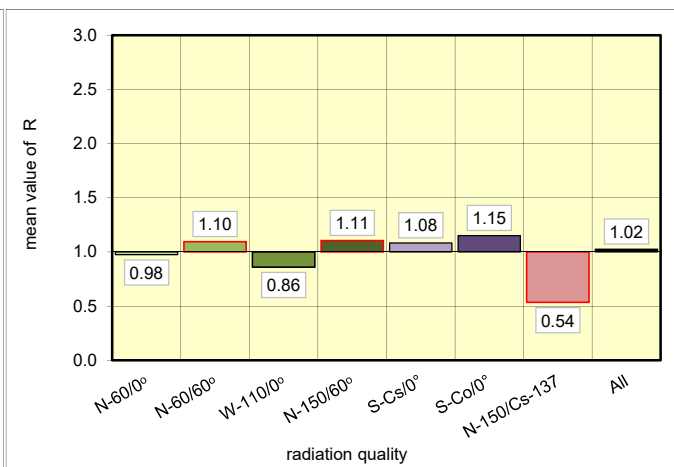
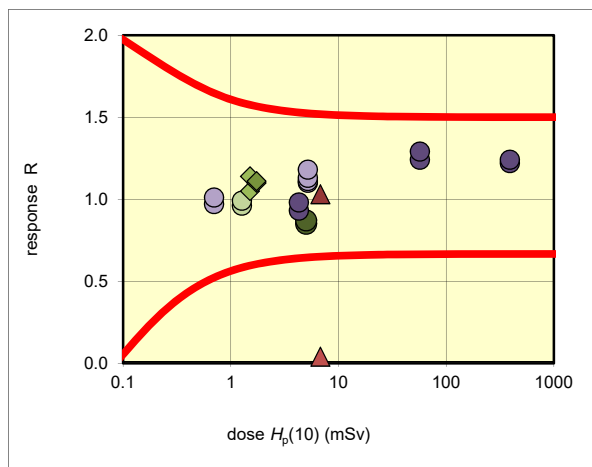
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	5	1.27	1.22	0.96	OK
		12	1.27	1.26	0.99	OK
	N-60/60°	25	1.51	1.58	1.05	OK
		23	1.51	1.71	1.14	OK
	W-110/0°	11	5.00	4.25	0.85	OK
		14	5.00	4.37	0.87	OK
	N-150/60°	9	1.73	1.90	1.10	OK
		28	1.73	1.92	1.11	OK
gamma	S-Cs-S/0°	17	0.70	0.68	0.97	OK
		15	0.70	0.71	1.01	OK
	S-Cs-L/0°	21	5.20	5.72	1.10	OK
		34	5.20	5.75	1.11	OK
		30	5.20	5.86	1.13	OK
		18	5.20	6.16	1.18	OK
	S-Co-L/0°	19	4.30	4.02	0.93	OK
		16	4.30	4.23	0.98	OK
	S-Co-M/0°	27	57.00	70.81	1.24	OK
		31	57.00	73.53	1.29	OK
	S-Co-H/0°	6	390.00	476.00	1.22	OK
		10	390.00	483.42	1.24	OK
mixed	N-150/Cs-137	1	6.80	0.25	0.04	outlier
		2	6.80	7.02	1.03	OK
NIR	NIR	3		0.24		
	NIR	4		0.29		
	NIR	7		0.30		
	NIR	8		0.27		
	NIR	13		0.28		
	NIR	20		0.27		
	NIR	22		0.23		
	NIR	24		0.22		
	NIR	26		0.22		
	NIR	29		0.23		
	NIR	32		0.23		
	NIR	33		0.25		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.98</b>	0.98	0.99	0.96	2%
N-60/60°	2	<b>1.10</b>	1.10	1.14	1.05	6%
W-110/0°	2	<b>0.86</b>	0.86	0.87	0.85	2%
N-150/60°	2	<b>1.11</b>	1.11	1.11	1.10	1%
S-Cs/0°	6	<b>1.11</b>	1.08	1.18	0.97	7%
S-Co/0°	6	<b>1.23</b>	1.15	1.29	0.93	13%
N-150/Cs-137	2	<b>0.54</b>	0.54	1.03	0.04	131%
<b>All</b>	<b>22</b>	<b>1.08</b>	<b>1.02</b>	<b>1.29</b>	<b>0.04</b>	<b>24%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 39: (TL) for dose quantity Hp(10)

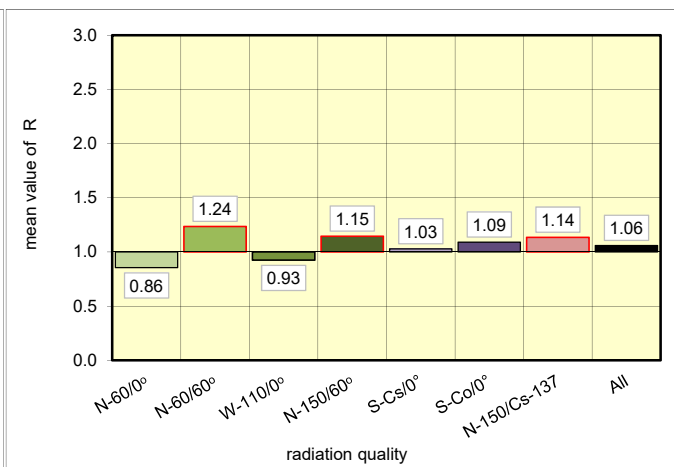
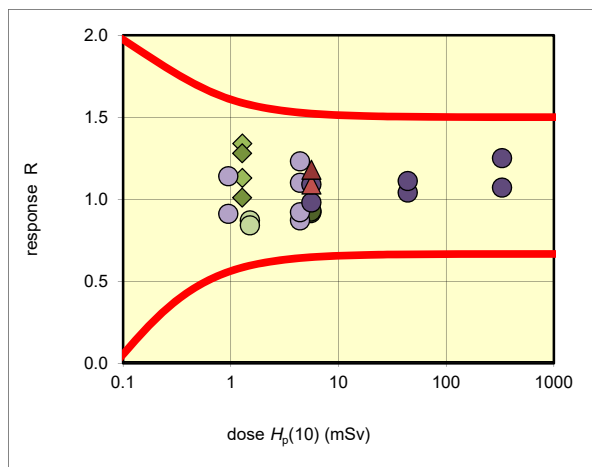
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose Hp(10) mSv	dose Hp(10) mSv	response R (reported/true)		
x-ray	N-60/0°	25	1.51	1.31	0.87	OK
		5	1.51	1.27	0.84	OK
	N-60/60°	29	1.28	1.44	1.13	OK
		33	1.28	1.72	1.34	OK
	W-110/0°	4	5.50	5.05	0.92	OK
		11	5.50	5.09	0.93	OK
N-150/60°	24	1.28	1.63	1.28	OK	
	17	1.28	1.29	1.01	OK	
gamma	S-Cs-S/0°	23	0.95	1.08	1.14	OK
		34	0.95	0.86	0.91	OK
	S-Cs-L/0°	22	4.40	3.84	0.87	OK
		20	4.40	4.06	0.92	OK
		9	4.40	4.82	1.10	OK
		1	4.40	5.42	1.23	OK
	S-Co-L/0°	18	5.60	5.47	0.98	OK
		13	5.60	6.10	1.09	OK
	S-Co-M/0°	7	44.00	45.80	1.04	OK
		14	44.00	48.78	1.11	OK
S-Co-H/0°	21	330.00	352.51	1.07	OK	
	27	330.00	412.53	1.25	OK	
mixed	N-150/Cs-137	30	5.60	6.12	1.09	OK
		26	5.60	6.61	1.18	OK
	WIR	15		-		
	WIR	31		-		
	NIR	2		0.00		
	NIR	28		0.00		
	NIR	16		0.00		
	NIR	12		0.00		
	NIR	8		0.00		
	NIR	3		0.00		
	NIR	6		0.00		
	NIR	10		0.00		
	NIR	19		0.00		
	NIR	32		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.86</b>	0.86	0.87	0.84	2%
N-60/60°	2	<b>1.24</b>	1.24	1.34	1.13	12%
W-110/0°	2	<b>0.93</b>	0.93	0.93	0.92	1%
N-150/60°	2	<b>1.15</b>	1.15	1.28	1.01	17%
S-Cs/0°	6	<b>1.01</b>	1.03	1.23	0.87	14%
S-Co/0°	6	<b>1.08</b>	1.09	1.25	0.98	8%
N-150/Cs-137	2	<b>1.14</b>	1.14	1.18	1.09	6%
All	<b>22</b>	<b>1.08</b>	<b>1.06</b>	<b>1.34</b>	<b>0.84</b>	<b>14%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 39: (TL) for dose quantity Hp(0.07)

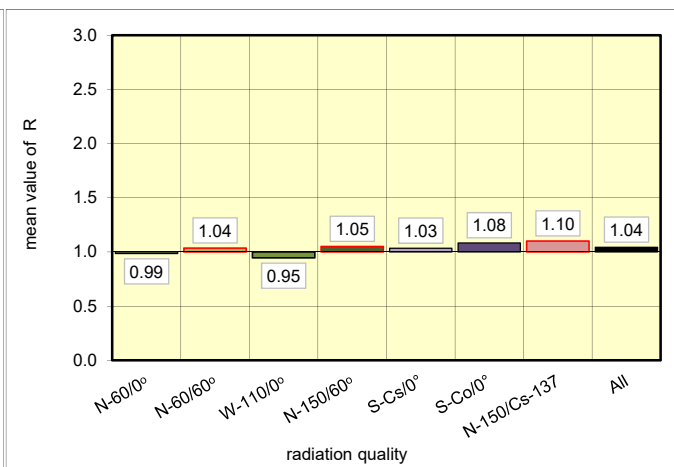
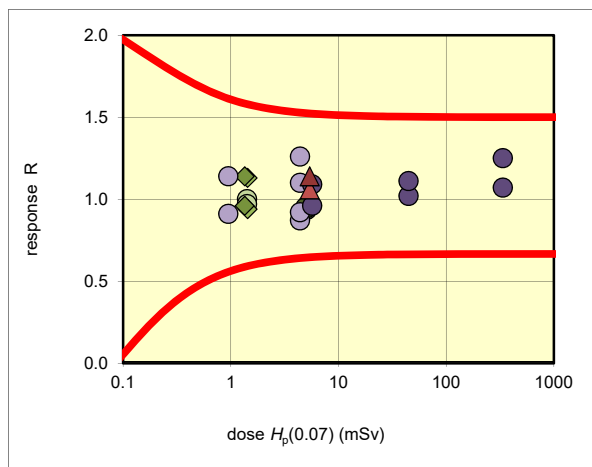
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	25	1.42	1.41	1.00	OK
		5	1.42	1.37	0.97	OK
	N-60/60°	29	1.43	1.35	0.94	OK
		33	1.43	1.62	1.13	OK
	W-110/0°	4	5.03	4.75	0.94	OK
		11	5.03	4.78	0.95	OK
gamma	N-150/60°	24	1.35	1.53	1.14	OK
		17	1.35	1.29	0.96	OK
	S-Cs-S/0°	23	0.95	1.08	1.14	OK
		34	0.95	0.86	0.91	OK
	S-Cs-L/0°	22	4.40	3.84	0.87	OK
		20	4.40	4.06	0.92	OK
		9	4.40	4.82	1.10	OK
	S-Co-L/0°	1	4.40	5.53	1.26	OK
		18	5.70	5.47	0.96	OK
	S-Co-M/0°	13	5.70	6.22	1.09	OK
		7	44.80	45.80	1.02	OK
	S-Co-H/0°	14	44.80	49.76	1.11	OK
21		336.00	359.56	1.07	OK	
mixed	N-150/Cs-137	27	336.00	420.78	1.25	OK
		30	5.41	5.75	1.06	OK
	26	5.41	6.15	1.14	OK	
	WIR	15		-		
	WIR	31		-		
	NIR	2		0.00		
	NIR	28		0.00		
	NIR	16		0.00		
	NIR	12		0.00		
	NIR	8		0.00		
	NIR	3		0.00		
	NIR	6		0.00		
	NIR	10		0.00		
	NIR	19		0.00		
	NIR	32		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.99</b>	0.99	1.00	0.97	2%
N-60/60°	2	<b>1.04</b>	1.04	1.13	0.94	13%
W-110/0°	2	<b>0.95</b>	0.95	0.95	0.94	1%
N-150/60°	2	<b>1.05</b>	1.05	1.14	0.96	12%
S-Cs/0°	6	<b>1.01</b>	1.03	1.26	0.87	15%
S-Co/0°	6	<b>1.08</b>	1.08	1.25	0.96	9%
N-150/Cs-137	2	<b>1.10</b>	1.10	1.14	1.06	5%
<b>All</b>	<b>22</b>	<b>1.04</b>	<b>1.04</b>	<b>1.26</b>	<b>0.87</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 40: (TL) for dose quantity Hp(10)

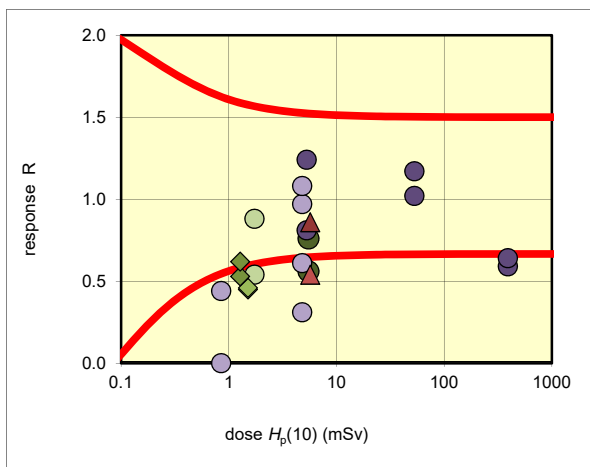
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	2	1.73	1.53	0.88	OK
		11	1.73	0.93	0.54	outlier
	N-60/60°	23	1.51	0.68	0.45	outlier
		22	1.51	0.70	0.46	outlier
	W-110/0°	25	5.50	3.06	0.56	outlier
		5	5.50	4.21	0.76	OK
N-150/60°	14	1.28	0.68	0.53	outlier	
	29	1.28	0.80	0.62	OK	
gamma	S-Cs-S/0°	32	0.85	0.00	0.00	outlier
		30	0.85	0.38	0.44	outlier
	S-Cs-L/0°	26	4.80	1.49	0.31	outlier
		28	4.80	2.95	0.61	outlier
		19	4.80	4.66	0.97	OK
	S-Co-L/0°	18	4.80	5.19	1.08	OK
		8	5.30	4.27	0.81	OK
	S-Co-M/0°	7	5.30	6.57	1.24	OK
		17	53.00	54.19	1.02	OK
	S-Co-H/0°	31	53.00	62.14	1.17	OK
12		390.00	228.21	0.59	outlier	
mixed	N-150/Cs-137	15	390.00	251.51	0.64	outlier
		21	5.70	3.06	0.54	outlier
NIR	N-150/Cs-137	24	5.70	4.92	0.86	OK
		1		0.63		
		3		0.72		
		4		0.65		
		6		1.13		
		9		1.04		
		10		0.76		
		13		0.87		
		16		0.63		
		20		0.55		
27		0.63				
33		0.64				
34		0.85				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

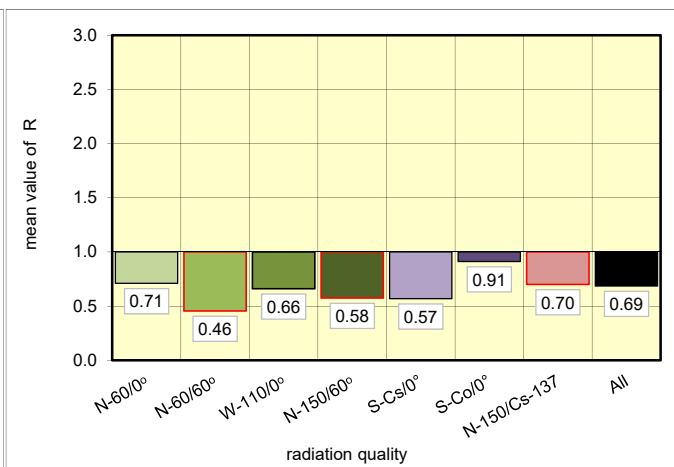
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.71</b>	0.71	0.88	0.54	34%
N-60/60°	2	<b>0.46</b>	0.46	0.46	0.45	2%
W-110/0°	2	<b>0.66</b>	0.66	0.76	0.56	21%
N-150/60°	2	<b>0.58</b>	0.58	0.62	0.53	11%
S-Cs/0°	6	<b>0.53</b>	0.57	1.08	0.00	72%
S-Co/0°	6	<b>0.92</b>	0.91	1.24	0.59	30%
N-150/Cs-137	2	<b>0.70</b>	0.70	0.86	0.54	32%
<b>All</b>	<b>22</b>	<b>0.62</b>	<b>0.69</b>	<b>1.24</b>	<b>0.00</b>	<b>43%</b>

outliers: 12 of 22

fraction of outliers: 55%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018



No dose values for  $H_p(0.07)$  submitted.

## Reporting number 41: (TL) for dose quantity Hp(10)

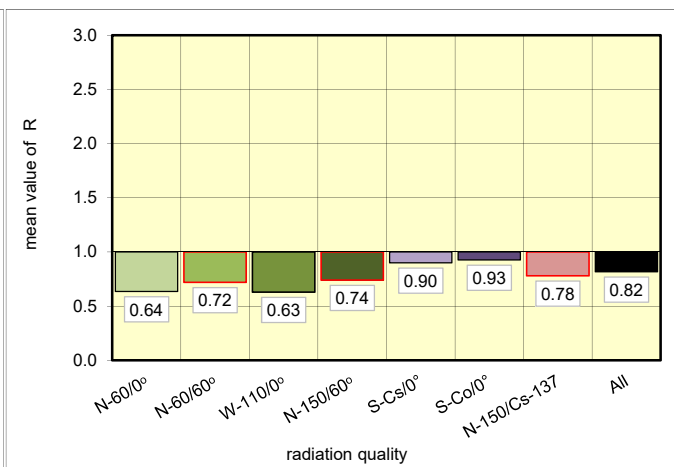
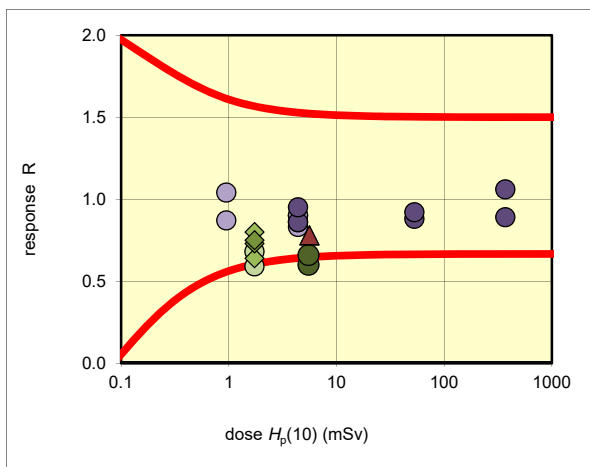
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.73	1.02	0.59	outlier
		30	1.73	1.18	0.68	OK
	N-60/60°	24	1.73	1.11	0.64	OK
		13	1.73	1.39	0.80	OK
	W-110/0°	5	5.50	3.31	0.60	outlier
		1	5.50	3.64	0.66	OK
N-150/60°	22	1.73	1.27	0.73	OK	
	9	1.73	1.30	0.75	OK	
gamma	S-Cs-S/0°	21	0.95	0.83	0.87	OK
		18	0.95	0.99	1.04	OK
	S-Cs-L/0°	2	4.40	3.66	0.83	OK
		32	4.40	3.79	0.86	OK
		3	4.40	3.94	0.90	OK
	S-Co-L/0°	31	4.40	3.95	0.90	OK
		16	4.40	3.79	0.86	OK
	S-Co-M/0°	17	4.40	4.19	0.95	OK
		33	53.00	46.50	0.88	OK
	S-Co-H/0°	27	53.00	49.00	0.92	OK
		15	370.00	329.00	0.89	OK
	mixed	N-150/Cs-137	23	370.00	393.00	1.06
20			5.60	4.35	0.78	OK
NIR	N-150/Cs-137	25	5.60	4.35	0.78	OK
		4		0.61		
		6		0.54		
		7		0.65		
		8		0.52		
		11		0.56		
		12		0.56		
		14		0.56		
		19		0.59		
		26		0.55		
28		0.50				
29		0.50				
34		0.53				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.64</b>	0.64	0.68	0.59	10%
N-60/60°	2	<b>0.72</b>	0.72	0.80	0.64	16%
W-110/0°	2	<b>0.63</b>	0.63	0.66	0.60	7%
N-150/60°	2	<b>0.74</b>	0.74	0.75	0.73	2%
S-Cs/0°	6	<b>0.89</b>	0.90	1.04	0.83	8%
S-Co/0°	6	<b>0.91</b>	0.93	1.06	0.86	8%
N-150/Cs-137	2	<b>0.78</b>	0.78	0.78	0.78	0%
All	22	<b>0.85</b>	<b>0.82</b>	<b>1.06</b>	<b>0.59</b>	<b>16%</b>

outliers: 2 of 22

Fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 42: (TL) for dose quantity Hp(10)

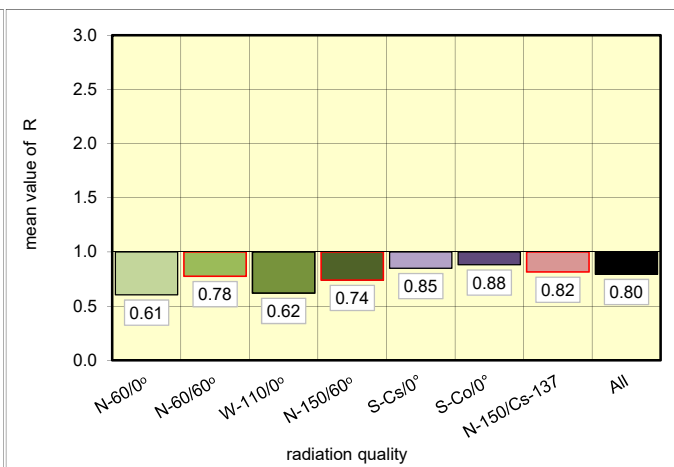
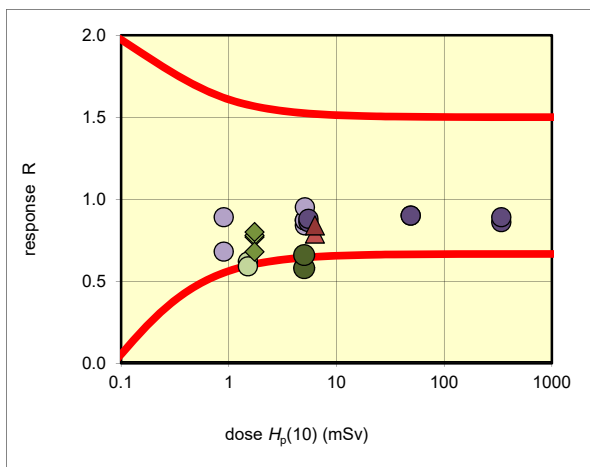
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	22	1.51	0.93	0.62	OK
		29	1.51	0.89	0.59	outlier
	N-60/60°	4	1.73	1.33	0.77	OK
		2	1.73	1.35	0.78	OK
	W-110/0°	15	5.00	2.88	0.58	outlier
		31	5.00	3.32	0.66	OK
	N-150/60°	9	1.73	1.18	0.68	OK
		14	1.73	1.38	0.80	OK
gamma	S-Cs-S/0°	33	0.90	0.61	0.68	OK
		30	0.90	0.80	0.89	OK
	S-Cs-L/0°	8	5.10	4.26	0.84	OK
		6	5.10	4.42	0.87	OK
		13	5.10	4.44	0.87	OK
		16	5.10	4.86	0.95	OK
	S-Co-L/0°	18	5.50	4.73	0.86	OK
		19	5.50	4.85	0.88	OK
	S-Co-M/0°	3	49.00	44.00	0.90	OK
		12	49.00	44.20	0.90	OK
	S-Co-H/0°	32	340.00	292.00	0.86	OK
		27	340.00	302.00	0.89	OK
mixed	N-150/Cs-137	26	6.30	4.98	0.79	OK
		25	6.30	5.28	0.84	OK
NIR	NIR	1		0.64		
	NIR	5		0.56		
	NIR	7		0.55		
	NIR	10		0.56		
	NIR	11		0.62		
	NIR	17		0.55		
	NIR	20		0.57		
	NIR	21		0.56		
	NIR	23		0.62		
	NIR	24		0.64		
	NIR	28		0.60		
	NIR	34		0.62		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.61</b>	0.61	0.62	0.59	4%
N-60/60°	2	<b>0.78</b>	0.78	0.78	0.77	1%
W-110/0°	2	<b>0.62</b>	0.62	0.66	0.58	9%
N-150/60°	2	<b>0.74</b>	0.74	0.80	0.68	11%
S-Cs/0°	6	<b>0.87</b>	0.85	0.95	0.68	11%
S-Co/0°	6	<b>0.89</b>	0.88	0.90	0.86	2%
N-150/Cs-137	2	<b>0.82</b>	0.82	0.84	0.79	4%
<b>All</b>	<b>22</b>	<b>0.84</b>	<b>0.80</b>	<b>0.95</b>	<b>0.58</b>	<b>14%</b>

outliers: 2 of 22

Fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 43: (TL) for dose quantity Hp(10)

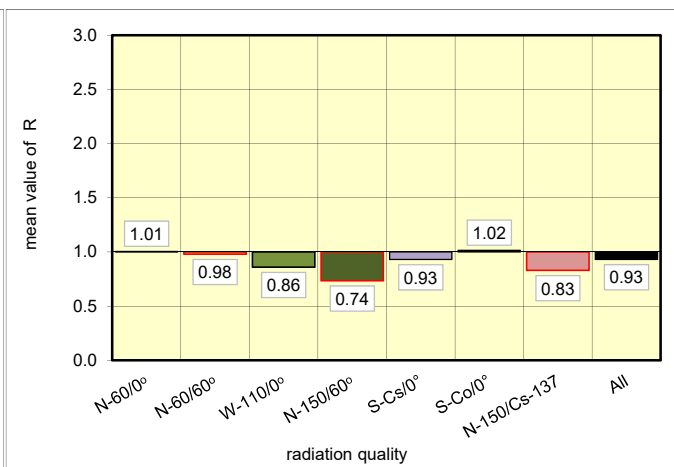
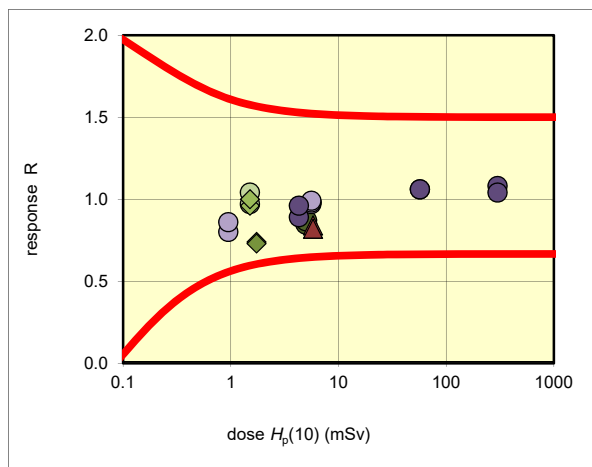
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose Hp(10) mSv	dose Hp(10) mSv	response R (reported/true)		
x-ray	N-60/0°	23	1.51	1.57	1.04	OK
		34	1.51	1.46	0.97	OK
	N-60/60°	5	1.51	1.45	0.96	OK
		3	1.51	1.51	1.00	OK
	W-110/0°	21	5.00	4.24	0.85	OK
		22	5.00	4.33	0.87	OK
	N-150/60°	14	1.73	1.28	0.74	OK
		17	1.73	1.27	0.73	OK
gamma	S-Cs-S/0°	16	0.95	0.76	0.80	OK
		25	0.95	0.82	0.86	OK
	S-Cs-L/0°	4	5.60	5.49	0.98	OK
		15	5.60	5.41	0.97	OK
		19	5.60	5.50	0.98	OK
		10	5.60	5.57	0.99	OK
	S-Co-L/0°	1	4.30	3.82	0.89	OK
		2	4.30	4.11	0.96	OK
	S-Co-M/0°	33	57.00	60.31	1.06	OK
		27	57.00	60.58	1.06	OK
	S-Co-H/0°	11	300.00	322.84	1.08	OK
		13	300.00	313.28	1.04	OK
mixed	N-150/Cs-137	6	5.80	4.90	0.84	OK
		7	5.80	4.75	0.82	OK
	WIR	9		-		
	WIR	32		-		
	NIR	8		0.00		
	NIR	12		0.00		
	NIR	18		0.00		
	NIR	20		0.00		
	NIR	24		0.00		
	NIR	26		0.00		
	NIR	28		0.00		
	NIR	29		0.00		
	NIR	30		0.00		
	NIR	31		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.01	1.01	1.04	0.97	5%
N-60/60°	2	0.98	0.98	1.00	0.96	3%
W-110/0°	2	0.86	0.86	0.87	0.85	2%
N-150/60°	2	0.74	0.74	0.74	0.73	1%
S-Cs/0°	6	0.98	0.93	0.99	0.80	9%
S-Co/0°	6	1.05	1.02	1.08	0.89	7%
N-150/Cs-137	2	0.83	0.83	0.84	0.82	2%
All	22	0.97	0.93	1.08	0.73	11%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 43: (TL) for dose quantity $H_p(0.07)$

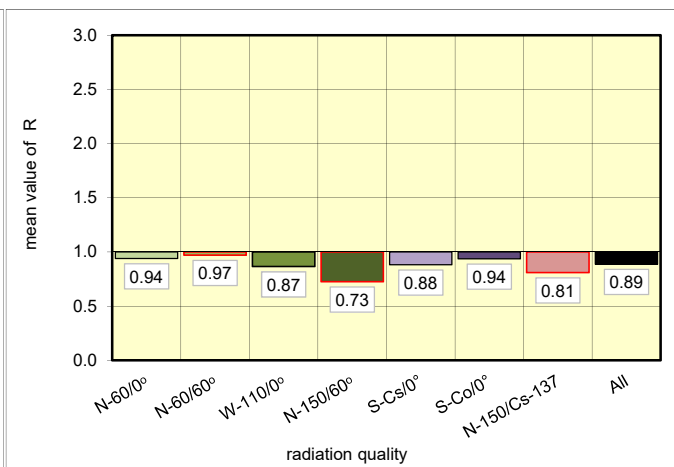
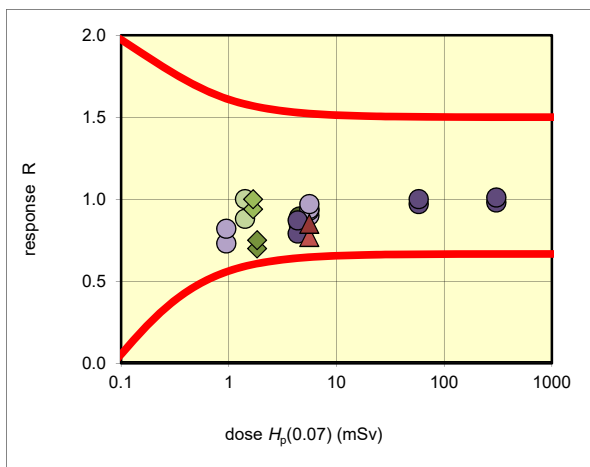
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	23	1.42	1.41	1.00	OK
		34	1.42	1.25	0.88	OK
	N-60/60°	5	1.68	1.59	0.94	OK
		3	1.68	1.69	1.00	OK
	W-110/0°	21	4.57	3.85	0.84	OK
		22	4.57	4.08	0.89	OK
	N-150/60°	14	1.83	1.28	0.70	OK
		17	1.83	1.38	0.75	OK
gamma	S-Cs-S/0°	16	0.95	0.69	0.73	OK
		25	0.95	0.78	0.82	OK
	S-Cs-L/0°	4	5.60	5.05	0.90	OK
		15	5.60	5.18	0.93	OK
		19	5.60	5.29	0.94	OK
		10	5.60	5.41	0.97	OK
	S-Co-L/0°	1	4.37	3.45	0.79	OK
		2	4.37	3.81	0.87	OK
	S-Co-M/0°	33	58.00	56.32	0.97	OK
		27	58.00	58.20	1.00	OK
	S-Co-H/0°	11	305.00	298.75	0.98	OK
		13	305.00	307.72	1.01	OK
mixed	N-150/Cs-137	6	5.58	4.32	0.77	OK
		7	5.58	4.72	0.85	OK
		9	5.58	4.72	0.85	OK
NIR	WIR	9	-	-	-	-
	WIR	32	-	-	-	-
	NIR	8	-	0.00	-	-
	NIR	12	-	0.00	-	-
	NIR	18	-	0.00	-	-
	NIR	20	-	0.00	-	-
	NIR	24	-	0.00	-	-
	NIR	26	-	0.00	-	-
	NIR	28	-	0.00	-	-
	NIR	29	-	0.00	-	-
	NIR	30	-	0.00	-	-
	NIR	31	-	0.00	-	-

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.94</b>	0.94	1.00	0.88	9%
N-60/60°	2	<b>0.97</b>	0.97	1.00	0.94	4%
W-110/0°	2	<b>0.87</b>	0.87	0.89	0.84	4%
N-150/60°	2	<b>0.73</b>	0.73	0.75	0.70	5%
S-Cs/0°	6	<b>0.92</b>	0.88	0.97	0.73	10%
S-Co/0°	6	<b>0.98</b>	0.94	1.01	0.79	9%
N-150/Cs-137	2	<b>0.81</b>	0.81	0.85	0.77	7%
<b>All</b>	<b>22</b>	<b>0.90</b>	<b>0.89</b>	<b>1.01</b>	<b>0.70</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 44: (TL) for dose quantity Hp(10)

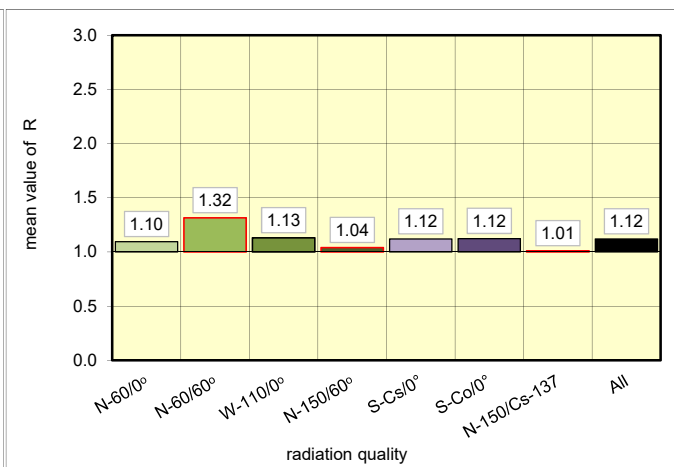
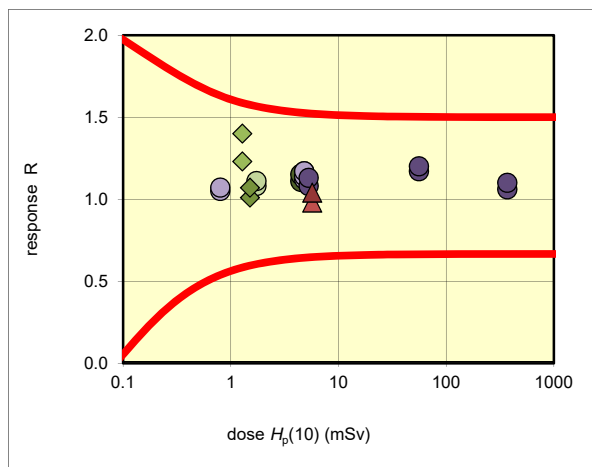
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	16	1.73	1.87	1.08	OK
		12	1.73	1.92	1.11	OK
	N-60/60°	23	1.28	1.57	1.23	OK
		6	1.28	1.79	1.40	OK
	W-110/0°	24	4.50	4.98	1.11	OK
		13	4.50	5.18	1.15	OK
	N-150/60°	20	1.51	1.52	1.01	OK
		8	1.51	1.61	1.07	OK
gamma	S-Cs-S/0°	22	0.80	0.84	1.05	OK
		21	0.80	0.85	1.07	OK
	S-Cs-L/0°	11	4.80	5.37	1.12	OK
		5	4.80	5.60	1.17	OK
		4	4.80	5.47	1.14	OK
		14	4.80	5.61	1.17	OK
	S-Co-L/0°	10	5.30	5.75	1.08	OK
		17	5.30	5.99	1.13	OK
	S-Co-M/0°	33	56.00	65.39	1.17	OK
		34	56.00	67.13	1.20	OK
	S-Co-H/0°	26	370.00	391.14	1.06	OK
		25	370.00	408.82	1.10	OK
mixed	N-150/Cs-137	1	5.70	5.61	0.98	OK
		2	5.70	5.90	1.04	OK
	NIR	3		0.00		
	NIR	7		0.00		
	NIR	9		0.00		
	NIR	15		0.00		
	NIR	18		0.00		
	NIR	19		0.00		
	NIR	27		0.00		
	NIR	28		0.00		
	NIR	29		0.00		
	NIR	30		0.00		
	NIR	31		0.00		
	NIR	32		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.10	1.10	1.11	1.08	2%
N-60/60°	2	1.32	1.32	1.40	1.23	9%
W-110/0°	2	1.13	1.13	1.15	1.11	3%
N-150/60°	2	1.04	1.04	1.07	1.01	4%
S-Cs/0°	6	1.13	1.12	1.17	1.05	5%
S-Co/0°	6	1.12	1.12	1.20	1.06	5%
N-150/Cs-137	2	1.01	1.01	1.04	0.98	4%
<b>All</b>	<b>22</b>	<b>1.11</b>	<b>1.12</b>	<b>1.40</b>	<b>0.98</b>	<b>8%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 44: (TL) for dose quantity Hp(0.07)

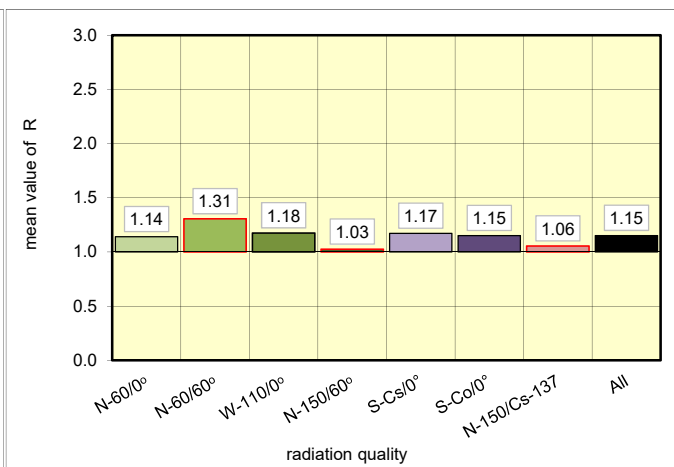
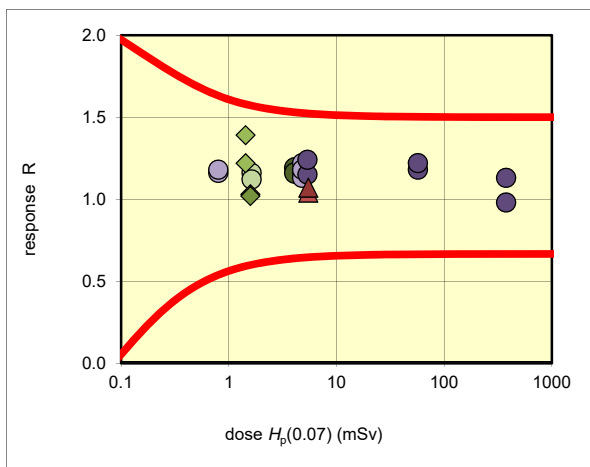
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	16	1.63	1.90	1.16	OK
		12	1.63	1.82	1.12	OK
	N-60/60°	23	1.43	1.75	1.22	OK
		6	1.43	1.99	1.39	OK
	W-110/0°	24	4.12	4.91	1.19	OK
		13	4.12	4.76	1.16	OK
	N-150/60°	20	1.59	1.64	1.03	OK
		8	1.59	1.61	1.02	OK
gamma	S-Cs-S/0°	22	0.80	0.93	1.16	OK
		21	0.80	0.94	1.18	OK
	S-Cs-L/0°	11	4.80	5.56	1.16	OK
		5	4.80	5.43	1.13	OK
		4	4.80	5.85	1.22	OK
		14	4.80	5.65	1.18	OK
	S-Co-L/0°	10	5.39	6.19	1.15	OK
		17	5.39	6.68	1.24	OK
	S-Co-M/0°	33	57.00	67.33	1.18	OK
		34	57.00	69.61	1.22	OK
	S-Co-H/0°	26	376.00	369.16	0.98	OK
		25	376.00	425.33	1.13	OK
mixed	N-150/Cs-137	1	5.48	5.72	1.04	OK
		2	5.48	5.87	1.07	OK
NIR	NIR	3		0.00		
	NIR	7		0.00		
	NIR	9		0.00		
	NIR	15		0.00		
	NIR	18		0.00		
	NIR	19		0.00		
	NIR	27		0.00		
	NIR	28		0.00		
	NIR	29		0.00		
	NIR	30		0.00		
	NIR	31		0.00		
	NIR	32		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.14	1.14	1.16	1.12	2%
N-60/60°	2	1.31	1.31	1.39	1.22	9%
W-110/0°	2	1.18	1.18	1.19	1.16	2%
N-150/60°	2	1.03	1.03	1.03	1.02	1%
S-Cs/0°	6	1.17	1.17	1.22	1.13	3%
S-Co/0°	6	1.17	1.15	1.24	0.98	8%
N-150/Cs-137	2	1.06	1.06	1.07	1.04	2%
<b>All</b>	<b>22</b>	<b>1.16</b>	<b>1.15</b>	<b>1.39</b>	<b>0.98</b>	<b>8%</b>

**outliers: 0 of 22**

**Fraction of outliers: 0%**



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 45: (TL) for dose quantity Hp(10)

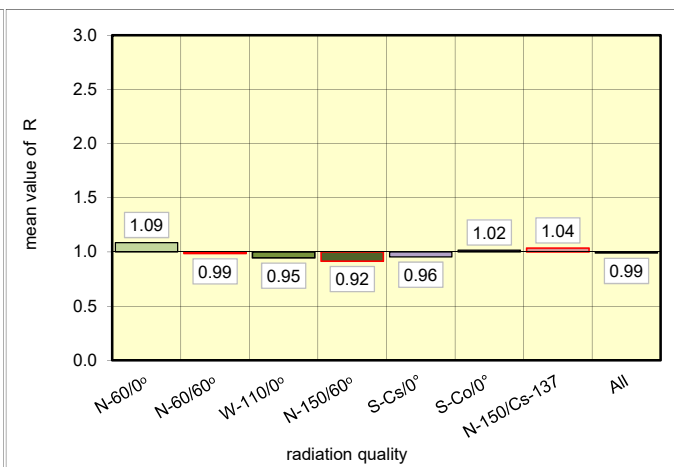
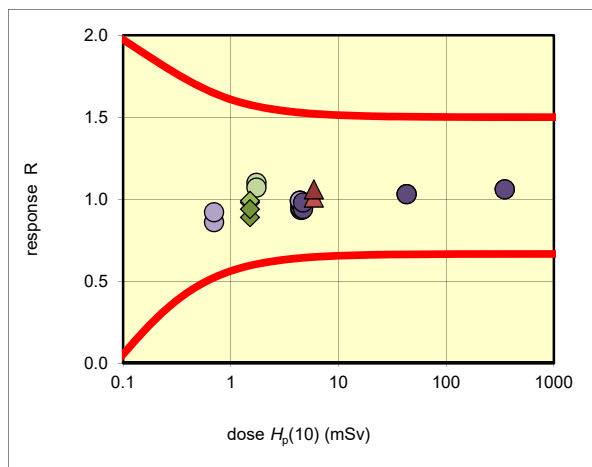
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	6	1.73	1.91	1.10	OK
		33	1.73	1.86	1.07	OK
	N-60/60°	13	1.51	1.48	0.98	OK
		34	1.51	1.49	0.99	OK
	W-110/0°	11	4.50	4.24	0.94	OK
		23	4.50	4.29	0.95	OK
	N-150/60°	20	1.51	1.33	0.89	OK
		17	1.51	1.41	0.94	OK
gamma	S-Cs-S/0°	25	0.70	0.60	0.86	OK
		22	0.70	0.64	0.92	OK
	S-Cs-L/0°	18	4.40	4.30	0.98	OK
		1	4.40	4.34	0.99	OK
		12	4.40	4.36	0.99	OK
		28	4.40	4.37	0.99	OK
	S-Co-L/0°	31	4.70	4.42	0.94	OK
		26	4.70	4.61	0.98	OK
	S-Co-M/0°	4	43.00	44.31	1.03	OK
		19	43.00	44.24	1.03	OK
	S-Co-H/0°	10	350.00	371.08	1.06	OK
		29	350.00	371.34	1.06	OK
mixed	N-150/Cs-137	8	5.90	5.96	1.01	OK
		5	5.90	6.26	1.06	OK
NIR	NIR	2		0.55		
	NIR	3		0.54		
	NIR	7		0.58		
	NIR	9		0.58		
	NIR	14		0.52		
	NIR	15		0.49		
	NIR	16		0.50		
	NIR	21		0.54		
	NIR	24		0.55		
	NIR	27		0.51		
	NIR	30		0.51		
	NIR	32		0.51		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.09	1.09	1.10	1.07	2%
N-60/60°	2	0.99	0.99	0.99	0.98	1%
W-110/0°	2	0.95	0.95	0.95	0.94	1%
N-150/60°	2	0.92	0.92	0.94	0.89	4%
S-Cs/0°	6	0.99	0.96	0.99	0.86	6%
S-Co/0°	6	1.03	1.02	1.06	0.94	5%
N-150/Cs-137	2	1.04	1.04	1.06	1.01	3%
All	22	0.99	0.99	1.10	0.86	6%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 45: (TL) for dose quantity $H_p(0.07)$

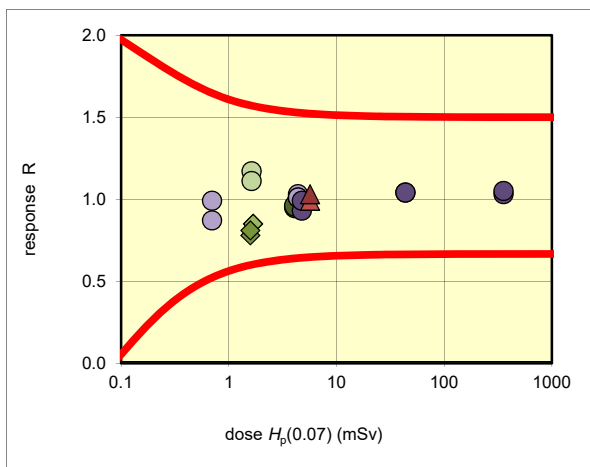
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	6	1.63	1.90	1.17	OK
		33	1.63	1.81	1.11	OK
	N-60/60°	13	1.68	1.43	0.85	OK
		34	1.68	1.44	0.85	OK
	W-110/0°	11	4.12	3.93	0.95	OK
		23	4.12	3.97	0.96	OK
	N-150/60°	20	1.59	1.23	0.78	OK
		17	1.59	1.29	0.81	OK
gamma	S-Cs-S/0°	25	0.70	0.61	0.87	OK
		22	0.70	0.69	0.99	OK
	S-Cs-L/0°	18	4.40	4.44	1.01	OK
		1	4.40	4.51	1.03	OK
		12	4.40	4.46	1.01	OK
		28	4.40	4.42	1.01	OK
	S-Co-L/0°	31	4.78	4.44	0.93	OK
		26	4.78	4.75	0.99	OK
	S-Co-M/0°	4	43.70	45.62	1.04	OK
		19	43.70	45.51	1.04	OK
S-Co-H/0°	10	356.00	368.04	1.03	OK	
	29	356.00	373.42	1.05	OK	
mixed	N-150/Cs-137	8	5.68	5.63	0.99	OK
		5	5.68	5.86	1.03	OK
NIR	NIR	2		0.55		
		3		0.53		
		7		0.55		
		9		0.57		
		14		0.52		
		15		0.47		
		16		0.47		
		21		0.51		
		24		0.54		
		27		0.46		
		30		0.50		
		32		0.48		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

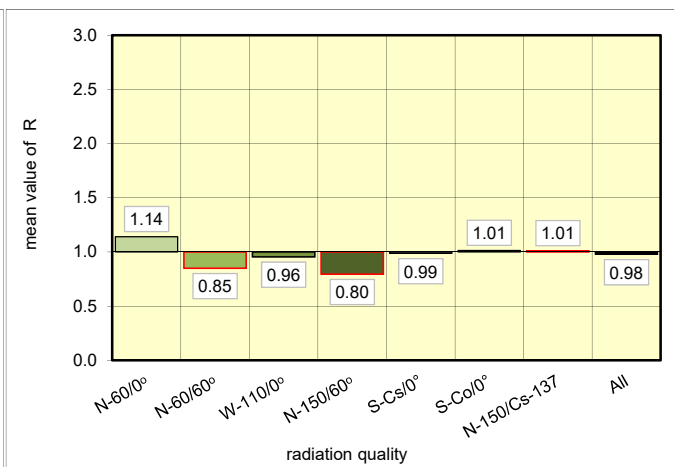
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.14</b>	1.14	1.17	1.11	4%
N-60/60°	2	<b>0.85</b>	0.85	0.85	0.85	0%
W-110/0°	2	<b>0.96</b>	0.96	0.96	0.95	1%
N-150/60°	2	<b>0.80</b>	0.80	0.81	0.78	3%
S-Cs/0°	6	<b>1.01</b>	0.99	1.03	0.87	6%
S-Co/0°	6	<b>1.04</b>	1.01	1.05	0.93	5%
N-150/Cs-137	2	<b>1.01</b>	1.01	1.03	0.99	3%
<b>All</b>	<b>22</b>	<b>1.00</b>	<b>0.98</b>	<b>1.17</b>	<b>0.78</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 46: (TL) for dose quantity Hp(10)

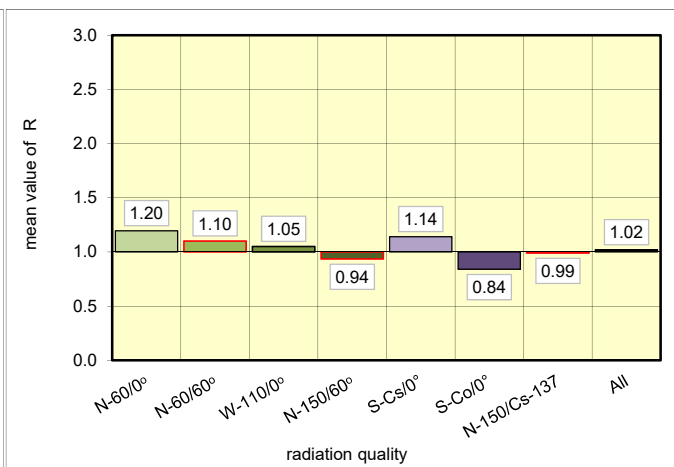
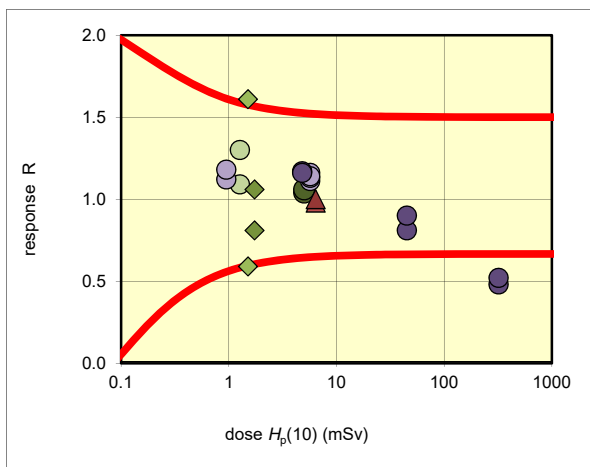
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	15	1.27	1.65	1.30	OK
		28	1.27	1.39	1.09	OK
	N-60/60°	13	1.51	0.89	0.59	outlier
		6	1.51	2.42	1.61	outlier
	W-110/0°	25	5.00	5.21	1.04	OK
		31	5.00	5.31	1.06	OK
	N-150/60°	30	1.73	1.41	0.81	OK
		14	1.73	1.84	1.06	OK
gamma	S-Cs-S/0°	18	0.95	1.06	1.12	OK
		21	0.95	1.12	1.18	OK
	S-Cs-L/0°	11	5.70	6.32	1.11	OK
		23	5.70	6.44	1.13	OK
		19	5.70	6.59	1.16	OK
		26	5.70	6.52	1.14	OK
	S-Co-L/0°	9	4.80	5.60	1.17	OK
		10	4.80	5.57	1.16	OK
	S-Co-M/0°	12	45.00	36.65	0.81	OK
		7	45.00	40.69	0.90	OK
	S-Co-H/0°	32	320.00	154.98	0.48	outlier
		34	320.00	166.92	0.52	outlier
mixed	N-150/Cs-137	29	6.40	6.28	0.98	OK
		27	6.40	6.43	1.00	OK
NIR	NIR	1		0.24		
	NIR	2		0.29		
	NIR	3		0.30		
	NIR	4		0.26		
	NIR	5		0.30		
	NIR	8		0.28		
	NIR	16		0.29		
	NIR	17		0.25		
	NIR	20		0.24		
	NIR	22		0.24		
	NIR	24		0.24		
	NIR	33		0.24		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.20	1.20	1.30	1.09	12%
N-60/60°	2	1.10	1.10	1.61	0.59	66%
W-110/0°	2	1.05	1.05	1.06	1.04	1%
N-150/60°	2	0.94	0.94	1.06	0.81	19%
S-Cs/0°	6	1.14	1.14	1.18	1.11	2%
S-Co/0°	6	0.86	0.84	1.17	0.48	36%
N-150/Cs-137	2	0.99	0.99	1.00	0.98	1%
All	22	1.08	1.02	1.61	0.48	25%

outliers: 4 of 22

Fraction of outliers: 18%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 46: (TL) for dose quantity $H_p(0.07)$

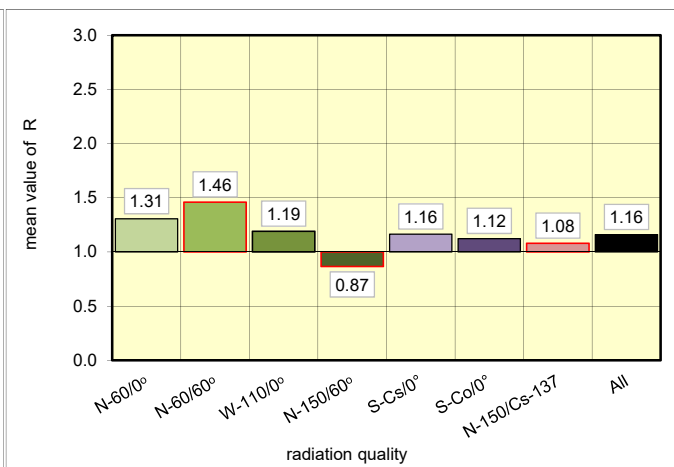
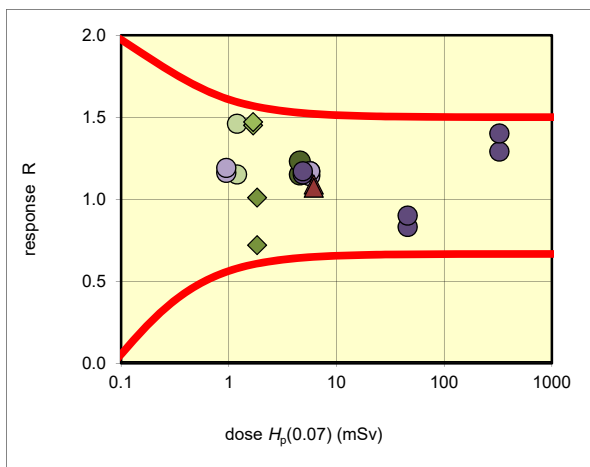
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	15	1.20	1.75	1.46	OK
		28	1.20	1.38	1.15	OK
	N-60/60°	13	1.68	2.45	1.45	OK
		6	1.68	2.48	1.47	OK
	W-110/0°	25	4.57	5.28	1.15	OK
		31	4.57	5.62	1.23	OK
N-150/60°	30	1.83	1.31	0.72	OK	
	14	1.83	1.85	1.01	OK	
gamma	S-Cs-S/0°	18	0.95	1.10	1.16	OK
		21	0.95	1.13	1.19	OK
	S-Cs-L/0°	11	5.70	6.55	1.15	OK
		23	5.70	6.65	1.17	OK
		19	5.70	6.52	1.14	OK
		26	5.70	6.68	1.17	OK
	S-Co-L/0°	9	4.88	5.60	1.15	OK
		10	4.88	5.73	1.17	OK
	S-Co-M/0°	12	45.80	38.10	0.83	OK
		7	45.80	41.28	0.90	OK
S-Co-H/0°	32	326.00	421.93	1.29	OK	
	34	326.00	455.71	1.40	OK	
mixed	N-150/Cs-137	29	6.16	6.72	1.09	OK
		27	6.16	6.58	1.07	OK
NIR	NIR	1		0.24		
	NIR	2		0.29		
	NIR	3		0.30		
	NIR	4		0.25		
	NIR	5		0.30		
	NIR	8		0.28		
	NIR	16		0.28		
	NIR	17		0.24		
	NIR	20		0.24		
	NIR	22		0.24		
	NIR	24		0.23		
	NIR	33		0.24		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.31</b>	1.31	1.46	1.15	17%
N-60/60°	2	<b>1.46</b>	1.46	1.47	1.45	1%
W-110/0°	2	<b>1.19</b>	1.19	1.23	1.15	5%
N-150/60°	2	<b>0.87</b>	0.87	1.01	0.72	24%
S-Cs/0°	6	<b>1.17</b>	1.16	1.19	1.14	2%
S-Co/0°	6	<b>1.16</b>	1.12	1.40	0.83	20%
N-150/Cs-137	2	<b>1.08</b>	1.08	1.09	1.07	1%
<b>All</b>	<b>22</b>	<b>1.16</b>	<b>1.16</b>	<b>1.47</b>	<b>0.72</b>	<b>16%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 47: (TL) for dose quantity Hp(10)

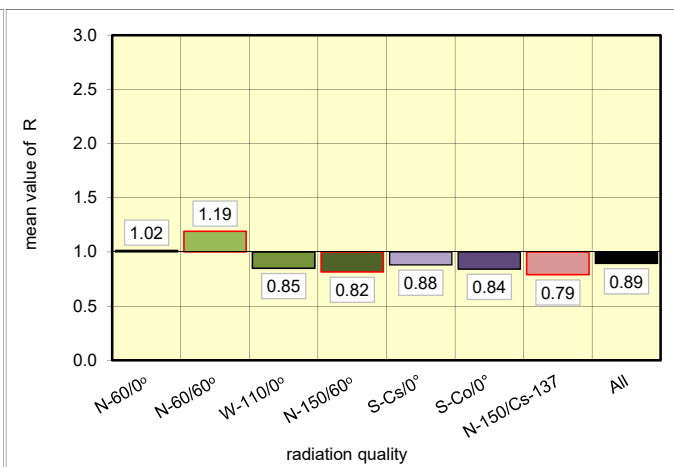
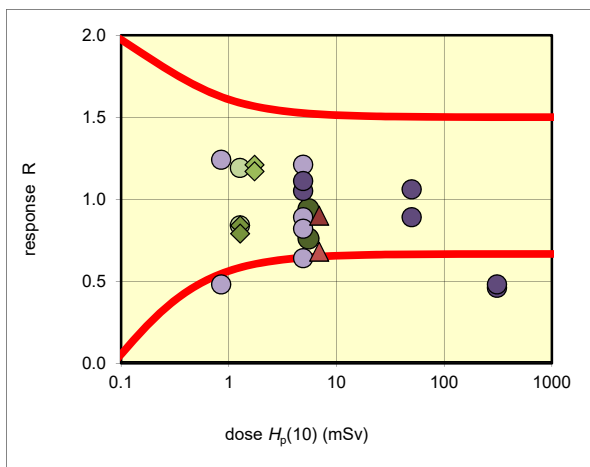
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose Hp(10) mSv	dose Hp(10) mSv	response R (reported/true)		
x-ray	N-60/0°	16	1.27	1.52	1.19	OK
		2	1.27	1.07	0.84	OK
	N-60/60°	19	1.73	2.10	1.21	OK
		34	1.73	2.03	1.17	OK
	W-110/0°	32	5.50	4.18	0.76	OK
		12	5.50	5.18	0.94	OK
N-150/60°	24	1.28	1.07	0.84	OK	
	14	1.28	1.01	0.79	OK	
gamma	S-Cs-S/0°	8	0.85	0.41	0.48	outlier
		13	0.85	1.06	1.24	OK
	S-Cs-L/0°	30	4.90	4.38	0.89	OK
		33	4.90	3.14	0.64	outlier
		25	4.90	4.03	0.82	OK
	S-Co-L/0°	5	4.90	5.95	1.21	OK
		15	4.90	5.16	1.05	OK
	S-Co-M/0°	18	4.90	5.45	1.11	OK
		4	50.00	44.68	0.89	OK
	S-Co-H/0°	10	50.00	52.88	1.06	OK
		20	310.00	142.52	0.46	outlier
	S-Co-H/0°	17	310.00	148.69	0.48	outlier
mixed		27	6.90	4.67	0.68	OK
	28	6.90	6.23	0.90	OK	
mixed	WIR	9		-		
	WIR	22		-		
	NIR	1		0.02		
	NIR	3		0.02		
	NIR	6		0.02		
	NIR	7		0.02		
	NIR	11		0.02		
	NIR	21		0.02		
	NIR	23		0.02		
	NIR	26		0.02		
	NIR	29		0.02		
NIR	31		0.02			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.02	1.02	1.19	0.84	24%
N-60/60°	2	1.19	1.19	1.21	1.17	2%
W-110/0°	2	0.85	0.85	0.94	0.76	15%
N-150/60°	2	0.82	0.82	0.84	0.79	4%
S-Cs/0°	6	0.86	0.88	1.24	0.48	34%
S-Co/0°	6	0.97	0.84	1.11	0.46	35%
N-150/Cs-137	2	0.79	0.79	0.90	0.68	20%
All	22	0.89	0.89	1.24	0.46	27%

outliers: 4 of 22

Fraction of outliers: 18%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 47: (TL) for dose quantity Hp(0.07)

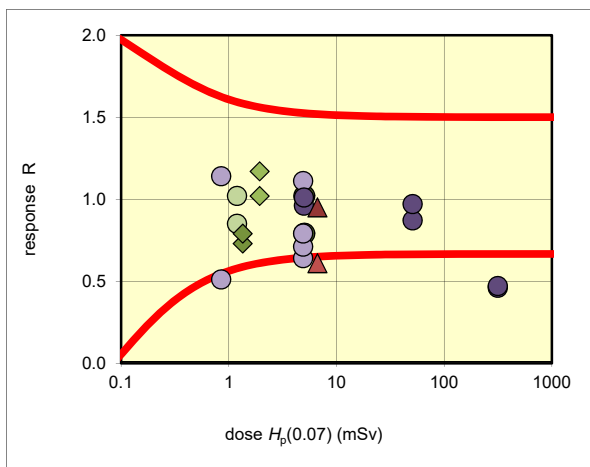
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	16	1.20	1.22	1.02	OK
		2	1.20	1.01	0.85	OK
	N-60/60°	19	1.94	1.97	1.02	OK
		34	1.94	2.27	1.17	OK
	W-110/0°	32	5.03	3.99	0.79	OK
		12	5.03	5.14	1.02	OK
	N-150/60°	24	1.35	0.98	0.73	OK
		14	1.35	1.07	0.79	OK
gamma	S-Cs-S/0°	8	0.85	0.43	0.51	outlier
		13	0.85	0.97	1.14	OK
	S-Cs-L/0°	30	4.90	3.14	0.64	outlier
		33	4.90	3.48	0.71	OK
		25	4.90	3.88	0.79	OK
	S-Co-L/0°	5	4.90	5.45	1.11	OK
		15	4.99	4.78	0.96	OK
	S-Co-M/0°	18	4.99	5.06	1.01	OK
		4	50.90	44.35	0.87	OK
	S-Co-H/0°	10	50.90	49.41	0.97	OK
		20	315.00	144.52	0.46	outlier
	S-Co-H/0°	17	315.00	147.31	0.47	outlier
mixed		N-150/Cs-137	27	6.66	4.08	0.61
	28		6.66	6.32	0.95	OK
mixed	WIR	9	-	-	-	-
	WIR	22	-	-	-	-
	NIR	1	-	0.02	-	-
	NIR	3	-	0.02	-	-
	NIR	6	-	0.02	-	-
	NIR	7	-	0.02	-	-
	NIR	11	-	0.02	-	-
	NIR	21	-	0.02	-	-
	NIR	23	-	0.02	-	-
	NIR	26	-	0.02	-	-
	NIR	29	-	0.02	-	-
NIR	31	-	0.02	-	-	

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

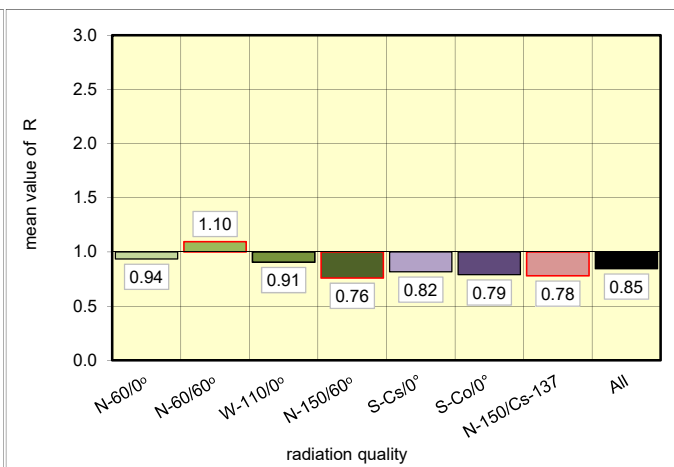
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.94</b>	0.94	1.02	0.85	13%
N-60/60°	2	<b>1.10</b>	1.10	1.17	1.02	10%
W-110/0°	2	<b>0.91</b>	0.91	1.02	0.79	18%
N-150/60°	2	<b>0.76</b>	0.76	0.79	0.73	6%
S-Cs/0°	6	<b>0.75</b>	0.82	1.14	0.51	31%
S-Co/0°	6	<b>0.92</b>	0.79	1.01	0.46	32%
N-150/Cs-137	2	<b>0.78</b>	0.78	0.95	0.61	31%
<b>All</b>	<b>22</b>	<b>0.86</b>	<b>0.85</b>	<b>1.17</b>	<b>0.46</b>	<b>25%</b>

outliers: 5 of 22

fraction of outliers: 23%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 48: (TL) for dose quantity Hp(10)

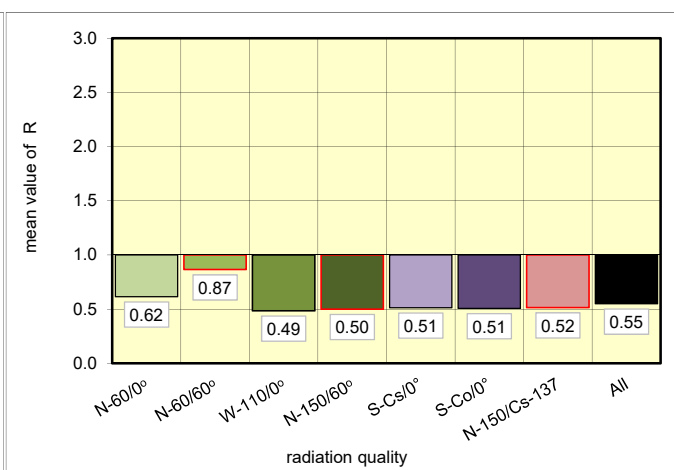
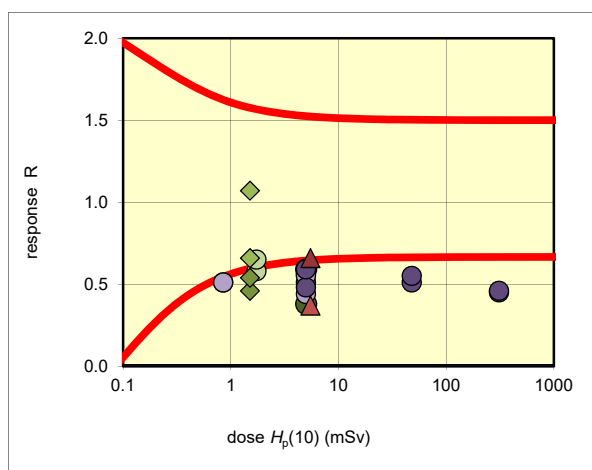
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	28	1.73	1.01	0.58	outlier
		13	1.73	1.12	0.65	OK
	N-60/60°	21	1.51	1.00	0.66	OK
		23	1.51	1.61	1.07	OK
	W-110/0°	2	5.00	1.91	0.38	outlier
		19	5.00	2.96	0.59	outlier
	N-150/60°	7	1.51	0.69	0.46	outlier
16		1.51	0.81	0.54	outlier	
gamma	S-Cs-S/0°	25	0.85	0.43	0.51	outlier
		26	0.85	0.43	0.51	outlier
	S-Cs-L/0°	18	5.00	2.19	0.44	outlier
		17	5.00	2.81	0.56	outlier
		34	5.00	2.53	0.51	outlier
		33	5.00	2.73	0.55	outlier
	S-Co-L/0°	29	5.00	2.42	0.48	outlier
		30	5.00	2.95	0.59	outlier
	S-Co-M/0°	12	48.00	24.42	0.51	outlier
		15	48.00	26.48	0.55	outlier
S-Co-H/0°	1	310.00	140.52	0.45	outlier	
	3	310.00	142.59	0.46	outlier	
mixed	N-150/Cs-137	5	5.50	2.05	0.37	outlier
		4	5.50	3.61	0.66	OK
NIR	NIR	6		0.11		
	NIR	8		0.13		
	NIR	9		0.11		
	NIR	10		0.13		
	NIR	11		0.11		
	NIR	14		0.12		
	NIR	20		0.13		
	NIR	22		0.10		
	NIR	24		0.11		
	NIR	27		0.12		
	NIR	31		0.11		
	NIR	32		0.09		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.62</b>	0.62	0.65	0.58	8%
N-60/60°	2	<b>0.87</b>	0.87	1.07	0.66	34%
W-110/0°	2	<b>0.49</b>	0.49	0.59	0.38	31%
N-150/60°	2	<b>0.50</b>	0.50	0.54	0.46	11%
S-Cs/0°	6	<b>0.51</b>	0.51	0.56	0.44	8%
S-Co/0°	6	<b>0.50</b>	0.51	0.59	0.45	11%
N-150/Cs-137	2	<b>0.52</b>	0.52	0.66	0.37	40%
<b>All</b>	<b>22</b>	<b>0.53</b>	<b>0.55</b>	<b>1.07</b>	<b>0.37</b>	<b>26%</b>

outliers: 18 of 22

fraction of outliers: 82%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 48: (TL) for dose quantity $H_p(0.07)$

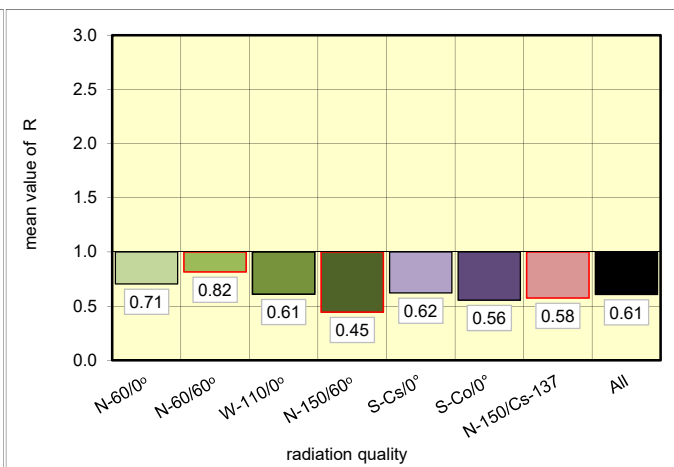
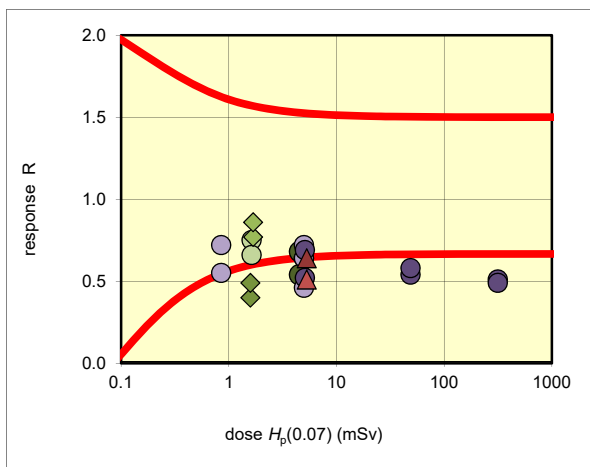
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	28	1.63	1.22	0.75	OK
		13	1.63	1.08	0.66	OK
	N-60/60°	21	1.68	1.29	0.77	OK
		23	1.68	1.45	0.86	OK
	W-110/0°	2	4.57	2.49	0.54	outlier
		19	4.57	3.12	0.68	OK
N-150/60°	7	1.59	0.63	0.40	outlier	
	16	1.59	0.78	0.49	outlier	
gamma	S-Cs-S/0°	25	0.85	0.61	0.72	OK
		26	0.85	0.47	0.55	OK
	S-Cs-L/0°	18	5.00	3.19	0.64	outlier
		17	5.00	2.30	0.46	outlier
		34	5.00	3.58	0.72	OK
		33	5.00	3.18	0.64	outlier
	S-Co-L/0°	29	5.09	2.63	0.52	outlier
		30	5.09	3.52	0.69	OK
	S-Co-M/0°	12	48.80	26.25	0.54	outlier
		15	48.80	28.06	0.58	outlier
S-Co-H/0°	1	315.00	159.15	0.51	outlier	
	3	315.00	155.19	0.49	outlier	
mixed	N-150/Cs-137	5	5.30	2.69	0.51	outlier
		4	5.30	3.37	0.64	outlier
NIR	NIR	6		0.11		
	NIR	8		0.14		
	NIR	9		0.11		
	NIR	10		0.13		
	NIR	11		0.14		
	NIR	14		0.16		
	NIR	20		0.13		
	NIR	22		0.13		
	NIR	24		0.11		
	NIR	27		0.15		
	NIR	31		0.13		
	NIR	32		0.11		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.71</b>	0.71	0.75	0.66	9%
N-60/60°	2	<b>0.82</b>	0.82	0.86	0.77	8%
W-110/0°	2	<b>0.61</b>	0.61	0.68	0.54	16%
N-150/60°	2	<b>0.45</b>	0.45	0.49	0.40	14%
S-Cs/0°	6	<b>0.64</b>	0.62	0.72	0.46	16%
S-Co/0°	6	<b>0.53</b>	0.56	0.69	0.49	13%
N-150/Cs-137	2	<b>0.58</b>	0.58	0.64	0.51	16%
<b>All</b>	<b>22</b>	<b>0.61</b>	<b>0.61</b>	<b>0.86</b>	<b>0.40</b>	<b>19%</b>

outliers: 13 of 22

fraction of outliers: 59%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 49: (TL) for dose quantity $H_p(10)$

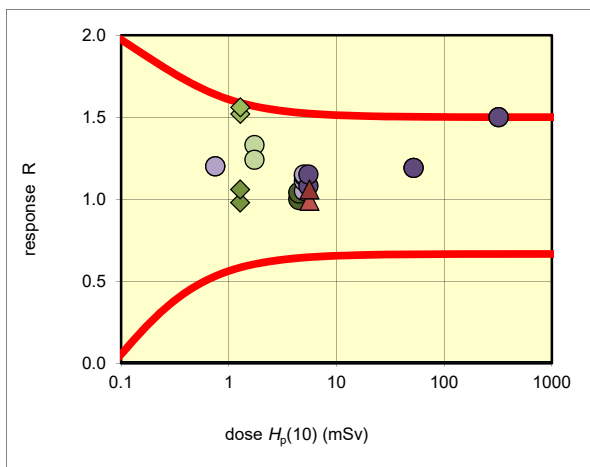
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.73	2.30	1.33	OK
		19	1.73	2.15	1.24	OK
	N-60/60°	21	1.28	1.95	1.52	OK
		20	1.28	2.00	1.56	OK
	W-110/0°	5	4.50	4.50	1.00	OK
		23	4.50	4.70	1.04	OK
N-150/60°	1	1.28	1.25	0.98	OK	
	30	1.28	1.35	1.06	OK	
gamma	S-Cs-S/0°	18	0.75	0.90	1.20	OK
		2	0.75	0.90	1.20	OK
	S-Cs-L/0°	34	5.00	5.25	1.05	OK
		4	5.00	5.55	1.11	OK
		33	5.00	5.70	1.14	OK
		6	5.00	5.75	1.15	OK
	S-Co-L/0°	7	5.50	5.95	1.08	OK
		8	5.50	6.30	1.15	OK
	S-Co-M/0°	9	52.00	62.00	1.19	OK
		29	52.00	62.00	1.19	OK
S-Co-H/0°	13	320.00	480.00	1.50	OK	
	22	320.00	480.00	1.50	OK	
mixed	N-150/Cs-137	14	5.60	5.55	0.99	OK
		15	5.60	5.95	1.06	OK
NIR	NIR	3		0.05		
	NIR	11		0.05		
	NIR	12		0.05		
	NIR	16		0.05		
	NIR	17		0.05		
	NIR	24		0.05		
	NIR	25		0.05		
	NIR	26		0.05		
	NIR	27		0.05		
	NIR	28		0.05		
	NIR	31		0.05		
NIR	32		0.05			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

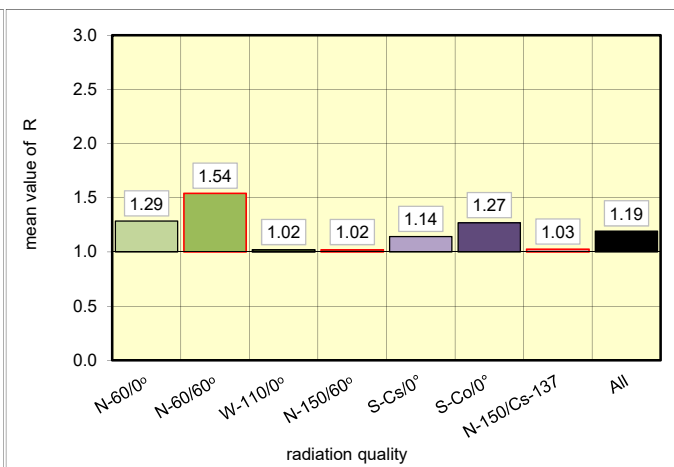
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.29	1.29	1.33	1.24	5%
N-60/60°	2	1.54	1.54	1.56	1.52	2%
W-110/0°	2	1.02	1.02	1.04	1.00	3%
N-150/60°	2	1.02	1.02	1.06	0.98	6%
S-Cs/0°	6	1.15	1.14	1.20	1.05	5%
S-Co/0°	6	1.19	1.27	1.50	1.08	14%
N-150/Cs-137	2	1.03	1.03	1.06	0.99	5%
<b>All</b>	<b>22</b>	<b>1.15</b>	<b>1.19</b>	<b>1.56</b>	<b>0.98</b>	<b>15%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 49: (TL) for dose quantity Hp(0.07)

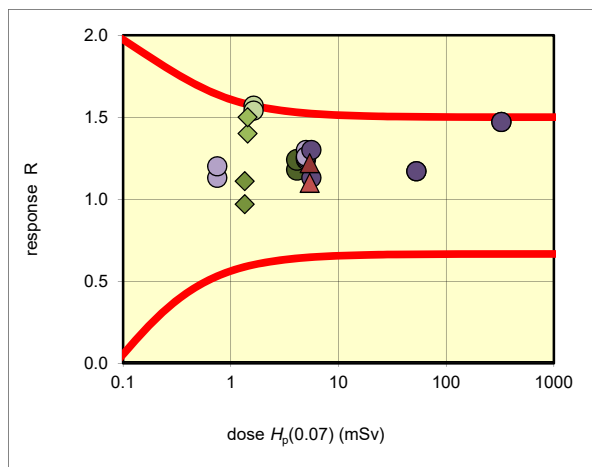
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.63	2.55	1.57	OK
		19	1.63	2.50	1.54	OK
	N-60/60°	21	1.43	2.00	1.40	OK
		20	1.43	2.15	1.50	OK
	W-110/0°	5	4.12	4.85	1.18	OK
		23	4.12	5.10	1.24	OK
N-150/60°	1	1.35	1.30	0.97	OK	
	30	1.35	1.50	1.11	OK	
gamma	S-Cs-S/0°	18	0.75	0.85	1.13	OK
		2	0.75	0.90	1.20	OK
	S-Cs-L/0°	34	5.00	6.20	1.24	OK
		4	5.00	6.50	1.30	OK
		33	5.00	6.25	1.25	OK
		6	5.00	6.30	1.26	OK
	S-Co-L/0°	7	5.60	6.35	1.13	OK
		8	5.60	7.30	1.30	OK
	S-Co-M/0°	9	52.90	62.00	1.17	OK
		29	52.90	62.00	1.17	OK
	S-Co-H/0°	13	326.00	480.00	1.47	OK
		22	326.00	480.00	1.47	OK
mixed	N-150/Cs-137	14	5.41	5.95	1.10	OK
		15	5.41	6.60	1.22	OK
NIR	NIR	3		0.05		
	NIR	11		0.05		
	NIR	12		0.05		
	NIR	16		0.05		
	NIR	17		0.05		
	NIR	24		0.05		
	NIR	25		0.05		
	NIR	26		0.05		
	NIR	27		0.05		
	NIR	28		0.05		
	NIR	31		0.05		
NIR	32		0.05			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

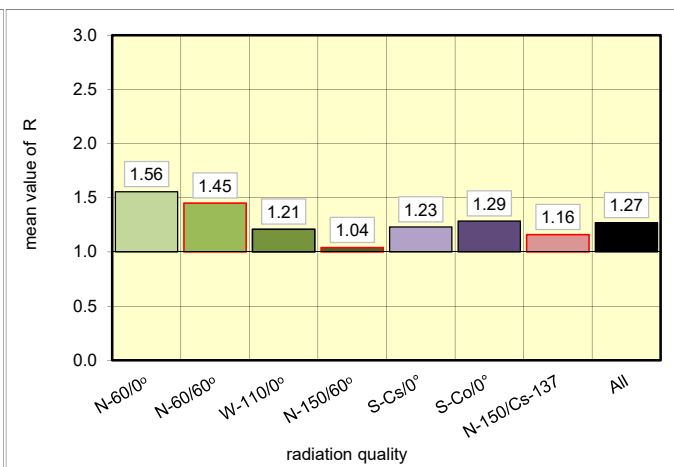
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.56	1.56	1.57	1.54	1%
N-60/60°	2	1.45	1.45	1.50	1.40	5%
W-110/0°	2	1.21	1.21	1.24	1.18	4%
N-150/60°	2	1.04	1.04	1.11	0.97	10%
S-Cs/0°	6	1.25	1.23	1.30	1.13	5%
S-Co/0°	6	1.24	1.29	1.47	1.13	12%
N-150/Cs-137	2	1.16	1.16	1.22	1.10	7%
All	22	1.24	1.27	1.57	0.97	13%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 50: (TL) for dose quantity Hp(10)

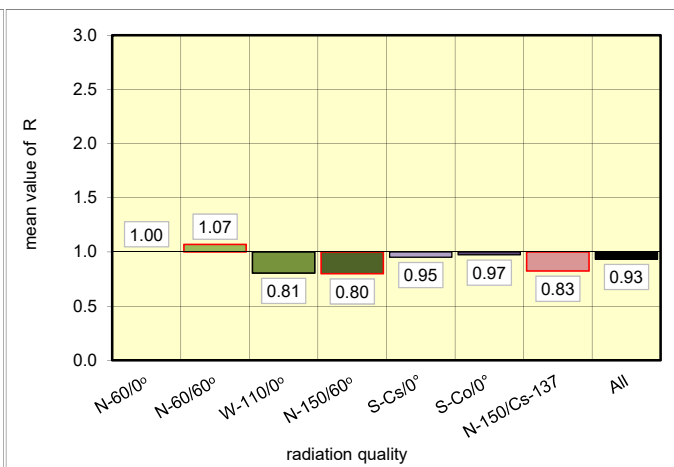
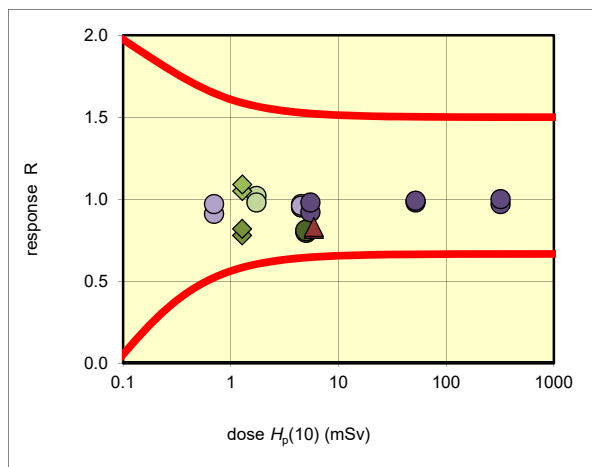
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	22	1.73	1.76	1.02	OK
		28	1.73	1.69	0.98	OK
	N-60/60°	11	1.28	1.35	1.05	OK
		9	1.28	1.39	1.09	OK
	W-110/0°	19	5.00	4.00	0.80	OK
		20	5.00	4.06	0.81	OK
	N-150/60°	12	1.28	0.99	0.78	OK
		33	1.28	1.04	0.82	OK
gamma	S-Cs-S/0°	23	0.70	0.64	0.91	OK
		26	0.70	0.68	0.97	OK
	S-Cs-L/0°	2	4.50	4.27	0.95	OK
		25	4.50	4.35	0.97	OK
		31	4.50	4.27	0.95	OK
		34	4.50	4.30	0.96	OK
	S-Co-L/0°	16	5.50	5.04	0.92	OK
		17	5.50	5.38	0.98	OK
	S-Co-M/0°	3	52.00	50.80	0.98	OK
		6	52.00	51.30	0.99	OK
	S-Co-H/0°	18	320.00	309.50	0.97	OK
		1	320.00	319.70	1.00	OK
mixed	N-150/Cs-137	29	5.90	4.86	0.82	OK
		30	5.90	4.88	0.83	OK
NIR	NIR	4		0.59		
	NIR	5		0.57		
	NIR	7		0.57		
	NIR	8		0.61		
	NIR	10		0.63		
	NIR	13		0.57		
	NIR	14		0.62		
	NIR	15		0.57		
	NIR	21		0.64		
	NIR	24		0.58		
	NIR	27		0.60		
	NIR	32		0.59		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.00	1.00	1.02	0.98	3%
N-60/60°	2	1.07	1.07	1.09	1.05	3%
W-110/0°	2	0.81	0.81	0.81	0.80	1%
N-150/60°	2	0.80	0.80	0.82	0.78	4%
S-Cs/0°	6	0.96	0.95	0.97	0.91	2%
S-Co/0°	6	0.98	0.97	1.00	0.92	3%
N-150/Cs-137	2	0.83	0.83	0.83	0.82	1%
All	22	0.97	0.93	1.09	0.78	9%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 50: (TL) for dose quantity $H_p(0.07)$

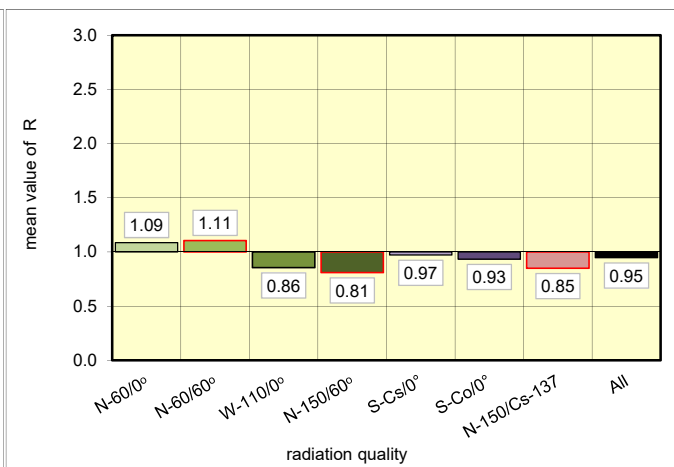
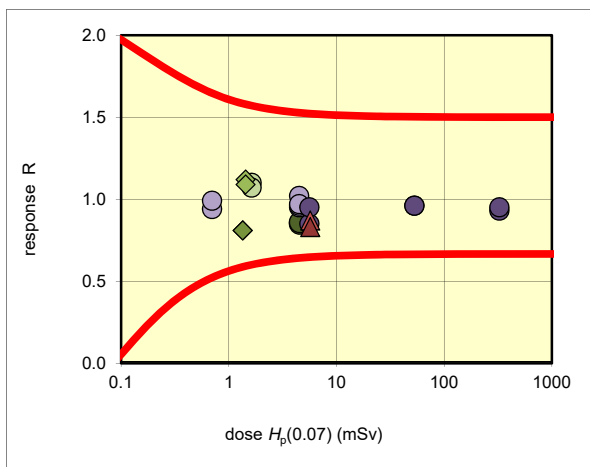
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	22	1.63	1.79	1.10	OK
		28	1.63	1.74	1.07	OK
	N-60/60°	11	1.43	1.61	1.12	OK
		9	1.43	1.56	1.09	OK
	W-110/0°	19	4.57	3.89	0.85	OK
		20	4.57	3.93	0.86	OK
	N-150/60°	12	1.35	1.09	0.81	OK
		33	1.35	1.09	0.81	OK
gamma	S-Cs-S/0°	23	0.70	0.66	0.94	OK
		26	0.70	0.69	0.99	OK
	S-Cs-L/0°	2	4.50	4.57	1.02	OK
		25	4.50	4.27	0.95	OK
		31	4.50	4.33	0.96	OK
		34	4.50	4.36	0.97	OK
	S-Co-L/0°	16	5.60	4.75	0.85	OK
		17	5.60	5.31	0.95	OK
	S-Co-M/0°	3	52.90	50.80	0.96	OK
		6	52.90	50.90	0.96	OK
	S-Co-H/0°	18	326.00	302.20	0.93	OK
		1	326.00	308.50	0.95	OK
mixed	N-150/Cs-137	29	5.70	4.97	0.87	OK
		30	5.70	4.72	0.83	OK
NIR	NIR	4		0.55		
	NIR	5		0.56		
	NIR	7		0.59		
	NIR	8		0.59		
	NIR	10		0.60		
	NIR	13		0.55		
	NIR	14		0.59		
	NIR	15		0.55		
	NIR	21		0.59		
	NIR	24		0.58		
	NIR	27		0.59		
	NIR	32		0.56		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.09	1.09	1.10	1.07	2%
N-60/60°	2	1.11	1.11	1.12	1.09	2%
W-110/0°	2	0.86	0.86	0.86	0.85	1%
N-150/60°	2	0.81	0.81	0.81	0.81	0%
S-Cs/0°	6	0.97	0.97	1.02	0.94	3%
S-Co/0°	6	0.95	0.93	0.96	0.85	5%
N-150/Cs-137	2	0.85	0.85	0.87	0.83	3%
All	22	0.95	0.95	1.12	0.81	10%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 51: (TL) for dose quantity Hp(10)

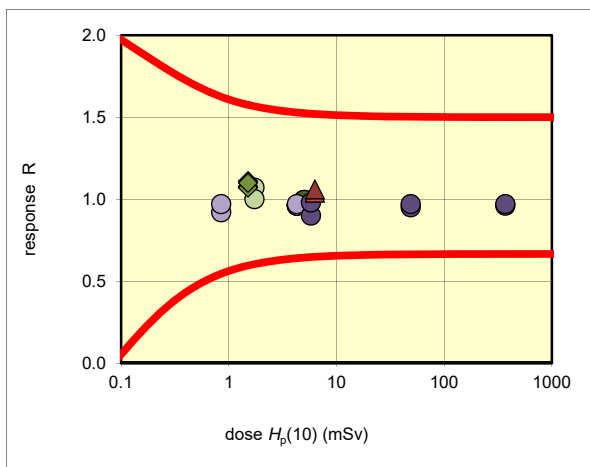
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	27	1.73	1.85	1.07	OK
		17	1.73	1.73	1.00	OK
	N-60/60°	1	1.51	1.63	1.08	OK
		28	1.51	1.67	1.11	OK
	W-110/0°	8	5.00	4.97	0.99	OK
		12	5.00	4.95	0.99	OK
	N-150/60°	21	1.51	1.61	1.07	OK
		19	1.51	1.65	1.10	OK
gamma	S-Cs-S/0°	15	0.85	0.78	0.92	OK
		14	0.85	0.82	0.97	OK
	S-Cs-L/0°	22	4.30	4.13	0.96	OK
		33	4.30	4.12	0.96	OK
		34	4.30	4.13	0.96	OK
		23	4.30	4.18	0.97	OK
	S-Co-L/0°	32	5.80	5.25	0.90	OK
		31	5.80	5.68	0.98	OK
	S-Co-M/0°	26	49.00	46.68	0.95	OK
		29	49.00	47.63	0.97	OK
	S-Co-H/0°	7	370.00	355.30	0.96	OK
		9	370.00	357.30	0.97	OK
mixed	N-150/Cs-137	10	6.30	6.57	1.04	OK
		11	6.30	6.66	1.06	OK
	WIR	3		-		
	WIR	5		-		
	NIR	2		0.00		
	NIR	4		0.00		
	NIR	6		0.00		
	NIR	13		0.00		
	NIR	16		0.00		
	NIR	18		0.00		
	NIR	20		0.00		
	NIR	24		0.00		
	NIR	25		0.00		
	NIR	30		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

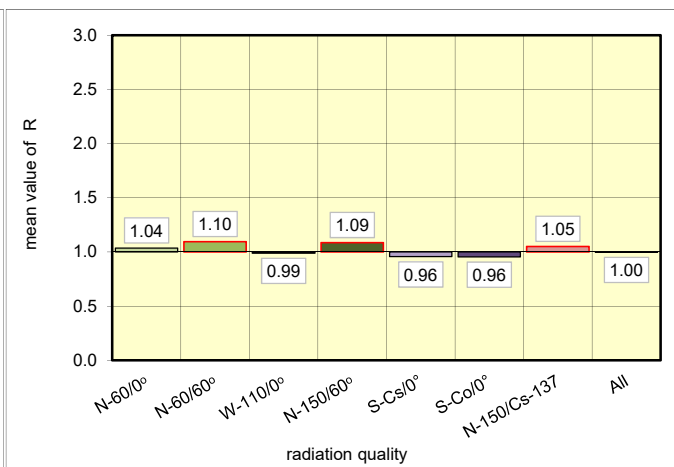
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.04	1.04	1.07	1.00	5%
N-60/60°	2	1.10	1.10	1.11	1.08	2%
W-110/0°	2	0.99	0.99	0.99	0.99	0%
N-150/60°	2	1.09	1.09	1.10	1.07	2%
S-Cs/0°	6	0.96	0.96	0.97	0.92	2%
S-Co/0°	6	0.97	0.96	0.98	0.90	3%
N-150/Cs-137	2	1.05	1.05	1.06	1.04	1%
<b>All</b>	<b>22</b>	<b>0.98</b>	<b>1.00</b>	<b>1.11</b>	<b>0.90</b>	<b>6%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 51: (TL) for dose quantity Hp(0.07)

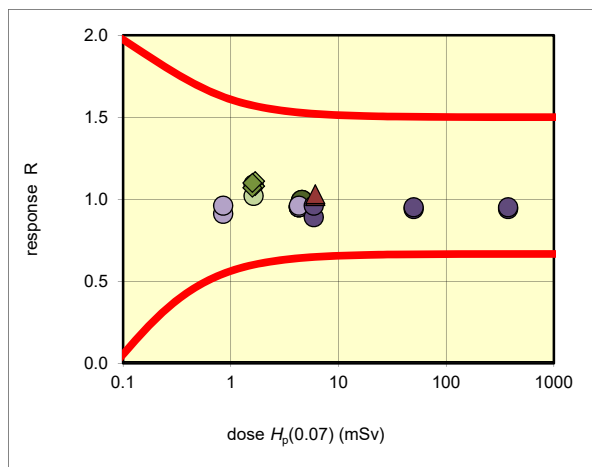
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	27	1.63	1.78	1.09	OK
		17	1.63	1.66	1.02	OK
	N-60/60°	1	1.68	1.82	1.08	OK
		28	1.68	1.87	1.11	OK
	W-110/0°	8	4.57	4.55	0.99	OK
		12	4.57	4.52	0.99	OK
N-150/60°	21	1.59	1.70	1.07	OK	
	19	1.59	1.75	1.10	OK	
gamma	S-Cs-S/0°	15	0.85	0.78	0.91	OK
		14	0.85	0.81	0.96	OK
	S-Cs-L/0°	22	4.30	4.10	0.95	OK
		33	4.30	4.09	0.95	OK
		34	4.30	4.09	0.95	OK
		23	4.30	4.14	0.96	OK
	S-Co-L/0°	32	5.90	5.25	0.89	OK
		31	5.90	5.68	0.96	OK
	S-Co-M/0°	26	49.90	46.68	0.94	OK
		29	49.90	47.63	0.95	OK
S-Co-H/0°	7	376.00	355.30	0.94	OK	
	9	376.00	357.30	0.95	OK	
mixed	N-150/Cs-137	10	6.08	6.17	1.02	OK
		11	6.08	6.26	1.03	OK
	WIR	3		-		
	WIR	5		-		
	NIR	2		0.00		
	NIR	4		0.00		
	NIR	6		0.00		
	NIR	13		0.00		
	NIR	16		0.00		
	NIR	18		0.00		
	NIR	20		0.00		
	NIR	24		0.00		
	NIR	25		0.00		
	NIR	30		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

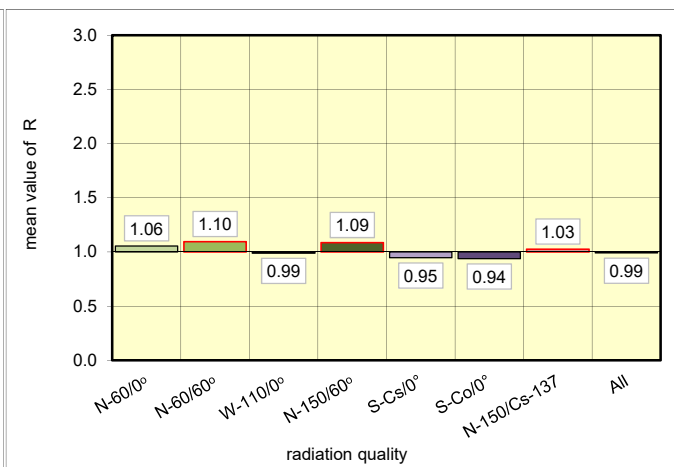
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.06	1.06	1.09	1.02	5%
N-60/60°	2	1.10	1.10	1.11	1.08	2%
W-110/0°	2	0.99	0.99	0.99	0.99	0%
N-150/60°	2	1.09	1.09	1.10	1.07	2%
S-Cs/0°	6	0.95	0.95	0.96	0.91	2%
S-Co/0°	6	0.95	0.94	0.96	0.89	3%
N-150/Cs-137	2	1.03	1.03	1.03	1.02	1%
<b>All</b>	<b>22</b>	<b>0.96</b>	<b>0.99</b>	<b>1.11</b>	<b>0.89</b>	<b>6%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 52: (TL) for dose quantity Hp(10)

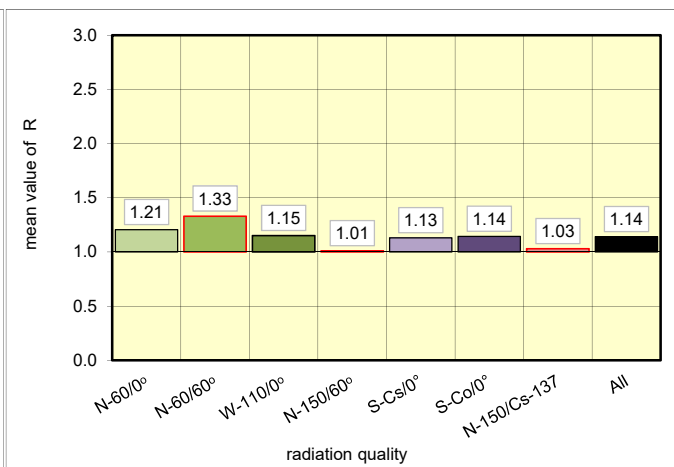
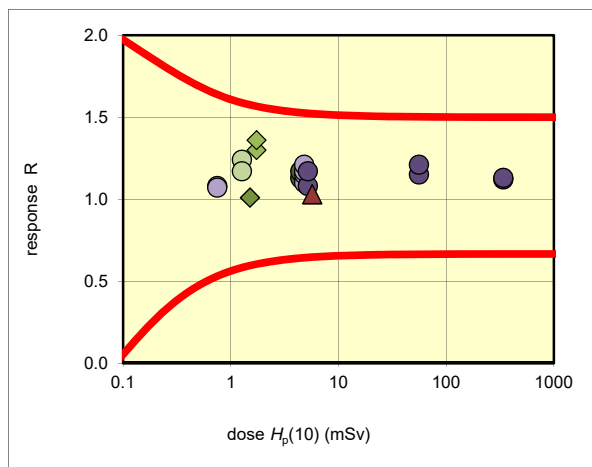
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.27	1.57	1.24	OK
		17	1.27	1.49	1.17	OK
	N-60/60°	15	1.73	2.25	1.30	OK
		14	1.73	2.36	1.36	OK
	W-110/0°	13	4.50	5.07	1.13	OK
		20	4.50	5.26	1.17	OK
N-150/60°	32	1.51	1.52	1.01	OK	
	25	1.51	1.52	1.01	OK	
gamma	S-Cs-S/0°	26	0.75	0.81	1.08	OK
		5	0.75	0.80	1.07	OK
	S-Cs-L/0°	10	4.80	5.27	1.10	OK
		19	4.80	5.53	1.15	OK
		18	4.80	5.61	1.17	OK
		8	4.80	5.83	1.21	OK
	S-Co-L/0°	30	5.20	5.63	1.08	OK
		31	5.20	6.09	1.17	OK
	S-Co-M/0°	27	56.00	64.16	1.15	OK
		22	56.00	67.68	1.21	OK
S-Co-H/0°	28	340.00	382.48	1.12	OK	
	29	340.00	384.30	1.13	OK	
mixed	N-150/Cs-137	3	5.70	5.85	1.03	OK
		4	5.70	5.86	1.03	OK
NIR	NIR	1		0.00		
	NIR	2		0.00		
	NIR	6		0.00		
	NIR	7		0.00		
	NIR	9		0.00		
	NIR	11		0.00		
	NIR	12		0.00		
	NIR	16		0.00		
	NIR	21		0.00		
	NIR	23		0.00		
	NIR	33		0.00		
	NIR	34		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.21	1.21	1.24	1.17	4%
N-60/60°	2	1.33	1.33	1.36	1.30	3%
W-110/0°	2	1.15	1.15	1.17	1.13	2%
N-150/60°	2	1.01	1.01	1.01	1.01	0%
S-Cs/0°	6	1.13	1.13	1.21	1.07	5%
S-Co/0°	6	1.14	1.14	1.21	1.08	4%
N-150/Cs-137	2	1.03	1.03	1.03	1.03	0%
<b>All</b>	<b>22</b>	<b>1.14</b>	<b>1.14</b>	<b>1.36</b>	<b>1.01</b>	<b>8%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 52: (TL) for dose quantity Hp(0.07)

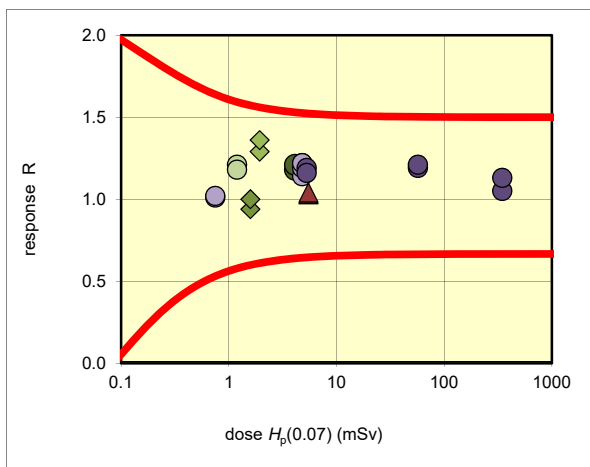
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.20	1.45	1.21	OK
		17	1.20	1.41	1.18	OK
	N-60/60°	15	1.94	2.50	1.29	OK
		14	1.94	2.63	1.36	OK
	W-110/0°	13	4.12	4.86	1.18	OK
		20	4.12	5.00	1.21	OK
	N-150/60°	32	1.59	1.49	0.94	OK
		25	1.59	1.59	1.00	OK
gamma	S-Cs-S/0°	26	0.75	0.76	1.01	OK
		5	0.75	0.76	1.02	OK
	S-Cs-L/0°	10	4.80	5.87	1.22	OK
		19	4.80	5.47	1.14	OK
		18	4.80	5.72	1.19	OK
		8	4.80	5.88	1.22	OK
	S-Co-L/0°	30	5.29	6.32	1.19	OK
		31	5.29	6.12	1.16	OK
	S-Co-M/0°	27	57.00	67.81	1.19	OK
		22	57.00	68.71	1.21	OK
	S-Co-H/0°	28	346.00	363.72	1.05	OK
		29	346.00	389.59	1.13	OK
mixed	N-150/Cs-137	3	5.49	5.64	1.03	OK
		4	5.49	5.71	1.04	OK
NIR	NIR	1		0.00		
	NIR	2		0.00		
	NIR	6		0.00		
	NIR	7		0.00		
	NIR	9		0.00		
	NIR	11		0.00		
	NIR	12		0.00		
	NIR	16		0.00		
	NIR	21		0.00		
	NIR	23		0.00		
	NIR	33		0.00		
	NIR	34		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

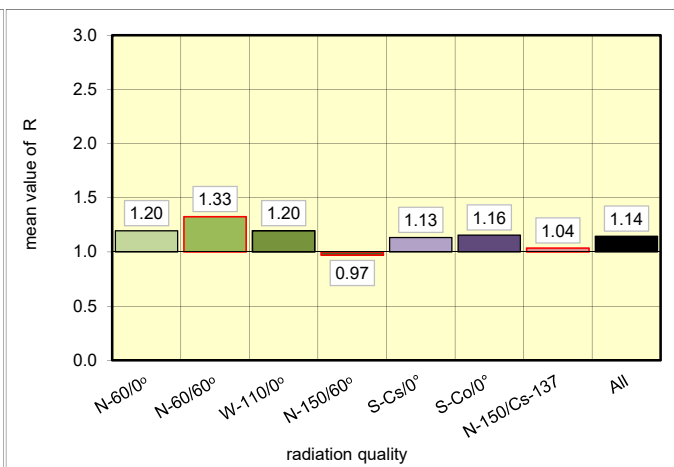
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.20	1.20	1.21	1.18	2%
N-60/60°	2	1.33	1.33	1.36	1.29	4%
W-110/0°	2	1.20	1.20	1.21	1.18	2%
N-150/60°	2	0.97	0.97	1.00	0.94	4%
S-Cs/0°	6	1.17	1.13	1.22	1.01	8%
S-Co/0°	6	1.18	1.16	1.21	1.05	5%
N-150/Cs-137	2	1.04	1.04	1.04	1.03	1%
<b>All</b>	<b>22</b>	<b>1.18</b>	<b>1.14</b>	<b>1.36</b>	<b>0.94</b>	<b>9%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 53: (TL) for dose quantity Hp(10)

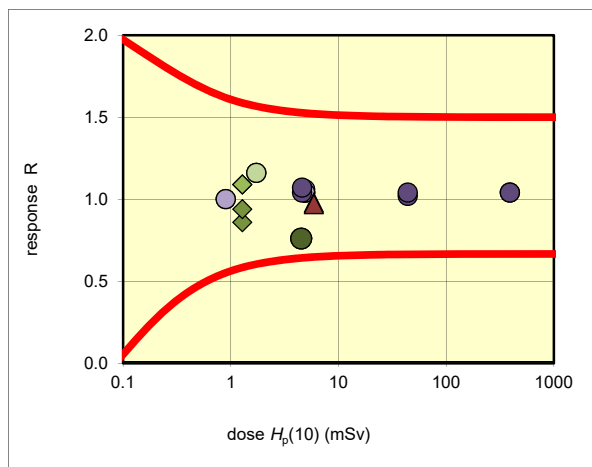
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv		response R (reported/true)	
x-ray	N-60/0°	5	1.73	2.00	1.16	OK
		34	1.73	2.00	1.16	OK
	N-60/60°	29	1.28	1.40	1.09	OK
		30	1.28	1.40	1.09	OK
	W-110/0°	8	4.50	3.40	0.76	OK
		9	4.50	3.40	0.76	OK
	N-150/60°	18	1.28	1.10	0.86	OK
		20	1.28	1.20	0.94	OK
gamma	S-Cs-S/0°	21	0.90	0.90	1.00	OK
		22	0.90	0.90	1.00	OK
	S-Cs-L/0°	3	4.90	5.10	1.04	OK
		6	4.90	5.10	1.04	OK
		10	4.90	5.20	1.06	OK
		11	4.90	5.10	1.04	OK
	S-Co-L/0°	7	4.60	4.80	1.04	OK
		23	4.60	4.90	1.07	OK
	S-Co-M/0°	24	44.00	45.00	1.02	OK
		26	44.00	45.80	1.04	OK
S-Co-H/0°	27	390.00	406.80	1.04	OK	
	28	390.00	406.80	1.04	OK	
mixed	N-150/Cs-137	1	5.90	5.80	0.98	OK
		2	5.90	5.70	0.97	OK
	WIR	16		-		
	WIR	17		-		
	NIR	4		1.10		
	NIR	12		1.20		
	NIR	13		1.20		
	NIR	14		1.10		
	NIR	15		1.10		
	NIR	19		1.10		
	NIR	25		1.00		
	NIR	31		1.10		
	NIR	32		1.30		
	NIR	33		1.10		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

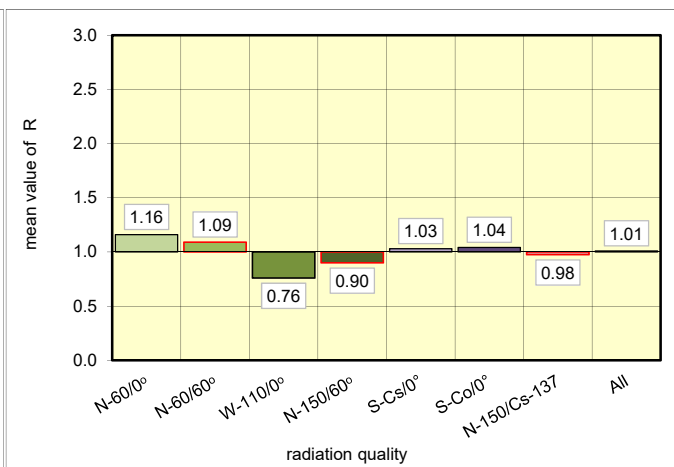
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.16</b>	1.16	1.16	1.16	0%
N-60/60°	2	<b>1.09</b>	1.09	1.09	1.09	0%
W-110/0°	2	<b>0.76</b>	0.76	0.76	0.76	0%
N-150/60°	2	<b>0.90</b>	0.90	0.94	0.86	6%
S-Cs/0°	6	<b>1.04</b>	1.03	1.06	1.00	2%
S-Co/0°	6	<b>1.04</b>	1.04	1.07	1.02	2%
N-150/Cs-137	2	<b>0.98</b>	0.98	0.98	0.97	1%
All	<b>22</b>	<b>1.04</b>	<b>1.01</b>	<b>1.16</b>	<b>0.76</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 54: (TL) for dose quantity Hp(10)

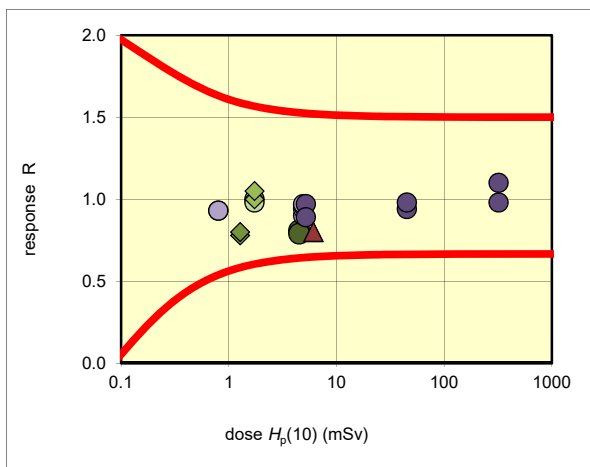
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv		response R (reported/true)	
x-ray	N-60/0°	17	1.73	1.73	1.00	OK
		23	1.73	1.70	0.98	OK
	N-60/60°	34	1.73	1.73	1.00	OK
		14	1.73	1.82	1.05	OK
	W-110/0°	5	4.50	3.63	0.81	OK
		20	4.50	3.57	0.79	OK
N-150/60°	24	1.28	1.00	0.78	OK	
	32	1.28	1.02	0.80	OK	
gamma	S-Cs-S/0°	9	0.80	0.74	0.93	OK
		16	0.80	0.74	0.93	OK
	S-Cs-L/0°	15	4.90	4.40	0.90	OK
		22	4.90	4.59	0.94	OK
		3	4.90	4.69	0.96	OK
		8	4.90	4.73	0.97	OK
	S-Co-L/0°	19	5.20	5.03	0.97	OK
		18	5.20	4.61	0.89	OK
	S-Co-M/0°	25	45.00	42.40	0.94	OK
		33	45.00	43.96	0.98	OK
	S-Co-H/0°	12	320.00	313.08	0.98	OK
		6	320.00	352.49	1.10	OK
mixed	N-150/Cs-137	26	6.10	4.90	0.80	OK
		27	6.10	4.89	0.80	OK
NIR	NIR	7		0.26		
	NIR	1		0.26		
	NIR	2		0.22		
	NIR	4		0.23		
	NIR	10		0.25		
	NIR	11		0.21		
	NIR	13		0.21		
	NIR	21		0.25		
	NIR	28		0.22		
	NIR	29		0.21		
	NIR	30		0.22		
	NIR	31		0.26		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

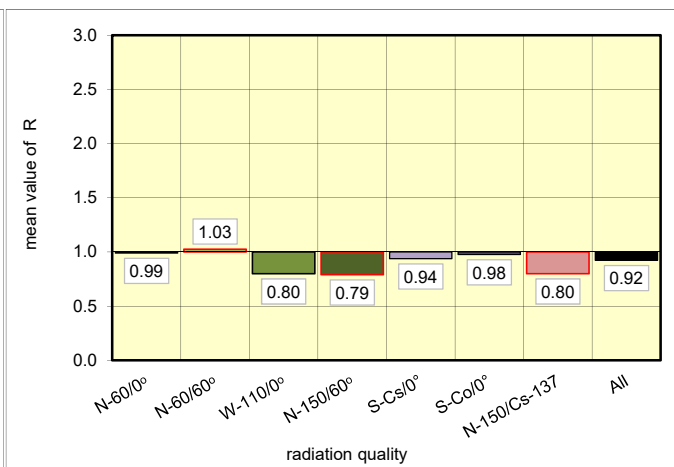
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.99</b>	0.99	1.00	0.98	1%
N-60/60°	2	<b>1.03</b>	1.03	1.05	1.00	3%
W-110/0°	2	<b>0.80</b>	0.80	0.81	0.79	2%
N-150/60°	2	<b>0.79</b>	0.79	0.80	0.78	2%
S-Cs/0°	6	<b>0.94</b>	0.94	0.97	0.90	3%
S-Co/0°	6	<b>0.98</b>	0.98	1.10	0.89	7%
N-150/Cs-137	2	<b>0.80</b>	0.80	0.80	0.80	0%
All	<b>22</b>	<b>0.94</b>	<b>0.92</b>	<b>1.10</b>	<b>0.78</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 54: (TL) for dose quantity $H_p(0.07)$

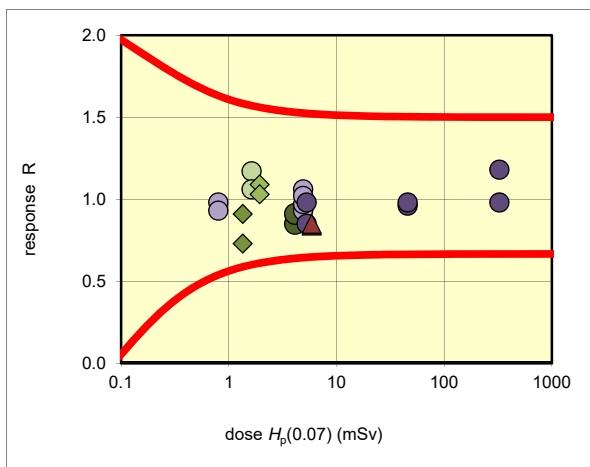
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	17	1.63	1.91	1.17	OK
		23	1.63	1.73	1.06	OK
	N-60/60°	34	1.94	2.11	1.09	OK
		14	1.94	2.00	1.03	OK
	W-110/0°	5	4.12	3.52	0.85	OK
		20	4.12	3.74	0.91	OK
	N-150/60°	24	1.35	0.98	0.73	OK
		32	1.35	1.22	0.91	OK
gamma	S-Cs-S/0°	9	0.80	0.78	0.98	OK
		16	0.80	0.74	0.93	OK
	S-Cs-L/0°	15	4.90	4.57	0.93	OK
		22	4.90	4.75	0.97	OK
		3	4.90	5.18	1.06	OK
		8	4.90	5.00	1.02	OK
	S-Co-L/0°	19	5.29	5.19	0.98	OK
		18	5.29	4.50	0.85	OK
	S-Co-M/0°	25	45.80	43.82	0.96	OK
		33	45.80	44.89	0.98	OK
	S-Co-H/0°	12	326.00	320.37	0.98	OK
		6	326.00	385.98	1.18	OK
mixed	N-150/Cs-137	26	5.89	4.93	0.84	OK
		27	5.89	4.99	0.85	OK
NIR	NIR	7		0.27		
	NIR	1		0.26		
	NIR	2		0.24		
	NIR	4		0.23		
	NIR	10		0.26		
	NIR	11		0.23		
	NIR	13		0.21		
	NIR	21		0.27		
	NIR	28		0.22		
	NIR	29		0.22		
	NIR	30		0.23		
	NIR	31		0.27		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

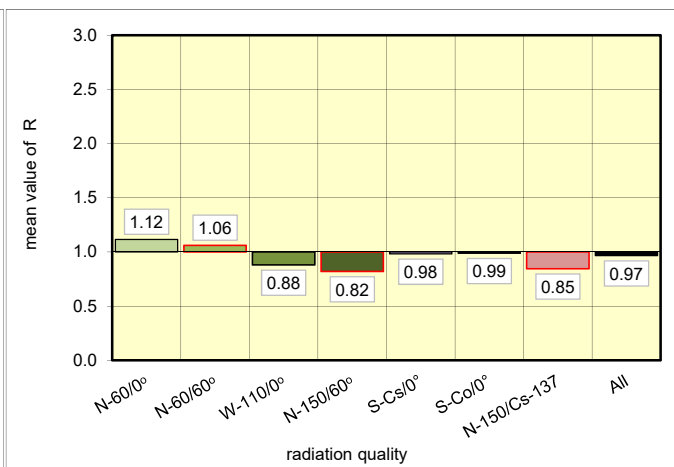
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.12	1.12	1.17	1.06	7%
N-60/60°	2	1.06	1.06	1.09	1.03	4%
W-110/0°	2	0.88	0.88	0.91	0.85	5%
N-150/60°	2	0.82	0.82	0.91	0.73	16%
S-Cs/0°	6	0.98	0.98	1.06	0.93	5%
S-Co/0°	6	0.98	0.99	1.18	0.85	11%
N-150/Cs-137	2	0.85	0.85	0.85	0.84	1%
All	22	0.98	0.97	1.18	0.73	11%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 55: (TL) for dose quantity Hp(10)

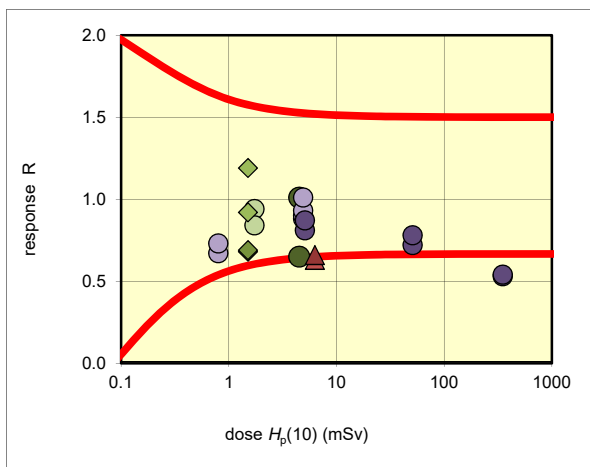
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	1	1.73	1.63	0.94	OK
		10	1.73	1.46	0.84	OK
	N-60/60°	25	1.51	1.39	0.92	OK
		2	1.51	1.79	1.19	OK
	W-110/0°	30	4.50	2.93	0.65	OK
		3	4.50	4.55	1.01	OK
N-150/60°	29	1.51	1.02	0.68	OK	
	31	1.51	1.04	0.69	OK	
gamma	S-Cs-S/0°	20	0.80	0.54	0.67	OK
		34	0.80	0.58	0.73	OK
	S-Cs-L/0°	13	4.90	4.33	0.88	OK
		17	4.90	4.40	0.90	OK
		28	4.90	4.57	0.93	OK
		24	4.90	4.95	1.01	OK
	S-Co-L/0°	5	5.10	4.12	0.81	OK
		7	5.10	4.45	0.87	OK
	S-Co-M/0°	21	51.00	36.57	0.72	OK
		16	51.00	39.97	0.78	OK
S-Co-H/0°	19	350.00	185.56	0.53	outlier	
	11	350.00	188.83	0.54	outlier	
mixed	N-150/Cs-137	33	6.30	3.97	0.63	outlier
		27	6.30	4.17	0.66	OK
NIR	NIR	4		0.66		
	NIR	6		0.73		
	NIR	8		0.65		
	NIR	9		0.74		
	NIR	12		0.73		
	NIR	14		0.68		
	NIR	15		0.68		
	NIR	18		0.68		
	NIR	22		0.67		
	NIR	23		0.72		
	NIR	26		0.69		
	NIR	32		0.71		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

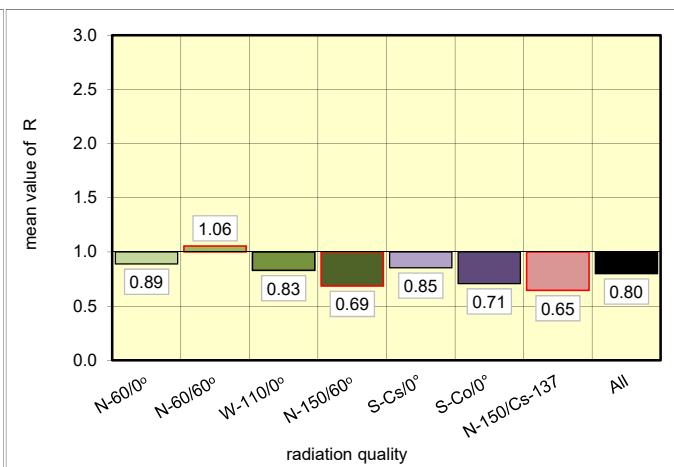
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.89</b>	0.89	0.94	0.84	8%
N-60/60°	2	<b>1.06</b>	1.06	1.19	0.92	18%
W-110/0°	2	<b>0.83</b>	0.83	1.01	0.65	31%
N-150/60°	2	<b>0.69</b>	0.69	0.69	0.68	1%
S-Cs/0°	6	<b>0.89</b>	0.85	1.01	0.67	15%
S-Co/0°	6	<b>0.75</b>	0.71	0.87	0.53	20%
N-150/Cs-137	2	<b>0.65</b>	0.65	0.66	0.63	3%
<b>All</b>	<b>22</b>	<b>0.80</b>	<b>0.80</b>	<b>1.19</b>	<b>0.53</b>	<b>21%</b>

outliers: 3 of 22

fraction of outliers: 14%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 55: (TL) for dose quantity Hp(0.07)

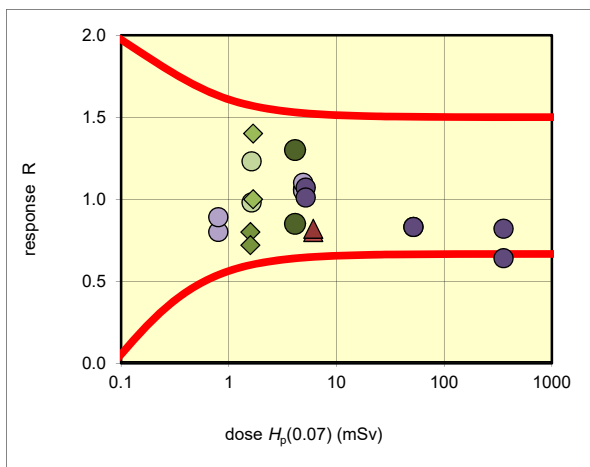
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	1	1.63	2.00	1.23	OK
		10	1.63	1.60	0.98	OK
	N-60/60°	25	1.68	1.68	1.00	OK
		2	1.68	2.36	1.40	OK
	W-110/0°	30	4.12	3.49	0.85	OK
		3	4.12	5.34	1.30	OK
	N-150/60°	29	1.59	1.27	0.80	OK
		31	1.59	1.15	0.72	OK
gamma	S-Cs-S/0°	20	0.80	0.64	0.80	OK
		34	0.80	0.71	0.89	OK
	S-Cs-L/0°	13	4.90	5.17	1.06	OK
		17	4.90	5.17	1.06	OK
		28	4.90	5.15	1.05	OK
		24	4.90	5.41	1.10	OK
	S-Co-L/0°	5	5.19	5.53	1.07	OK
		7	5.19	5.23	1.01	OK
	S-Co-M/0°	21	51.90	43.25	0.83	OK
		16	51.90	43.25	0.83	OK
	S-Co-H/0°	19	356.00	227.20	0.64	outlier
		11	356.00	292.30	0.82	OK
mixed	N-150/Cs-137	33	6.09	4.86	0.80	OK
		27	6.09	4.98	0.82	OK
NIR	NIR	4		0.76		
	NIR	6		0.78		
	NIR	8		0.74		
	NIR	9		0.80		
	NIR	12		0.78		
	NIR	14		0.81		
	NIR	15		0.72		
	NIR	18		0.71		
	NIR	22		0.75		
	NIR	23		0.80		
	NIR	26		0.73		
	NIR	32		0.76		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

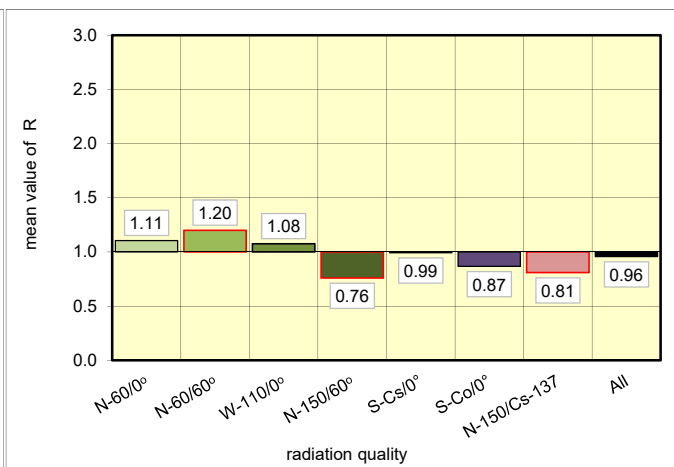
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.11	1.11	1.23	0.98	16%
N-60/60°	2	1.20	1.20	1.40	1.00	24%
W-110/0°	2	1.08	1.08	1.30	0.85	30%
N-150/60°	2	0.76	0.76	0.80	0.72	7%
S-Cs/0°	6	1.06	0.99	1.10	0.80	12%
S-Co/0°	6	0.83	0.87	1.07	0.64	18%
N-150/Cs-137	2	0.81	0.81	0.82	0.80	2%
<b>All</b>	<b>22</b>	<b>0.94</b>	<b>0.96</b>	<b>1.40</b>	<b>0.64</b>	<b>20%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 56: (TL) for dose quantity Hp(10)

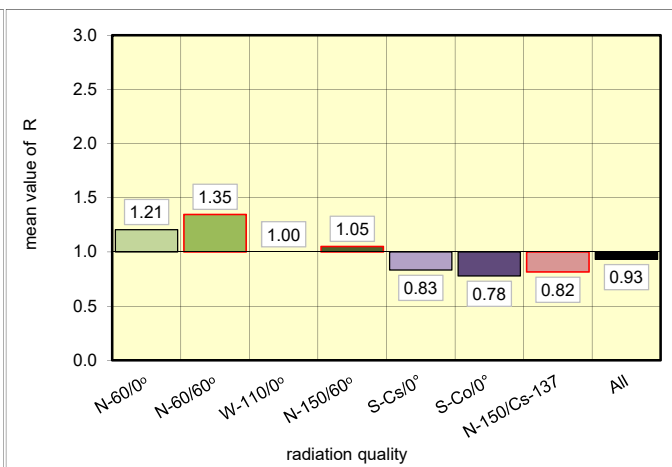
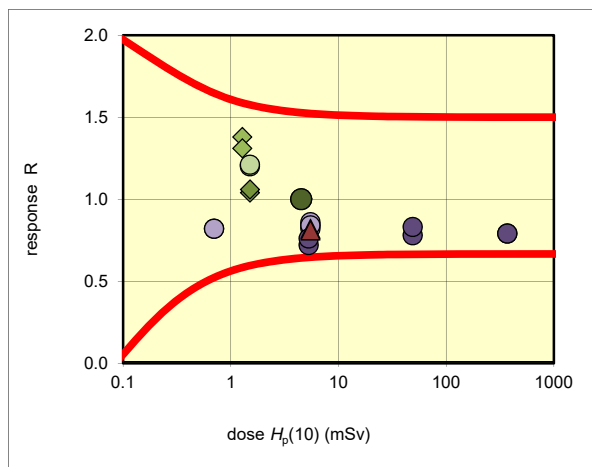
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	5	1.51	1.81	1.20	OK
		30	1.51	1.83	1.21	OK
	N-60/60°	2	1.28	1.76	1.38	OK
		8	1.28	1.68	1.31	OK
	W-110/0°	9	4.50	4.48	1.00	OK
		23	4.50	4.48	1.00	OK
	N-150/60°	3	1.51	1.57	1.04	OK
		17	1.51	1.59	1.06	OK
gamma	S-Cs-S/0°	18	0.70	0.58	0.82	OK
		29	0.70	0.58	0.82	OK
	S-Cs-L/0°	13	5.50	4.60	0.84	OK
		14	5.50	4.52	0.82	OK
		16	5.50	4.71	0.86	OK
		19	5.50	4.62	0.84	OK
	S-Co-L/0°	10	5.30	3.80	0.72	OK
		11	5.30	4.03	0.76	OK
	S-Co-M/0°	15	49.00	38.27	0.78	OK
		20	49.00	40.72	0.83	OK
	S-Co-H/0°	12	370.00	293.76	0.79	OK
		32	370.00	292.74	0.79	OK
mixed	N-150/Cs-137	22	5.50	4.50	0.82	OK
		28	5.50	4.47	0.81	OK
NIR	NIR	1		0.15		
	NIR	4		0.15		
	NIR	6		0.18		
	NIR	7		0.13		
	NIR	21		0.19		
	NIR	24		0.19		
	NIR	25		0.18		
	NIR	26		0.15		
	NIR	27		0.18		
	NIR	31		0.13		
	NIR	33		0.14		
	NIR	34		0.14		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.21	1.21	1.21	1.20	1%
N-60/60°	2	1.35	1.35	1.38	1.31	4%
W-110/0°	2	1.00	1.00	1.00	1.00	0%
N-150/60°	2	1.05	1.05	1.06	1.04	1%
S-Cs/0°	6	0.83	0.83	0.86	0.82	2%
S-Co/0°	6	0.79	0.78	0.83	0.72	5%
N-150/Cs-137	2	0.82	0.82	0.82	0.81	1%
All	22	0.84	0.93	1.38	0.72	20%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 56: (TL) for dose quantity Hp(0.07)

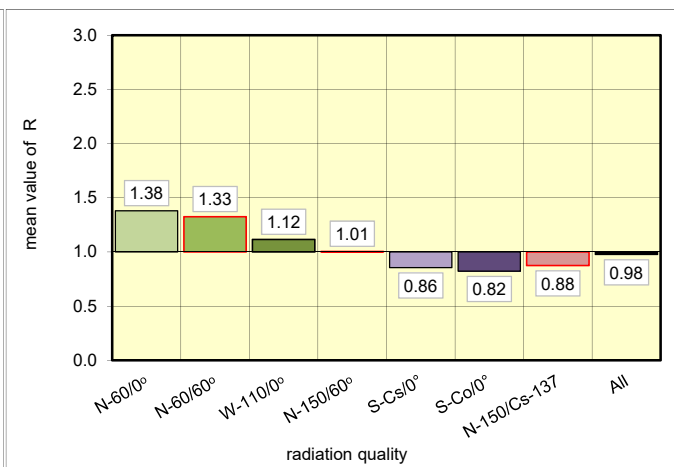
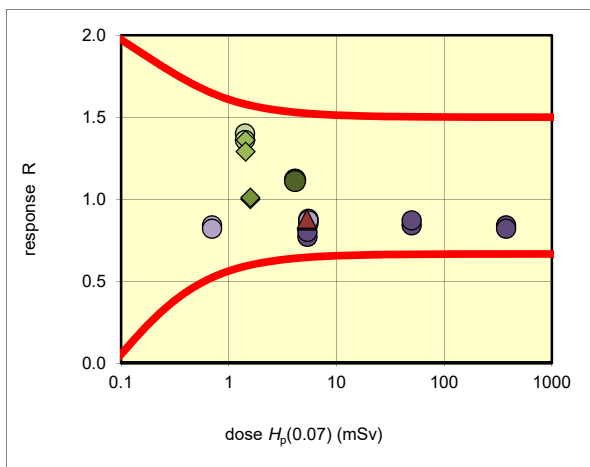
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	5	1.42	1.98	1.40	OK
		30	1.42	1.92	1.36	OK
	N-60/60°	2	1.43	1.95	1.36	OK
		8	1.43	1.84	1.29	OK
	W-110/0°	9	4.12	4.63	1.12	OK
		23	4.12	4.57	1.11	OK
	N-150/60°	3	1.59	1.58	1.00	OK
		17	1.59	1.61	1.01	OK
gamma	S-Cs-S/0°	18	0.70	0.59	0.84	OK
		29	0.70	0.58	0.82	OK
	S-Cs-L/0°	13	5.50	4.77	0.87	OK
		14	5.50	4.70	0.85	OK
		16	5.50	4.84	0.88	OK
		19	5.50	4.80	0.87	OK
	S-Co-L/0°	10	5.39	4.17	0.77	OK
		11	5.39	4.33	0.80	OK
	S-Co-M/0°	15	49.90	42.09	0.84	OK
		20	49.90	43.30	0.87	OK
	S-Co-H/0°	12	376.00	314.72	0.84	OK
		32	376.00	309.93	0.82	OK
mixed	N-150/Cs-137	22	5.31	4.60	0.87	OK
		28	5.31	4.65	0.88	OK
NIR	NIR	1		0.17		
	NIR	4		0.15		
	NIR	6		0.20		
	NIR	7		0.15		
	NIR	21		0.20		
	NIR	24		0.20		
	NIR	25		0.20		
	NIR	26		0.16		
	NIR	27		0.18		
	NIR	31		0.14		
	NIR	33		0.15		
	NIR	34		0.16		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.38</b>	1.38	1.40	1.36	2%
N-60/60°	2	<b>1.33</b>	1.33	1.36	1.29	4%
W-110/0°	2	<b>1.12</b>	1.12	1.12	1.11	1%
N-150/60°	2	<b>1.01</b>	1.01	1.01	1.00	1%
S-Cs/0°	6	<b>0.86</b>	0.86	0.88	0.82	3%
S-Co/0°	6	<b>0.83</b>	0.82	0.87	0.77	4%
N-150/Cs-137	2	<b>0.88</b>	0.88	0.88	0.87	1%
<b>All</b>	<b>22</b>	<b>0.87</b>	<b>0.98</b>	<b>1.40</b>	<b>0.77</b>	<b>21%</b>

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 57: (TL) for dose quantity $H_p(10)$

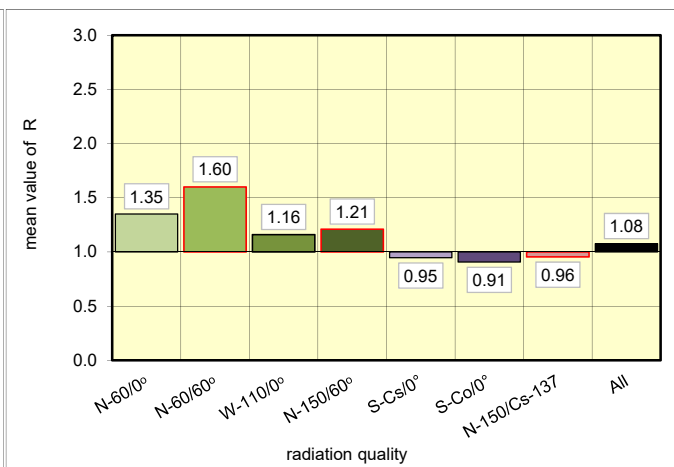
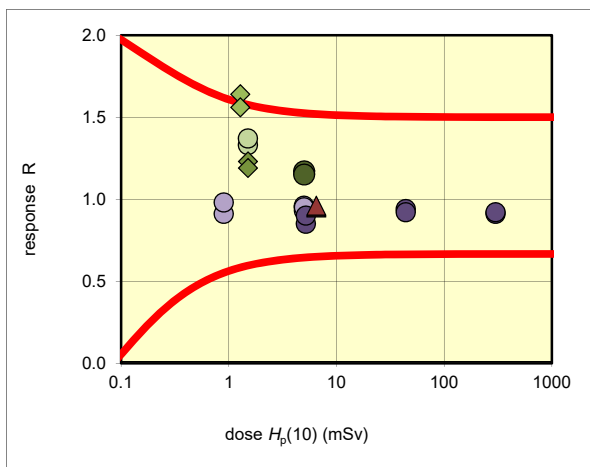
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	7	1.51	2.01	1.33	OK
		8	1.51	2.07	1.37	OK
	N-60/60°	5	1.28	2.10	1.64	outlier
		22	1.28	2.00	1.56	OK
	W-110/0°	10	5.00	5.85	1.17	OK
		33	5.00	5.73	1.15	OK
N-150/60°	1	1.51	1.85	1.23	OK	
	32	1.51	1.79	1.19	OK	
gamma	S-Cs-S/0°	20	0.90	0.82	0.91	OK
		21	0.90	0.88	0.98	OK
	S-Cs-L/0°	3	5.00	4.75	0.95	OK
		4	5.00	4.80	0.96	OK
		6	5.00	4.65	0.93	OK
		9	5.00	4.77	0.95	OK
	S-Co-L/0°	16	5.20	4.43	0.85	OK
		17	5.20	4.66	0.90	OK
	S-Co-M/0°	18	44.00	41.19	0.94	OK
		19	44.00	40.69	0.92	OK
	S-Co-H/0°	30	300.00	274.33	0.91	OK
		31	300.00	277.13	0.92	OK
mixed	N-150/Cs-137	14	6.50	6.19	0.95	OK
		15	6.50	6.22	0.96	OK
NIR	NIR	2		0.21		
	NIR	11		0.20		
	NIR	12		0.16		
	NIR	13		0.21		
	NIR	23		0.16		
	NIR	24		0.17		
	NIR	25		0.15		
	NIR	26		0.20		
	NIR	27		0.15		
	NIR	28		0.19		
	NIR	29		0.15		
NIR	34		0.20			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.35	1.35	1.37	1.33	2%
N-60/60°	2	1.60	1.60	1.64	1.56	4%
W-110/0°	2	1.16	1.16	1.17	1.15	1%
N-150/60°	2	1.21	1.21	1.23	1.19	2%
S-Cs/0°	6	0.95	0.95	0.98	0.91	3%
S-Co/0°	6	0.92	0.91	0.94	0.85	3%
N-150/Cs-137	2	0.96	0.96	0.96	0.95	1%
<b>All</b>	<b>22</b>	<b>0.96</b>	<b>1.08</b>	<b>1.64</b>	<b>0.85</b>	<b>21%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 57: (TL) for dose quantity Hp(0.07)

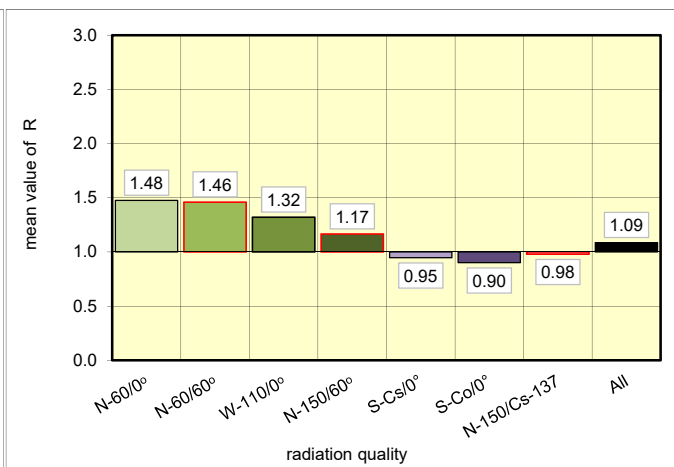
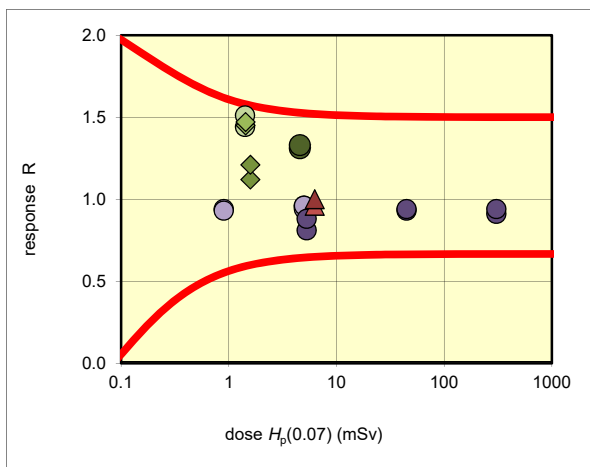
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	7	1.42	2.04	1.44	OK
		8	1.42	2.14	1.51	OK
	N-60/60°	5	1.43	2.07	1.45	OK
		22	1.43	2.11	1.47	OK
	W-110/0°	10	4.57	6.00	1.31	OK
		33	4.57	6.08	1.33	OK
	N-150/60°	1	1.59	1.78	1.12	OK
		32	1.59	1.92	1.21	OK
gamma	S-Cs-S/0°	20	0.90	0.85	0.94	OK
		21	0.90	0.84	0.93	OK
	S-Cs-L/0°	3	5.00	4.74	0.95	OK
		4	5.00	4.79	0.96	OK
		6	5.00	4.72	0.94	OK
		9	5.00	4.78	0.96	OK
	S-Co-L/0°	16	5.29	4.28	0.81	OK
		17	5.29	4.64	0.88	OK
	S-Co-M/0°	18	44.80	41.59	0.93	OK
		19	44.80	42.09	0.94	OK
	S-Co-H/0°	30	305.00	278.24	0.91	OK
		31	305.00	285.49	0.94	OK
mixed	N-150/Cs-137	14	6.28	6.06	0.96	OK
		15	6.28	6.26	1.00	OK
NIR	NIR	2		0.21		
	NIR	11		0.18		
	NIR	12		0.14		
	NIR	13		0.21		
	NIR	23		0.22		
	NIR	24		0.21		
	NIR	25		0.14		
	NIR	26		0.19		
	NIR	27		0.15		
	NIR	28		0.16		
	NIR	29		0.14		
NIR	34		0.30			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.48</b>	1.48	1.51	1.44	3%
N-60/60°	2	<b>1.46</b>	1.46	1.47	1.45	1%
W-110/0°	2	<b>1.32</b>	1.32	1.33	1.31	1%
N-150/60°	2	<b>1.17</b>	1.17	1.21	1.12	5%
S-Cs/0°	6	<b>0.95</b>	0.95	0.96	0.93	1%
S-Co/0°	6	<b>0.92</b>	0.90	0.94	0.81	6%
N-150/Cs-137	2	<b>0.98</b>	0.98	1.00	0.96	3%
<b>All</b>	<b>22</b>	<b>0.96</b>	<b>1.09</b>	<b>1.51</b>	<b>0.81</b>	<b>21%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 58: (TL) for dose quantity Hp(10)

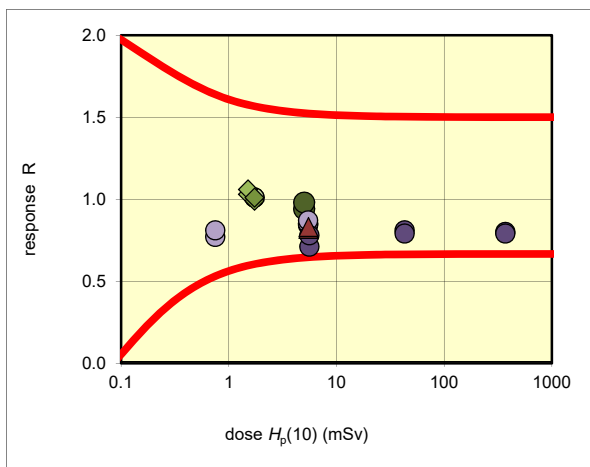
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	19	1.73	1.76	1.01	OK
		1	1.73	1.75	1.01	OK
	N-60/60°	14	1.51	1.56	1.03	OK
		17	1.51	1.60	1.06	OK
	W-110/0°	18	5.00	4.71	0.94	OK
		31	5.00	4.93	0.98	OK
N-150/60°	10	1.73	1.73	0.99	OK	
	23	1.73	1.76	1.01	OK	
gamma	S-Cs-S/0°	34	0.75	0.58	0.77	OK
		33	0.75	0.61	0.81	OK
	S-Cs-L/0°	16	5.46	4.58	0.84	OK
		21	5.46	4.65	0.85	OK
		20	5.46	4.65	0.85	OK
		22	5.46	4.77	0.87	OK
	S-Co-L/0°	27	5.60	4.00	0.71	OK
		29	5.60	4.39	0.78	OK
	S-Co-M/0°	12	43.00	34.77	0.81	OK
		15	43.00	33.97	0.79	OK
S-Co-H/0°	3	370.00	296.51	0.80	OK	
	2	370.00	292.90	0.79	OK	
mixed	N-150/Cs-137	7	5.50	4.52	0.82	OK
		6	5.50	4.57	0.83	OK
NIR	WIR	4	-	-	-	-
	WIR	26	-	-	-	-
	NIR	5	-	0.19	-	-
	NIR	8	-	0.16	-	-
	NIR	9	-	0.15	-	-
	NIR	11	-	0.16	-	-
	NIR	13	-	0.19	-	-
	NIR	24	-	0.15	-	-
	NIR	25	-	0.15	-	-
	NIR	28	-	0.20	-	-
	NIR	30	-	0.15	-	-
	NIR	32	-	0.15	-	-

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

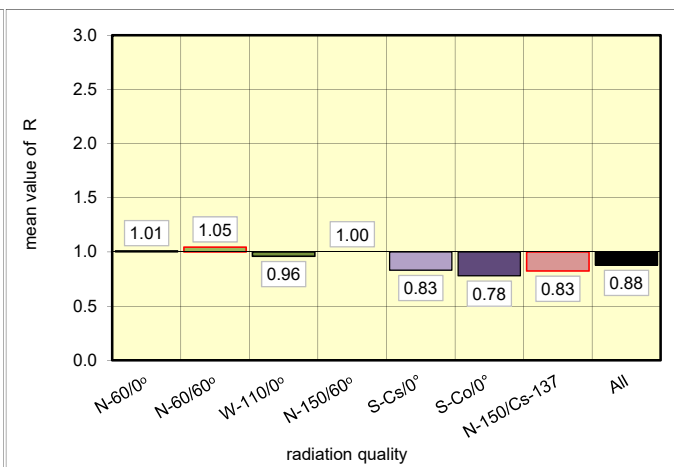
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.01	1.01	1.01	1.01	0%
N-60/60°	2	1.05	1.05	1.06	1.03	2%
W-110/0°	2	0.96	0.96	0.98	0.94	3%
N-150/60°	2	1.00	1.00	1.01	0.99	1%
S-Cs/0°	6	0.85	0.83	0.87	0.77	4%
S-Co/0°	6	0.79	0.78	0.81	0.71	5%
N-150/Cs-137	2	0.83	0.83	0.83	0.82	1%
<b>All</b>	<b>22</b>	<b>0.85</b>	<b>0.88</b>	<b>1.06</b>	<b>0.71</b>	<b>12%</b>

**outliers: 0 of 22**

**Fraction of outliers: 0%**



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 58: (TL) for dose quantity Hp(0.07)

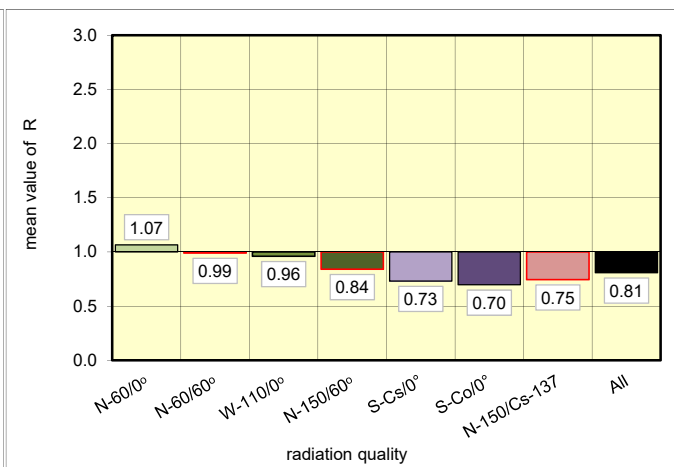
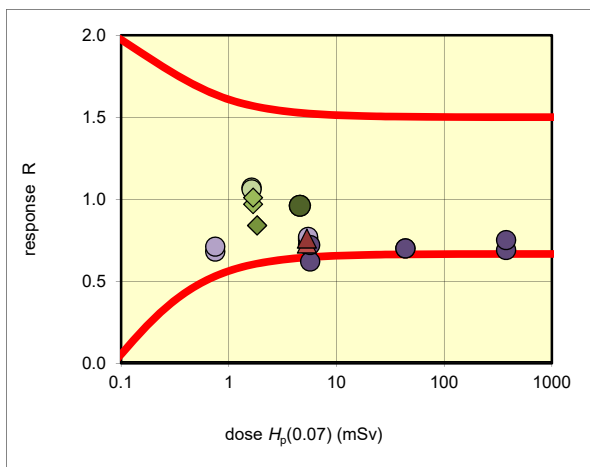
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	19	1.63	1.74	1.07	OK
		1	1.63	1.72	1.06	OK
	N-60/60°	14	1.68	1.63	0.97	OK
		17	1.68	1.70	1.01	OK
	W-110/0°	18	4.57	4.39	0.96	OK
		31	4.57	4.40	0.96	OK
	N-150/60°	10	1.83	1.53	0.84	OK
		23	1.83	1.53	0.84	OK
gamma	S-Cs-S/0°	34	0.75	0.51	0.68	OK
		33	0.75	0.53	0.71	OK
	S-Cs-L/0°	16	5.46	3.94	0.72	OK
		21	5.46	4.08	0.75	OK
		20	5.46	4.17	0.76	OK
		22	5.46	4.21	0.77	OK
	S-Co-L/0°	27	5.70	3.55	0.62	outlier
		29	5.70	4.09	0.72	OK
	S-Co-M/0°	12	43.70	30.52	0.70	OK
		15	43.70	30.38	0.70	OK
S-Co-H/0°	3	376.00	260.53	0.69	OK	
	2	376.00	281.67	0.75	OK	
mixed	N-150/Cs-137	7	5.31	3.90	0.73	OK
		6	5.31	4.01	0.76	OK
NIR	WIR	4	-	-	-	-
	WIR	26	-	-	-	-
	NIR	5	-	0.16	-	-
	NIR	8	-	0.14	-	-
	NIR	9	-	0.13	-	-
	NIR	11	-	0.13	-	-
	NIR	13	-	0.16	-	-
	NIR	24	-	0.13	-	-
	NIR	25	-	0.13	-	-
	NIR	28	-	0.17	-	-
	NIR	30	-	0.12	-	-
	NIR	32	-	0.13	-	-

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.07	1.07	1.07	1.06	1%
N-60/60°	2	0.99	0.99	1.01	0.97	3%
W-110/0°	2	0.96	0.96	0.96	0.96	0%
N-150/60°	2	0.84	0.84	0.84	0.84	0%
S-Cs/0°	6	0.74	0.73	0.77	0.68	5%
S-Co/0°	6	0.70	0.70	0.75	0.62	6%
N-150/Cs-137	2	0.75	0.75	0.76	0.73	3%
<b>All</b>	<b>22</b>	<b>0.76</b>	<b>0.81</b>	<b>1.07</b>	<b>0.62</b>	<b>17%</b>

outliers: 1 of 22

fraction of outliers: 5%



Results: IC2018

## Reporting number 59: (TL) for dose quantity Hp(10)

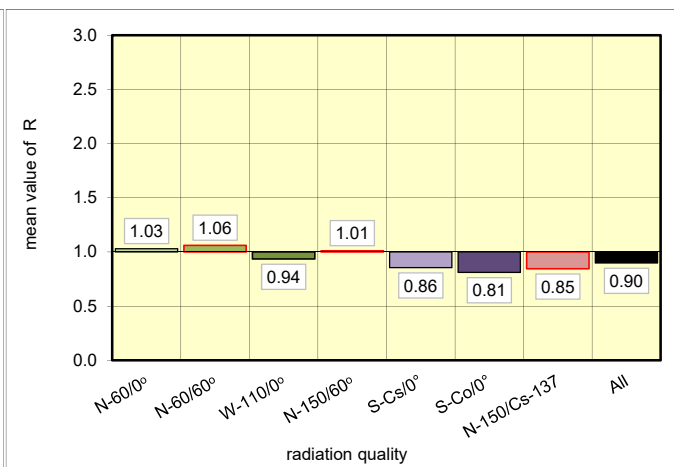
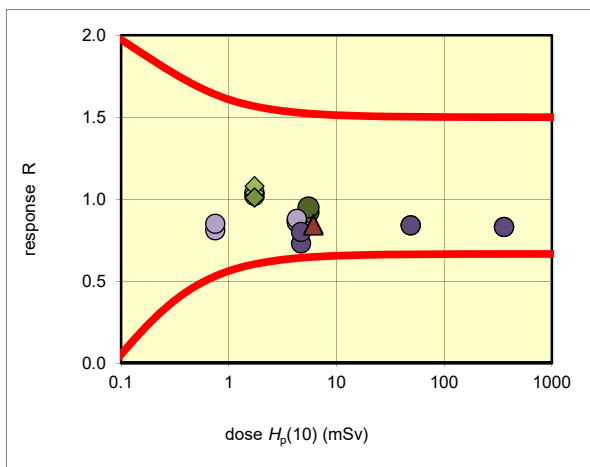
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	3	1.73	1.77	1.02	OK
		25	1.73	1.81	1.04	OK
	N-60/60°	21	1.73	1.81	1.04	OK
		26	1.73	1.87	1.08	OK
	W-110/0°	24	5.50	5.06	0.92	OK
		14	5.50	5.23	0.95	OK
	N-150/60°	32	1.73	1.75	1.01	OK
		27	1.73	1.76	1.01	OK
gamma	S-Cs-S/0°	18	0.75	0.61	0.81	OK
		12	0.75	0.64	0.85	OK
	S-Cs-L/0°	17	4.30	3.69	0.86	OK
		15	4.30	3.74	0.87	OK
		22	4.30	3.72	0.86	OK
	S-Co-L/0°	23	4.30	3.78	0.88	OK
		5	4.70	3.44	0.73	OK
	S-Co-M/0°	13	4.70	3.75	0.80	OK
		31	49.00	40.99	0.84	OK
	S-Co-H/0°	10	49.00	41.07	0.84	OK
		8	360.00	299.94	0.83	OK
	mixed	N-150/Cs-137	6	360.00	299.97	0.83
7			6.10	5.21	0.85	OK
		4	6.10	5.11	0.84	OK
		1		-		
		2		-		
		9		0.16		
		11		0.15		
		16		0.19		
		19		0.15		
		20		0.15		
		28		0.19		
		29		0.19		
30		0.15				
33		0.15				
34		0.14				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.03</b>	1.03	1.04	1.02	1%
N-60/60°	2	<b>1.06</b>	1.06	1.08	1.04	3%
W-110/0°	2	<b>0.94</b>	0.94	0.95	0.92	2%
N-150/60°	2	<b>1.01</b>	1.01	1.01	1.01	0%
S-Cs/0°	6	<b>0.86</b>	0.86	0.88	0.81	3%
S-Co/0°	6	<b>0.83</b>	0.81	0.84	0.73	5%
N-150/Cs-137	2	<b>0.85</b>	0.85	0.85	0.84	1%
<b>All</b>	<b>22</b>	<b>0.86</b>	<b>0.90</b>	<b>1.08</b>	<b>0.73</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 59: (TL) for dose quantity $H_p(0.07)$

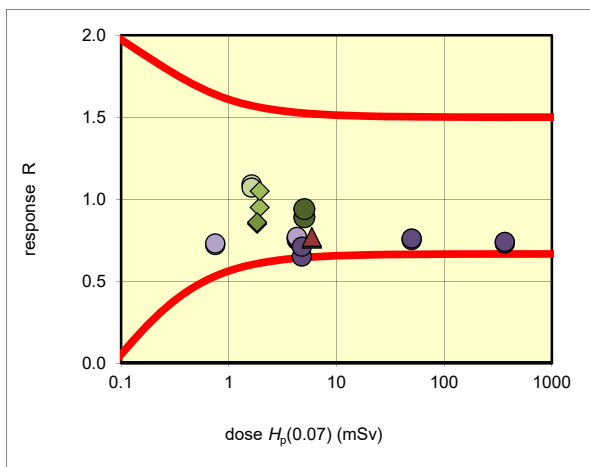
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	3	1.63	1.78	1.09	OK
		25	1.63	1.74	1.07	OK
	N-60/60°	21	1.94	1.85	0.95	OK
		26	1.94	2.03	1.05	OK
	W-110/0°	24	5.03	4.47	0.89	OK
		14	5.03	4.72	0.94	OK
	N-150/60°	32	1.83	1.55	0.85	OK
		27	1.83	1.57	0.86	OK
gamma	S-Cs-S/0°	18	0.75	0.54	0.72	OK
		12	0.75	0.55	0.73	OK
	S-Cs-L/0°	17	4.30	3.22	0.75	OK
		15	4.30	3.27	0.76	OK
		22	4.30	3.28	0.76	OK
		23	4.30	3.30	0.77	OK
	S-Co-L/0°	5	4.78	3.10	0.65	OK
		13	4.78	3.41	0.71	OK
	S-Co-M/0°	31	49.90	37.39	0.75	OK
		10	49.90	37.81	0.76	OK
	S-Co-H/0°	8	366.00	268.85	0.73	OK
		6	366.00	271.22	0.74	OK
mixed	N-150/Cs-137	7	5.90	4.51	0.76	OK
		4	5.90	4.52	0.77	OK
	WIR	1		-		
	WIR	2		-		
	NIR	9		0.13		
	NIR	11		0.12		
	NIR	16		0.15		
	NIR	19		0.13		
	NIR	20		0.12		
	NIR	28		0.16		
	NIR	29		0.15		
	NIR	30		0.12		
	NIR	33		0.12		
	NIR	34		0.12		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

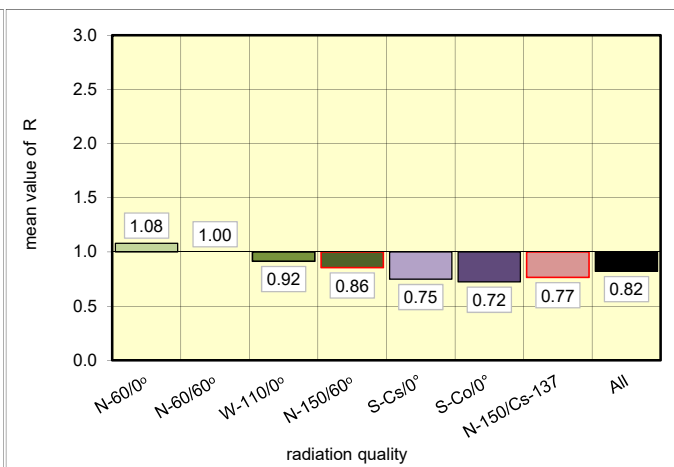
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.08</b>	1.08	1.09	1.07	1%
N-60/60°	2	<b>1.00</b>	1.00	1.05	0.95	7%
W-110/0°	2	<b>0.92</b>	0.92	0.94	0.89	4%
N-150/60°	2	<b>0.86</b>	0.86	0.86	0.85	1%
S-Cs/0°	6	<b>0.76</b>	0.75	0.77	0.72	3%
S-Co/0°	6	<b>0.74</b>	0.72	0.76	0.65	6%
N-150/Cs-137	2	<b>0.77</b>	0.77	0.77	0.76	1%
<b>All</b>	<b>22</b>	<b>0.76</b>	<b>0.82</b>	<b>1.09</b>	<b>0.65</b>	<b>15%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 60: (TL) for dose quantity Hp(10)

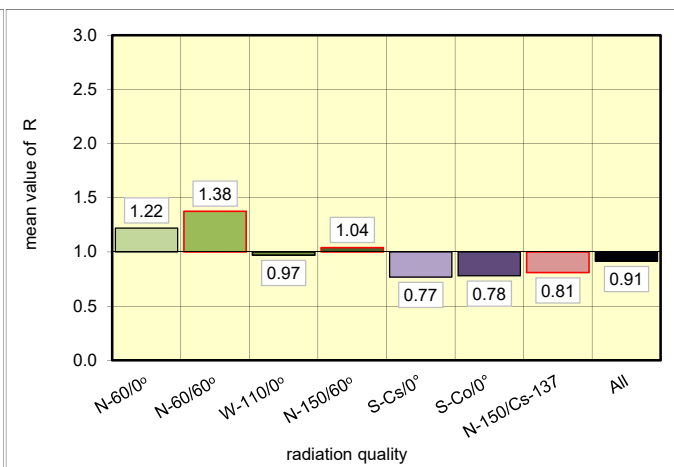
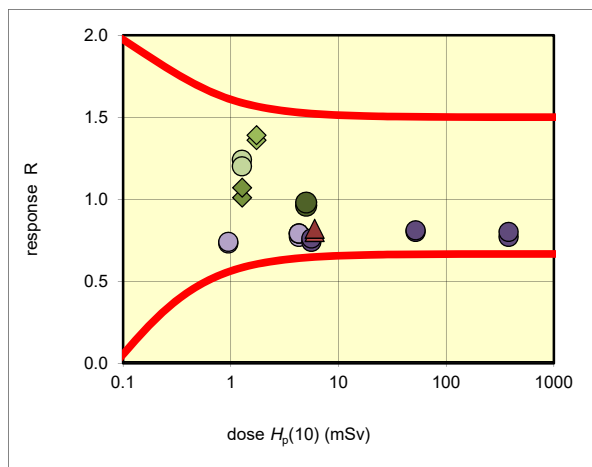
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.27	1.58	1.24	OK
		28	1.27	1.53	1.20	OK
	N-60/60°	3	1.73	2.36	1.36	OK
		11	1.73	2.41	1.39	OK
	W-110/0°	30	5.00	4.81	0.96	OK
		32	5.00	4.88	0.98	OK
	N-150/60°	6	1.28	1.28	1.01	OK
		33	1.28	1.37	1.07	OK
gamma	S-Cs-S/0°	19	0.95	0.70	0.73	OK
		22	0.95	0.71	0.74	OK
	S-Cs-L/0°	9	4.30	3.30	0.77	OK
		13	4.30	3.39	0.79	OK
		16	4.30	3.41	0.79	OK
	S-Co-L/0°	27	4.30	3.41	0.79	OK
		14	5.60	4.14	0.74	OK
	S-Co-M/0°	2	5.60	4.27	0.76	OK
		23	52.00	41.34	0.80	OK
	S-Co-H/0°	5	52.00	42.34	0.81	OK
		29	380.00	294.30	0.77	OK
	mixed	N-150/Cs-137	17	380.00	304.92	0.80
10			6.00	4.78	0.80	OK
NIR	N-150/Cs-137	20	6.00	4.94	0.82	OK
		1		0.33		
		4		0.40		
		7		0.34		
		8		0.39		
		12		0.44		
		15		0.40		
		18		0.45		
		21		0.39		
		25		0.41		
26		0.40				
31		0.41				
34		0.40				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.22	1.22	1.24	1.20	2%
N-60/60°	2	1.38	1.38	1.39	1.36	2%
W-110/0°	2	0.97	0.97	0.98	0.96	1%
N-150/60°	2	1.04	1.04	1.07	1.01	4%
S-Cs/0°	6	0.78	0.77	0.79	0.73	4%
S-Co/0°	6	0.79	0.78	0.81	0.74	4%
N-150/Cs-137	2	0.81	0.81	0.82	0.80	2%
All	22	0.80	0.91	1.39	0.73	23%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



No dose values for  $H_p(0.07)$  submitted.

## Reporting number 61: (TL) for dose quantity Hp(10)

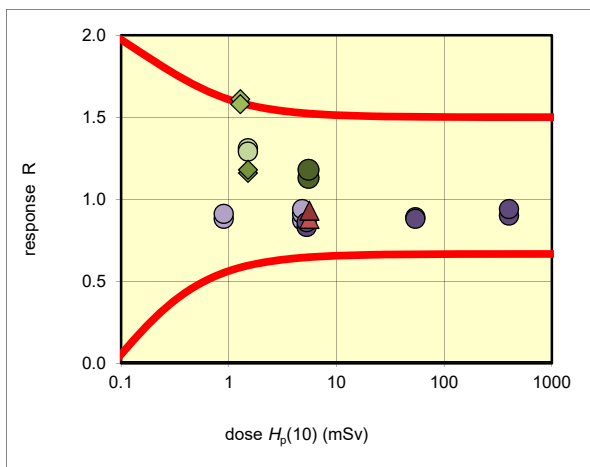
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	26	1.51	1.98	1.31	OK
		27	1.51	1.95	1.29	OK
	N-60/60°	32	1.28	2.06	1.61	outlier
		31	1.28	2.02	1.58	OK
	W-110/0°	16	5.50	6.23	1.13	OK
		7	5.50	6.51	1.18	OK
N-150/60°	25	1.51	1.75	1.16	OK	
	28	1.51	1.77	1.18	OK	
gamma	S-Cs-S/0°	19	0.90	0.79	0.88	OK
		5	0.90	0.82	0.91	OK
	S-Cs-L/0°	22	4.80	4.16	0.87	OK
		2	4.80	4.38	0.91	OK
		18	4.80	4.35	0.91	OK
		10	4.80	4.49	0.94	OK
	S-Co-L/0°	33	5.30	4.42	0.83	OK
		34	5.30	4.58	0.86	OK
	S-Co-M/0°	17	54.00	48.19	0.89	OK
		29	54.00	47.62	0.88	OK
	S-Co-H/0°	21	400.00	360.71	0.90	OK
		14	400.00	375.40	0.94	OK
mixed	N-150/Cs-137	24	5.60	4.93	0.88	OK
		23	5.60	5.19	0.93	OK
NIR	WIR	4		-		
	WIR	8		-		
	NIR	1		0.20		
	NIR	3		0.15		
	NIR	6		0.15		
	NIR	9		0.20		
	NIR	11		0.14		
	NIR	12		0.20		
	NIR	13		0.14		
	NIR	15		0.14		
	NIR	20		0.14		
	NIR	30		0.14		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

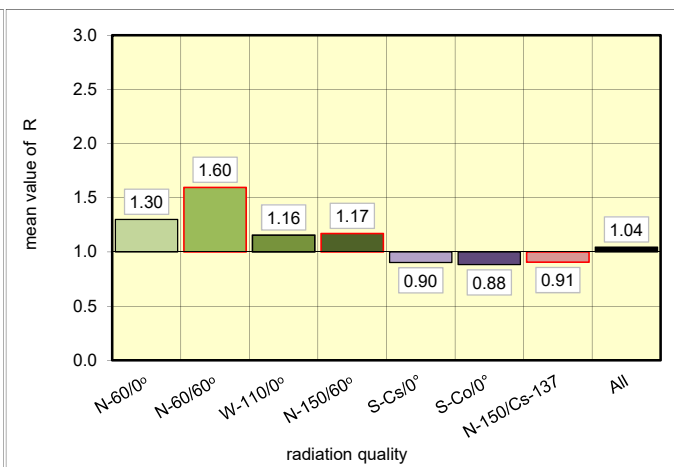
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.30	1.30	1.31	1.29	1%
N-60/60°	2	1.60	1.60	1.61	1.58	1%
W-110/0°	2	1.16	1.16	1.18	1.13	3%
N-150/60°	2	1.17	1.17	1.18	1.16	1%
S-Cs/0°	6	0.91	0.90	0.94	0.87	3%
S-Co/0°	6	0.89	0.88	0.94	0.83	4%
N-150/Cs-137	2	0.91	0.91	0.93	0.88	4%
All	22	0.92	1.04	1.61	0.83	22%

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 61: (TL) for dose quantity Hp(0.07)

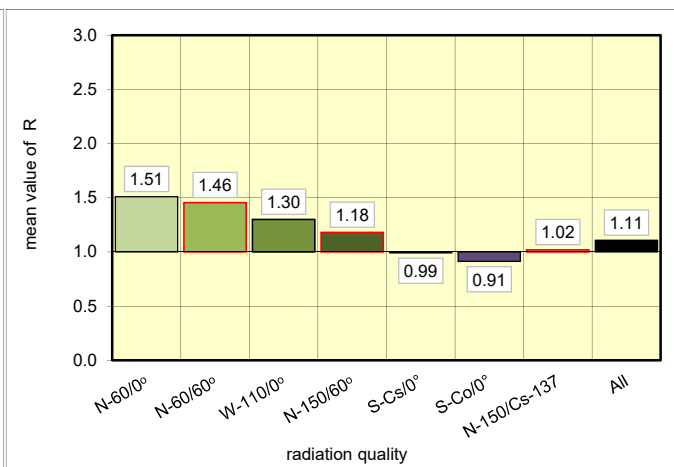
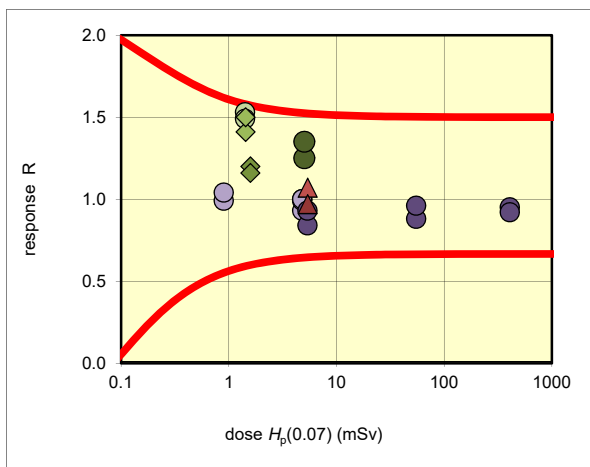
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	26	1.42	2.17	1.53	OK
		27	1.42	2.11	1.49	OK
	N-60/60°	32	1.43	2.02	1.41	OK
		31	1.43	2.15	1.50	OK
	W-110/0°	16	5.03	6.29	1.25	OK
		7	5.03	6.77	1.35	OK
N-150/60°	25	1.59	1.90	1.20	OK	
	28	1.59	1.84	1.16	OK	
gamma	S-Cs-S/0°	19	0.90	0.89	0.99	OK
		5	0.90	0.93	1.04	OK
	S-Cs-L/0°	22	4.80	4.78	1.00	OK
		2	4.80	4.44	0.93	OK
		18	4.80	4.76	0.99	OK
		10	4.80	4.80	1.00	OK
	S-Co-L/0°	33	5.39	4.55	0.84	OK
		34	5.39	4.99	0.93	OK
	S-Co-M/0°	17	54.90	48.16	0.88	OK
		29	54.90	52.88	0.96	OK
S-Co-H/0°	21	407.00	386.43	0.95	OK	
	14	407.00	373.30	0.92	OK	
mixed	N-150/Cs-137	24	5.40	5.77	1.07	OK
		23	5.40	5.26	0.97	OK
NIR	WIR	4	-	-	-	-
	WIR	8	-	-	-	-
	NIR	1	-	0.21	-	-
	NIR	3	-	0.16	-	-
	NIR	6	-	0.16	-	-
	NIR	9	-	0.20	-	-
	NIR	11	-	0.21	-	-
	NIR	12	-	0.21	-	-
	NIR	13	-	0.17	-	-
	NIR	15	-	0.16	-	-
	NIR	20	-	0.16	-	-
NIR	30	-	0.17	-	-	

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.51	1.51	1.53	1.49	2%
N-60/60°	2	1.46	1.46	1.50	1.41	4%
W-110/0°	2	1.30	1.30	1.35	1.25	5%
N-150/60°	2	1.18	1.18	1.20	1.16	2%
S-Cs/0°	6	1.00	0.99	1.04	0.93	4%
S-Co/0°	6	0.93	0.91	0.96	0.84	5%
N-150/Cs-137	2	1.02	1.02	1.07	0.97	7%
<b>All</b>	<b>22</b>	<b>1.00</b>	<b>1.11</b>	<b>1.53</b>	<b>0.84</b>	<b>20%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 62: (TL) for dose quantity $H_p(10)$

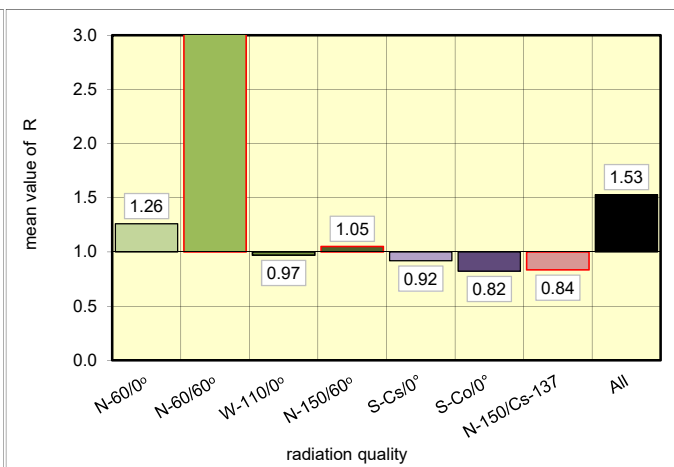
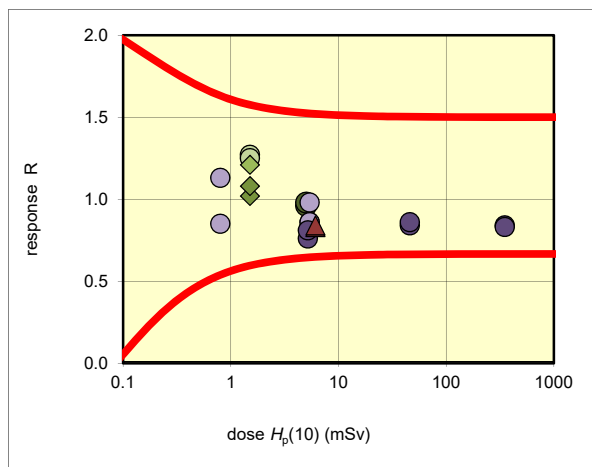
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	14	1.51	1.92	1.27	OK
		3	1.51	1.88	1.25	OK
	N-60/60°	7	1.51	1.82	1.21	OK
		21	1.51	20.64	13.70	outlier
	W-110/0°	27	5.00	4.78	0.96	OK
		5	5.00	4.89	0.98	OK
	N-150/60°	20	1.51	1.53	1.02	OK
17		1.51	1.62	1.08	OK	
gamma	S-Cs-S/0°	11	0.80	0.68	0.85	OK
		34	0.80	0.90	1.13	OK
	S-Cs-L/0°	25	5.40	4.48	0.83	OK
		12	5.40	4.65	0.86	OK
		13	5.40	4.66	0.86	OK
		22	5.40	5.30	0.98	OK
	S-Co-L/0°	10	5.20	3.94	0.76	OK
		18	5.20	4.19	0.81	OK
	S-Co-M/0°	32	46.00	38.86	0.84	OK
		19	46.00	39.45	0.86	OK
	S-Co-H/0°	31	350.00	294.65	0.84	OK
33		350.00	291.80	0.83	OK	
mixed	N-150/Cs-137	9	6.10	5.08	0.83	OK
		8	6.10	5.13	0.84	OK
NIR	NIR	1		0.53		
	NIR	2		0.53		
	NIR	4		0.54		
	NIR	6		0.53		
	NIR	15		0.47		
	NIR	16		0.45		
	NIR	23		0.48		
	NIR	24		0.52		
	NIR	26		0.53		
	NIR	28		0.58		
	NIR	29		0.59		
	NIR	30		0.51		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.26	1.26	1.27	1.25	1%
N-60/60°	2	7.46	7.46	13.70	1.21	118%
W-110/0°	2	0.97	0.97	0.98	0.96	1%
N-150/60°	2	1.05	1.05	1.08	1.02	4%
S-Cs/0°	6	0.86	0.92	1.13	0.83	13%
S-Co/0°	6	0.84	0.82	0.86	0.76	4%
N-150/Cs-137	2	0.84	0.84	0.84	0.83	1%
All	22	0.86	1.53	13.70	0.76	178%

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

1 point outside diagramme (> 2)

Results: IC2018

## Reporting number 62: (TL) for dose quantity Hp(0.07)

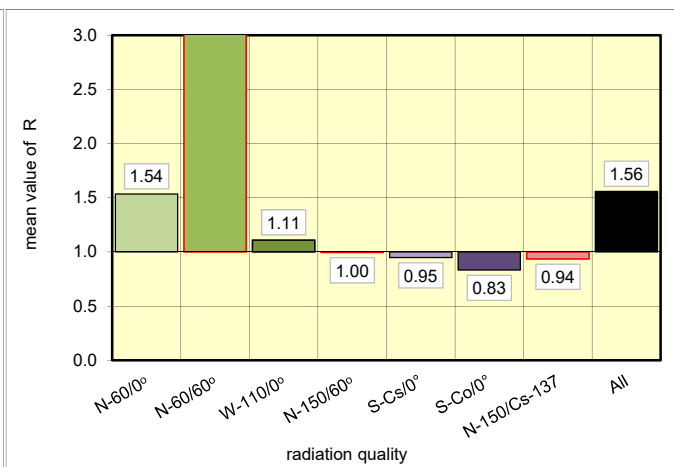
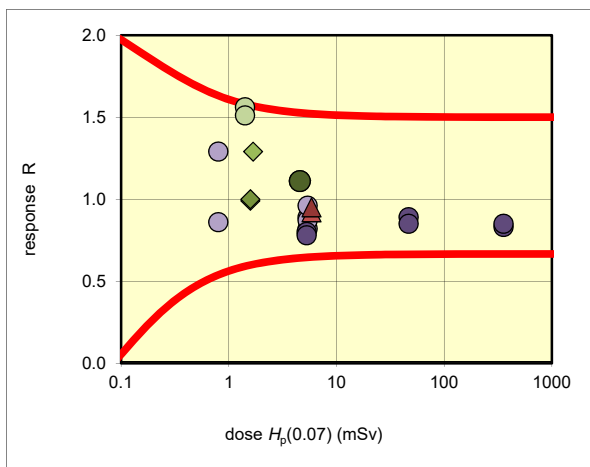
true values reported by the irradiating laboratory				values reported by participant		results	
radiation quality		dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv		response R (reported/true)	
x-ray	N-60/0°	14	1.42	2.21	1.56	OK	
		3	1.42	2.14	1.51	OK	
	N-60/60°	7	1.68	2.17	1.29	OK	
		21	1.68	22.14	13.15	outlier	
	W-110/0°	27	4.57	5.08	1.11	OK	
		5	4.57	5.07	1.11	OK	
N-150/60°	20	1.59	1.57	0.99	OK		
	17	1.59	1.59	1.00	OK		
gamma	S-Cs-S/0°	11	0.80	0.69	0.86	OK	
		34	0.80	1.03	1.29	OK	
	S-Cs-L/0°	25	5.40	4.42	0.82	OK	
		12	5.40	4.82	0.89	OK	
		13	5.40	4.71	0.87	OK	
		22	5.40	5.16	0.96	OK	
	S-Co-L/0°	10	5.29	4.24	0.80	OK	
		18	5.29	4.14	0.78	OK	
	S-Co-M/0°	32	46.80	41.50	0.89	OK	
		19	46.80	39.66	0.85	OK	
S-Co-H/0°	31	356.00	296.18	0.83	OK		
	33	356.00	301.03	0.85	OK		
mixed	N-150/Cs-137	9	5.87	5.42	0.92	OK	
		8	5.87	5.58	0.95	OK	
NIR	NIR	1		0.60			
	NIR	2		0.56			
	NIR	4		0.50			
	NIR	6		0.51			
	NIR	15		0.53			
	NIR	16		0.51			
	NIR	23		0.47			
	NIR	24		0.55			
	NIR	26		0.57			
	NIR	28		0.60			
	NIR	29		0.61			
	NIR	30		0.50			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.54	1.54	1.56	1.51	2%
N-60/60°	2	7.22	7.22	13.15	1.29	116%
W-110/0°	2	1.11	1.11	1.11	1.11	0%
N-150/60°	2	1.00	1.00	1.00	0.99	1%
S-Cs/0°	6	0.88	0.95	1.29	0.82	18%
S-Co/0°	6	0.84	0.83	0.89	0.78	5%
N-150/Cs-137	2	0.94	0.94	0.95	0.92	2%
<b>All</b>	<b>22</b>	<b>0.94</b>	<b>1.56</b>	<b>13.15</b>	<b>0.78</b>	<b>167%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

1 point outside diagramme (> 2)

Results: IC2018

## Reporting number 63: (TL) for dose quantity Hp(10)

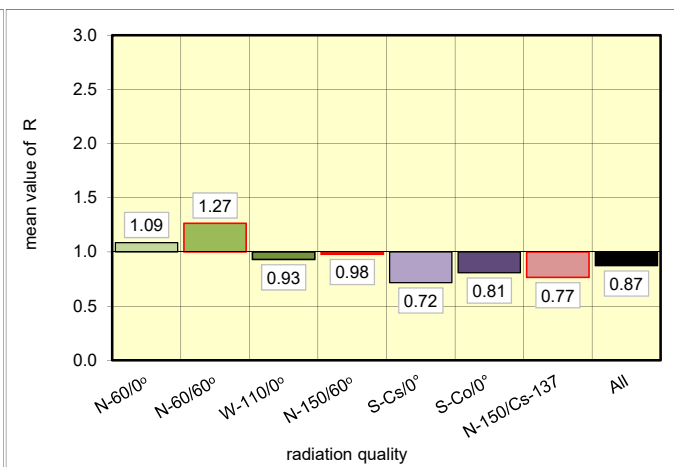
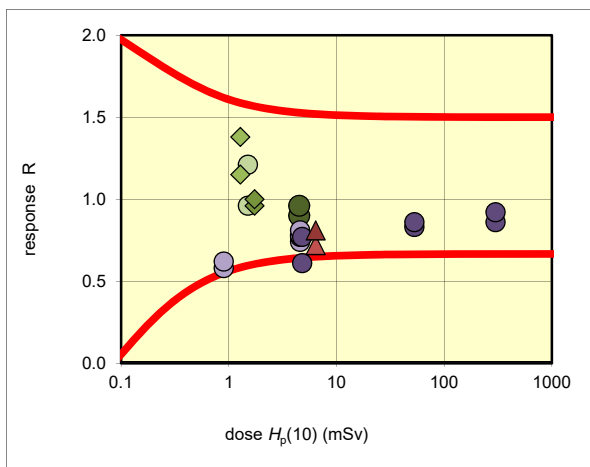
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	20	1.51	1.82	1.21	OK
		22	1.51	1.44	0.96	OK
	N-60/60°	33	1.28	1.47	1.15	OK
		1	1.28	1.76	1.38	OK
	W-110/0°	14	4.50	4.04	0.90	OK
		34	4.50	4.31	0.96	OK
N-150/60°	2	1.73	1.67	0.96	OK	
	7	1.73	1.73	1.00	OK	
gamma	S-Cs-S/0°	6	0.90	0.52	0.58	OK
		10	0.90	0.56	0.62	OK
	S-Cs-L/0°	11	4.60	3.39	0.74	OK
		26	4.60	3.54	0.77	OK
		9	4.60	3.61	0.78	OK
		28	4.60	3.72	0.81	OK
	S-Co-L/0°	21	4.80	2.94	0.61	outlier
		24	4.80	3.68	0.77	OK
	S-Co-M/0°	4	53.00	43.79	0.83	OK
		18	53.00	45.57	0.86	OK
S-Co-H/0°	13	300.00	259.12	0.86	OK	
	19	300.00	274.77	0.92	OK	
mixed	N-150/Cs-137	30	6.40	4.63	0.72	OK
		8	6.40	5.21	0.81	OK
NIR	NIR	29		0.56		
	NIR	3		0.54		
	NIR	5		0.54		
	NIR	12		0.57		
	NIR	15		0.61		
	NIR	16		0.62		
	NIR	17		0.64		
	NIR	23		0.68		
	NIR	25		0.57		
	NIR	27		0.52		
	NIR	31		0.58		
	NIR	32		0.55		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.09	1.09	1.21	0.96	16%
N-60/60°	2	1.27	1.27	1.38	1.15	13%
W-110/0°	2	0.93	0.93	0.96	0.90	5%
N-150/60°	2	0.98	0.98	1.00	0.96	3%
S-Cs/0°	6	0.76	0.72	0.81	0.58	13%
S-Co/0°	6	0.85	0.81	0.92	0.61	13%
N-150/Cs-137	2	0.77	0.77	0.81	0.72	8%
<b>All</b>	<b>22</b>	<b>0.85</b>	<b>0.87</b>	<b>1.38</b>	<b>0.58</b>	<b>22%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 63: (TL) for dose quantity Hp(0.07)

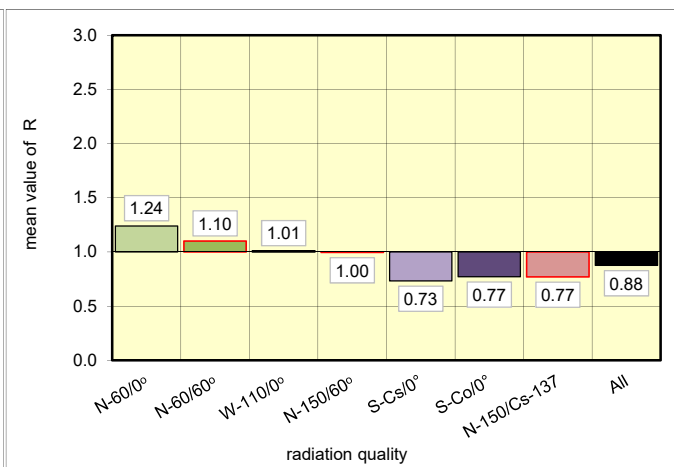
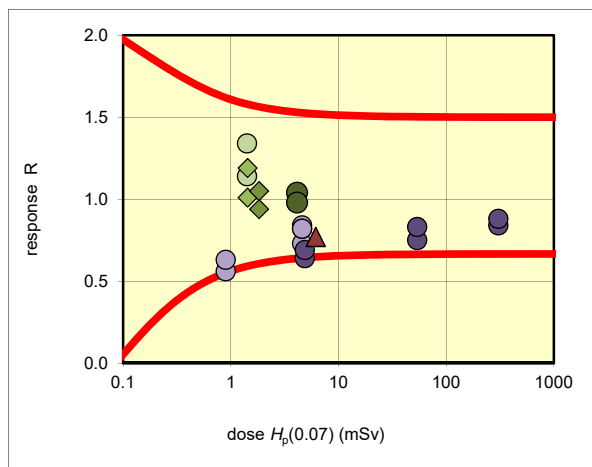
true values reported by the irradiating laboratory				values reported by participant	results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	20	1.42	1.89	1.34	OK
		22	1.42	1.61	1.14	OK
	N-60/60°	33	1.43	1.44	1.01	OK
		1	1.43	1.71	1.19	OK
	W-110/0°	14	4.12	4.27	1.04	OK
		34	4.12	4.02	0.98	OK
N-150/60°	2	1.83	1.72	0.94	OK	
	7	1.83	1.92	1.05	OK	
gamma	S-Cs-S/0°	6	0.90	0.50	0.56	OK
		10	0.90	0.57	0.63	OK
	S-Cs-L/0°	11	4.60	3.38	0.73	OK
		26	4.60	3.85	0.84	OK
		9	4.60	3.75	0.82	OK
		28	4.60	3.77	0.82	OK
	S-Co-L/0°	21	4.88	3.14	0.64	outlier
		24	4.88	3.38	0.69	OK
	S-Co-M/0°	4	53.90	40.39	0.75	OK
		18	53.90	44.87	0.83	OK
S-Co-H/0°	13	305.00	255.43	0.84	OK	
	19	305.00	267.17	0.88	OK	
mixed	N-150/Cs-137	30	6.16	4.75	0.77	OK
		8	6.16	4.77	0.77	OK
NIR	NIR	29		0.63		
	NIR	3		0.61		
	NIR	5		0.55		
	NIR	12		0.57		
	NIR	15		0.64		
	NIR	16		0.62		
	NIR	17		0.67		
	NIR	23		0.68		
	NIR	25		0.59		
	NIR	27		0.60		
	NIR	31		0.61		
	NIR	32		0.55		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.24</b>	1.24	1.34	1.14	11%
N-60/60°	2	<b>1.10</b>	1.10	1.19	1.01	12%
W-110/0°	2	<b>1.01</b>	1.01	1.04	0.98	4%
N-150/60°	2	<b>1.00</b>	1.00	1.05	0.94	8%
S-Cs/0°	6	<b>0.78</b>	0.73	0.84	0.56	16%
S-Co/0°	6	<b>0.79</b>	0.77	0.88	0.64	12%
N-150/Cs-137	2	<b>0.77</b>	0.77	0.77	0.77	0%
<b>All</b>	<b>22</b>	<b>0.84</b>	<b>0.88</b>	<b>1.34</b>	<b>0.56</b>	<b>22%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 64: (TL) for dose quantity Hp(10)

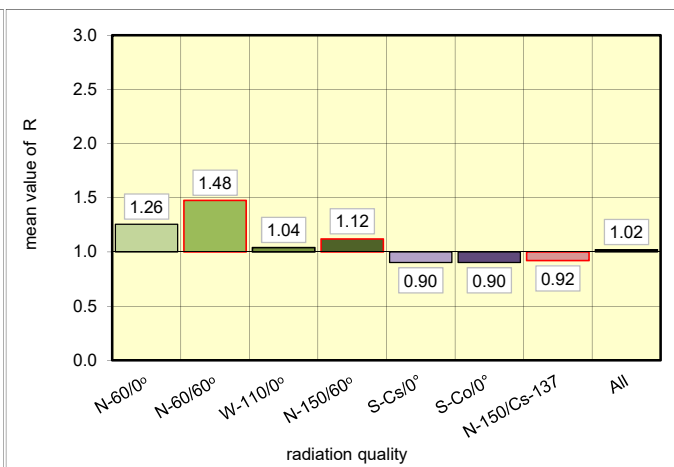
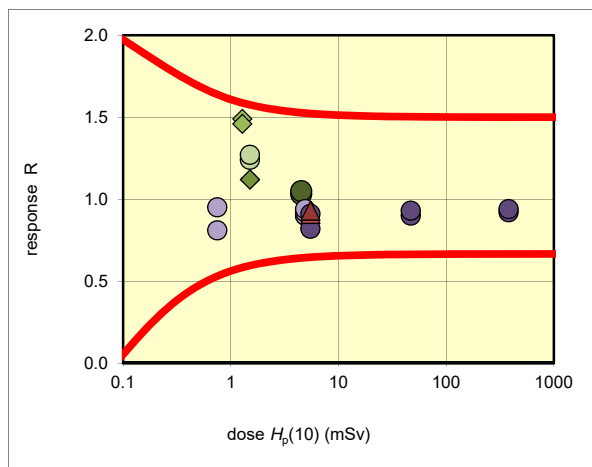
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	7	1.51	1.87	1.24	OK
		21	1.51	1.92	1.27	OK
	N-60/60°	6	1.28	1.91	1.49	OK
		18	1.28	1.87	1.46	OK
	W-110/0°	22	4.50	4.63	1.03	OK
		23	4.50	4.73	1.05	OK
	N-150/60°	34	1.51	1.68	1.12	OK
		8	1.51	1.69	1.12	OK
gamma	S-Cs-S/0°	25	0.75	0.61	0.81	OK
		32	0.75	0.71	0.95	OK
	S-Cs-L/0°	19	4.90	4.41	0.90	OK
		20	4.90	4.40	0.90	OK
		12	4.90	4.49	0.92	OK
		10	4.90	4.60	0.94	OK
	S-Co-L/0°	29	5.50	4.50	0.82	OK
		28	5.50	4.98	0.91	OK
	S-Co-M/0°	3	47.00	42.46	0.90	OK
		24	47.00	43.51	0.93	OK
	S-Co-H/0°	2	380.00	348.79	0.92	OK
		31	380.00	357.14	0.94	OK
mixed	N-150/Cs-137	4	5.50	4.99	0.91	OK
		5	5.50	5.09	0.93	OK
NIR	NIR	13		0.60		
	NIR	1		0.67		
	NIR	9		0.60		
	NIR	11		0.62		
	NIR	14		0.62		
	NIR	15		0.61		
	NIR	16		0.63		
	NIR	17		0.60		
	NIR	26		0.63		
	NIR	27		0.61		
	NIR	30		0.61		
	NIR	33		0.69		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.26	1.26	1.27	1.24	2%
N-60/60°	2	1.48	1.48	1.49	1.46	1%
W-110/0°	2	1.04	1.04	1.05	1.03	1%
N-150/60°	2	1.12	1.12	1.12	1.12	0%
S-Cs/0°	6	0.91	0.90	0.95	0.81	6%
S-Co/0°	6	0.92	0.90	0.94	0.82	5%
N-150/Cs-137	2	0.92	0.92	0.93	0.91	2%
All	22	0.94	1.02	1.49	0.81	19%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 64: (TL) for dose quantity Hp(0.07)

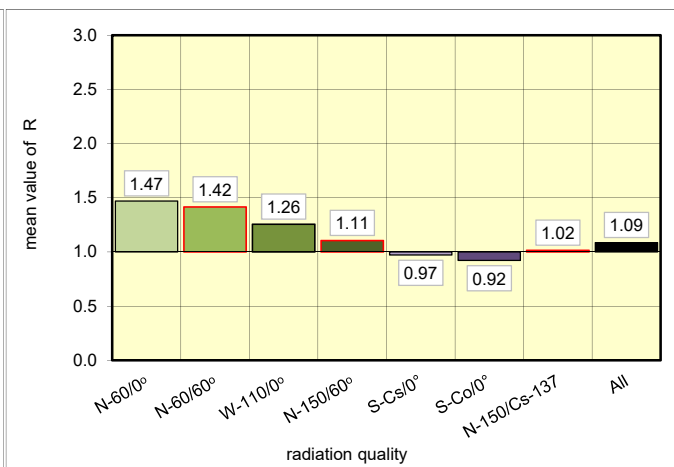
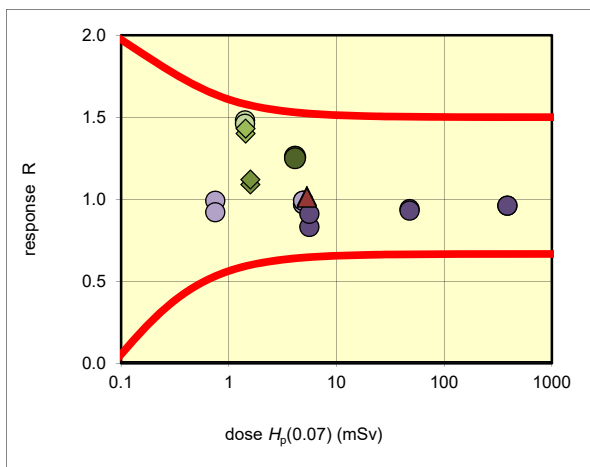
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	7	1.42	2.10	1.48	OK
		21	1.42	2.06	1.46	OK
	N-60/60°	6	1.43	2.00	1.40	OK
		18	1.43	2.04	1.43	OK
	W-110/0°	22	4.12	5.17	1.26	OK
		23	4.12	5.13	1.25	OK
	N-150/60°	34	1.59	1.73	1.09	OK
		8	1.59	1.77	1.12	OK
gamma	S-Cs-S/0°	25	0.75	0.74	0.99	OK
		32	0.75	0.69	0.92	OK
	S-Cs-L/0°	19	4.90	4.76	0.97	OK
		20	4.90	4.75	0.97	OK
		12	4.90	4.86	0.99	OK
		10	4.90	4.84	0.99	OK
	S-Co-L/0°	29	5.60	4.66	0.83	OK
		28	5.60	5.12	0.91	OK
	S-Co-M/0°	3	47.80	45.17	0.94	OK
		24	47.80	44.52	0.93	OK
	S-Co-H/0°	2	387.00	371.87	0.96	OK
		31	387.00	370.07	0.96	OK
mixed	N-150/Cs-137	4	5.31	5.41	1.02	OK
		5	5.31	5.36	1.01	OK
NIR	NIR	13		0.58		
	NIR	1		0.64		
	NIR	9		0.66		
	NIR	11		0.64		
	NIR	14		0.62		
	NIR	15		0.67		
	NIR	16		0.69		
	NIR	17		0.64		
	NIR	26		0.64		
	NIR	27		0.58		
	NIR	30		0.59		
	NIR	33		0.69		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.47	1.47	1.48	1.46	1%
N-60/60°	2	1.42	1.42	1.43	1.40	1%
W-110/0°	2	1.26	1.26	1.26	1.25	1%
N-150/60°	2	1.11	1.11	1.12	1.09	2%
S-Cs/0°	6	0.98	0.97	0.99	0.92	3%
S-Co/0°	6	0.94	0.92	0.96	0.83	5%
N-150/Cs-137	2	1.02	1.02	1.02	1.01	1%
<b>All</b>	<b>22</b>	<b>0.99</b>	<b>1.09</b>	<b>1.48</b>	<b>0.83</b>	<b>18%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 65: (TL) for dose quantity $H_p(10)$

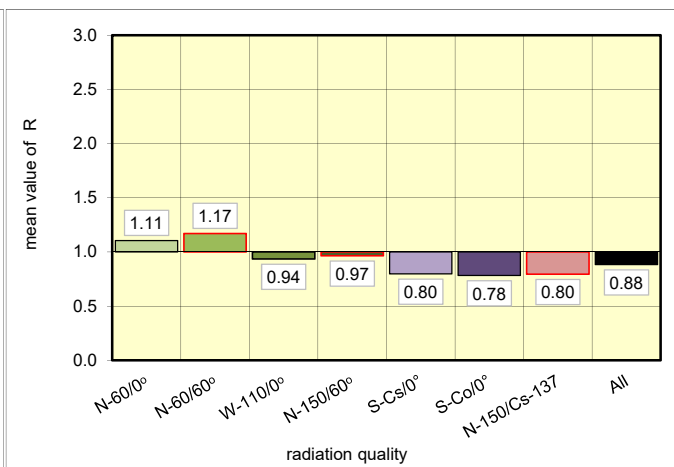
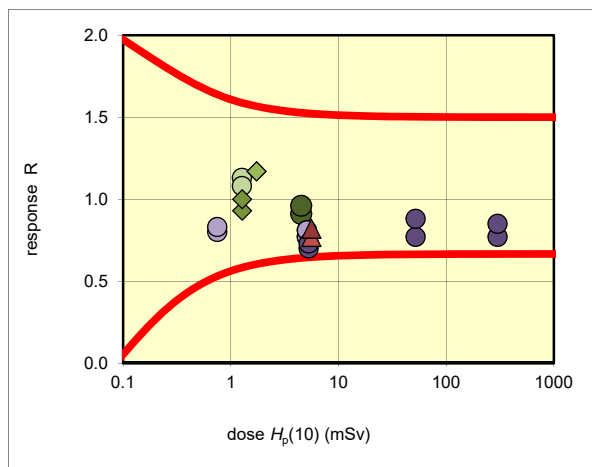
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	14	1.27	1.44	1.13	OK
		28	1.27	1.37	1.08	OK
	N-60/60°	24	1.73	2.02	1.17	OK
		30	1.73	2.02	1.17	OK
	W-110/0°	4	4.50	4.10	0.91	OK
		1	4.50	4.32	0.96	OK
N-150/60°	7	1.28	1.19	0.93	OK	
	26	1.28	1.28	1.00	OK	
gamma	S-Cs-S/0°	31	0.75	0.60	0.80	OK
		34	0.75	0.62	0.83	OK
	S-Cs-L/0°	2	5.10	3.95	0.77	OK
		15	5.10	3.95	0.77	OK
		8	5.10	4.12	0.81	OK
		11	5.10	4.14	0.81	OK
	S-Co-L/0°	20	5.30	3.69	0.70	OK
		19	5.30	3.87	0.73	OK
	S-Co-M/0°	33	52.00	39.85	0.77	OK
		21	52.00	45.59	0.88	OK
	S-Co-H/0°	17	300.00	230.55	0.77	OK
		22	300.00	255.06	0.85	OK
mixed	N-150/Cs-137	9	5.60	4.30	0.77	OK
		25	5.60	4.60	0.82	OK
NIR	WIR	16	-	-	-	-
	WIR	29	-	-	-	-
	NIR	13	-	0.13	-	-
	NIR	3	-	0.19	-	-
	NIR	5	-	0.19	-	-
	NIR	6	-	0.12	-	-
	NIR	10	-	0.18	-	-
	NIR	12	-	0.23	-	-
	NIR	18	-	0.17	-	-
	NIR	23	-	0.18	-	-
	NIR	27	-	0.18	-	-
	NIR	32	-	0.22	-	-

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.11	1.11	1.13	1.08	3%
N-60/60°	2	1.17	1.17	1.17	1.17	0%
W-110/0°	2	0.94	0.94	0.96	0.91	4%
N-150/60°	2	0.97	0.97	1.00	0.93	5%
S-Cs/0°	6	0.81	0.80	0.83	0.77	3%
S-Co/0°	6	0.77	0.78	0.88	0.70	9%
N-150/Cs-137	2	0.80	0.80	0.82	0.77	4%
<b>All</b>	<b>22</b>	<b>0.83</b>	<b>0.88</b>	<b>1.17</b>	<b>0.70</b>	<b>16%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 65: (TL) for dose quantity $H_p(0.07)$

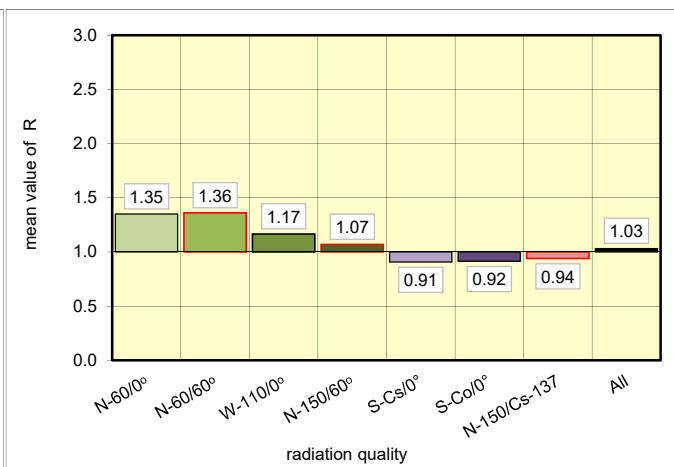
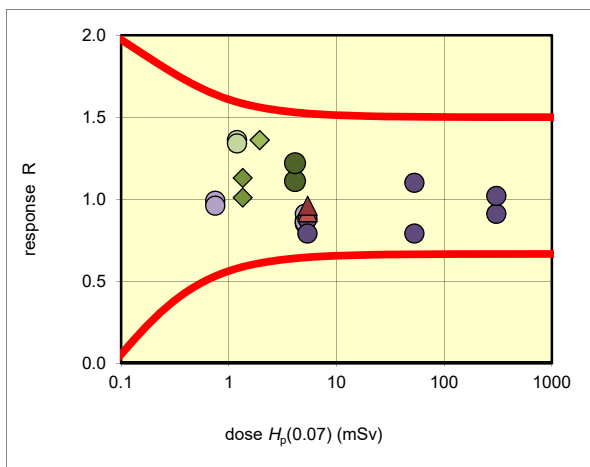
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	14	1.20	1.63	1.36	OK
		28	1.20	1.60	1.34	OK
	N-60/60°	24	1.94	2.63	1.36	OK
		30	1.94	2.63	1.36	OK
	W-110/0°	4	4.12	4.55	1.11	OK
		1	4.12	5.02	1.22	OK
N-150/60°	7	1.35	1.36	1.01	OK	
	26	1.35	1.52	1.13	OK	
gamma	S-Cs-S/0°	31	0.75	0.74	0.99	OK
		34	0.75	0.72	0.96	OK
	S-Cs-L/0°	2	5.10	4.43	0.87	OK
		15	5.10	4.65	0.91	OK
		8	5.10	4.35	0.85	OK
		11	5.10	4.39	0.86	OK
	S-Co-L/0°	20	5.39	4.72	0.88	OK
		19	5.39	4.25	0.79	OK
	S-Co-M/0°	33	52.90	41.89	0.79	OK
		21	52.90	58.39	1.10	OK
	S-Co-H/0°	17	305.00	276.06	0.91	OK
		22	305.00	311.79	1.02	OK
mixed	N-150/Cs-137	9	5.41	4.99	0.92	OK
		25	5.41	5.18	0.96	OK
	WIR	16		-		
	WIR	29		-		
	NIR	13		0.14		
	NIR	3		0.21		
	NIR	5		0.20		
	NIR	6		0.18		
	NIR	10		0.21		
	NIR	12		0.24		
	NIR	18		0.13		
	NIR	23		0.19		
	NIR	27		0.21		
	NIR	32		0.26		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.35	1.35	1.36	1.34	1%
N-60/60°	2	1.36	1.36	1.36	1.36	0%
W-110/0°	2	1.17	1.17	1.22	1.11	7%
N-150/60°	2	1.07	1.07	1.13	1.01	8%
S-Cs/0°	6	0.89	0.91	0.99	0.85	6%
S-Co/0°	6	0.90	0.92	1.10	0.79	14%
N-150/Cs-137	2	0.94	0.94	0.96	0.92	3%
<b>All</b>	<b>22</b>	<b>0.98</b>	<b>1.03</b>	<b>1.36</b>	<b>0.79</b>	<b>18%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 66: (TL) for dose quantity $H_p(10)$

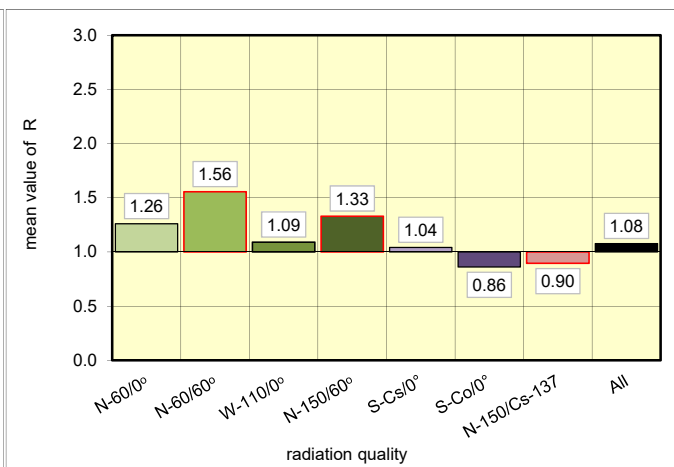
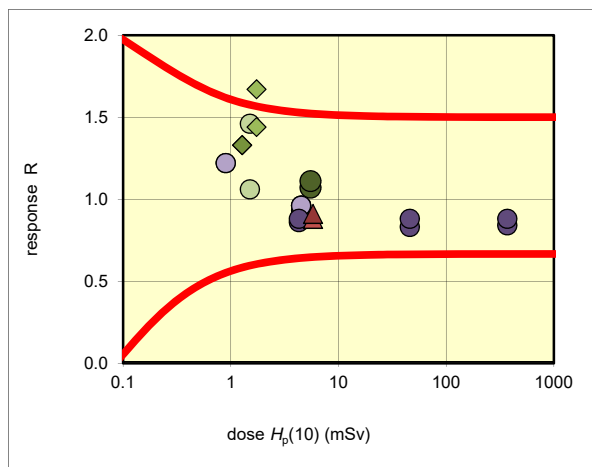
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	30	1.51	1.60	1.06	OK
		23	1.51	2.20	1.46	OK
	N-60/60°	25	1.73	2.50	1.44	OK
		22	1.73	2.90	1.67	outlier
	W-110/0°	7	5.50	5.90	1.07	OK
		20	5.50	6.10	1.11	OK
N-150/60°	11	1.28	1.70	1.33	OK	
	10	1.28	1.70	1.33	OK	
gamma	S-Cs-S/0°	33	0.90	1.10	1.22	OK
		34	0.90	1.10	1.22	OK
	S-Cs-L/0°	8	4.50	4.20	0.93	OK
		1	4.50	4.30	0.96	OK
		2	4.50	4.30	0.96	OK
		6	4.50	4.30	0.96	OK
	S-Co-L/0°	3	4.30	3.70	0.86	OK
		14	4.30	3.80	0.88	OK
	S-Co-M/0°	28	46.00	38.40	0.83	OK
		27	46.00	40.70	0.88	OK
	S-Co-H/0°	17	370.00	312.20	0.84	OK
		21	370.00	325.40	0.88	OK
mixed	N-150/Cs-137	15	5.80	5.10	0.88	OK
		12	5.80	5.30	0.91	OK
NIR	NIR	4		0.30		
	NIR	5		0.40		
	NIR	9		0.30		
	NIR	13		0.30		
	NIR	16		0.30		
	NIR	18		0.40		
	NIR	19		0.40		
	NIR	24		0.50		
	NIR	26		0.40		
	NIR	29		0.30		
	NIR	31		0.30		
	NIR	32		0.40		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.26	1.26	1.46	1.06	22%
N-60/60°	2	1.56	1.56	1.67	1.44	10%
W-110/0°	2	1.09	1.09	1.11	1.07	3%
N-150/60°	2	1.33	1.33	1.33	1.33	0%
S-Cs/0°	6	0.96	1.04	1.22	0.93	13%
S-Co/0°	6	0.87	0.86	0.88	0.83	3%
N-150/Cs-137	2	0.90	0.90	0.91	0.88	2%
All	22	0.96	1.08	1.67	0.83	22%

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 66: (TL) for dose quantity Hp(0.07)

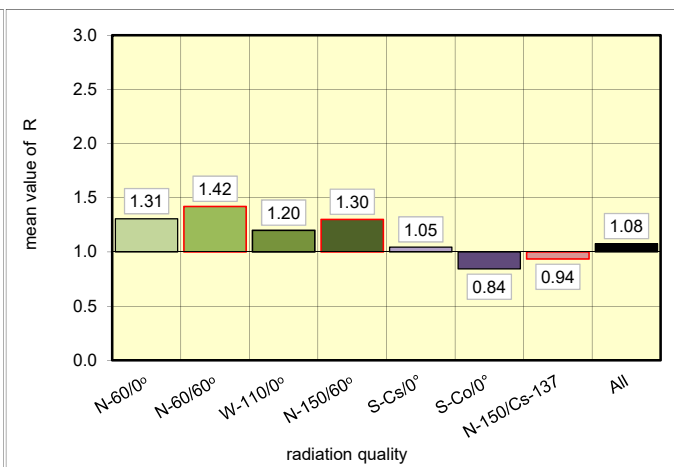
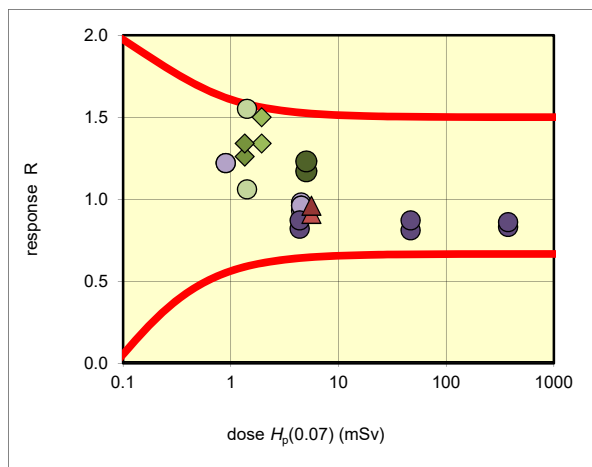
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	30	1.42	1.50	1.06	OK
		23	1.42	2.20	1.55	OK
	N-60/60°	25	1.94	2.60	1.34	OK
		22	1.94	2.90	1.50	OK
	W-110/0°	7	5.03	5.90	1.17	OK
		20	5.03	6.20	1.23	OK
N-150/60°	11	1.35	1.70	1.26	OK	
	10	1.35	1.80	1.34	OK	
gamma	S-Cs-S/0°	33	0.90	1.10	1.22	OK
		34	0.90	1.10	1.22	OK
	S-Cs-L/0°	8	4.50	4.20	0.93	OK
		1	4.50	4.40	0.98	OK
		2	4.50	4.30	0.96	OK
		6	4.50	4.30	0.96	OK
	S-Co-L/0°	3	4.37	3.60	0.82	OK
		14	4.37	3.80	0.87	OK
	S-Co-M/0°	28	46.80	38.00	0.81	OK
		27	46.80	40.70	0.87	OK
	S-Co-H/0°	17	376.00	311.40	0.83	OK
		21	376.00	324.20	0.86	OK
mixed	N-150/Cs-137	15	5.61	5.10	0.91	OK
		12	5.61	5.40	0.96	OK
NIR	NIR	4		0.30		
	NIR	5		0.40		
	NIR	9		0.30		
	NIR	13		0.30		
	NIR	16		0.30		
	NIR	18		0.40		
	NIR	19		0.40		
	NIR	24		0.50		
	NIR	26		0.40		
	NIR	29		0.30		
	NIR	31		0.30		
	NIR	32		0.40		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.31	1.31	1.55	1.06	27%
N-60/60°	2	1.42	1.42	1.50	1.34	8%
W-110/0°	2	1.20	1.20	1.23	1.17	4%
N-150/60°	2	1.30	1.30	1.34	1.26	4%
S-Cs/0°	6	0.97	1.05	1.22	0.93	13%
S-Co/0°	6	0.85	0.84	0.87	0.81	3%
N-150/Cs-137	2	0.94	0.94	0.96	0.91	4%
All	22	0.97	1.08	1.55	0.81	21%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 67: (TL) for dose quantity Hp(10)

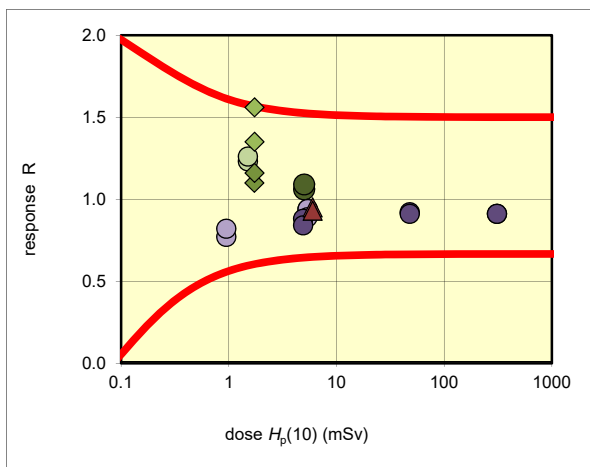
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	19	1.51	1.85	1.23	OK
		32	1.51	1.90	1.26	OK
	N-60/60°	15	1.73	2.34	1.35	OK
		1	1.73	2.71	1.56	OK
	W-110/0°	12	5.00	5.28	1.06	OK
		31	5.00	5.46	1.09	OK
	N-150/60°	5	1.73	1.91	1.10	OK
		24	1.73	2.01	1.16	OK
gamma	S-Cs-S/0°	11	0.95	0.73	0.77	OK
		10	0.95	0.78	0.82	OK
	S-Cs-L/0°	8	5.40	4.98	0.92	OK
		13	5.40	5.05	0.94	OK
		16	5.40	5.09	0.94	OK
	S-Co-L/0°	7	5.40	4.81	0.89	OK
		4	4.90	4.32	0.88	OK
	S-Co-M/0°	3	4.90	4.11	0.84	OK
		25	48.00	44.30	0.92	OK
	S-Co-H/0°	26	48.00	43.50	0.91	OK
		29	310.00	281.00	0.91	OK
	mixed	N-150/Cs-137	28	310.00	282.00	0.91
21			6.00	5.67	0.95	OK
NIR	N-150/Cs-137	22	6.00	5.59	0.93	OK
		33		0.59		
		2		0.61		
		6		0.58		
		9		0.56		
		14		0.58		
		17		0.62		
		18		0.57		
		20		0.57		
		23		0.59		
		27		0.59		
		30		0.63		
34		0.58				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

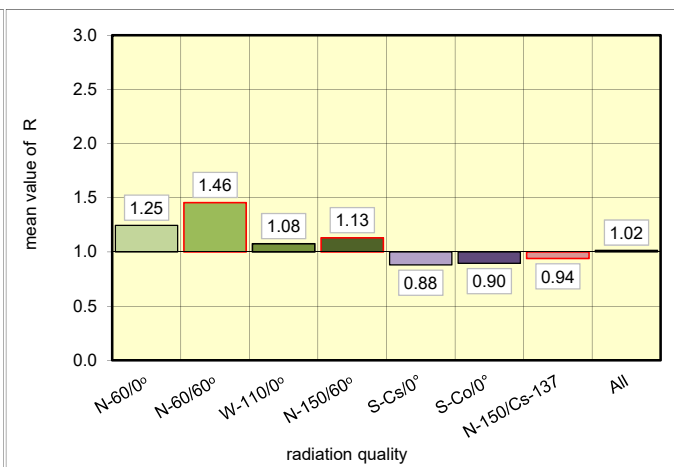
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.25	1.25	1.26	1.23	2%
N-60/60°	2	1.46	1.46	1.56	1.35	10%
W-110/0°	2	1.08	1.08	1.09	1.06	2%
N-150/60°	2	1.13	1.13	1.16	1.10	4%
S-Cs/0°	6	0.91	0.88	0.94	0.77	8%
S-Co/0°	6	0.91	0.90	0.92	0.84	3%
N-150/Cs-137	2	0.94	0.94	0.95	0.93	2%
All	22	0.94	1.02	1.56	0.77	19%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 67: (TL) for dose quantity Hp(0.07)

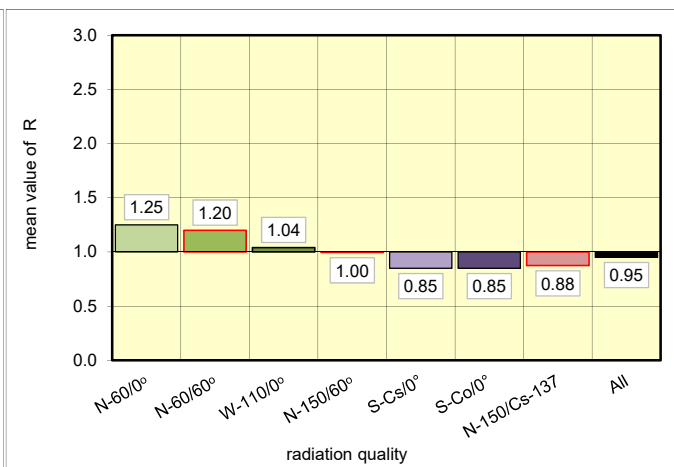
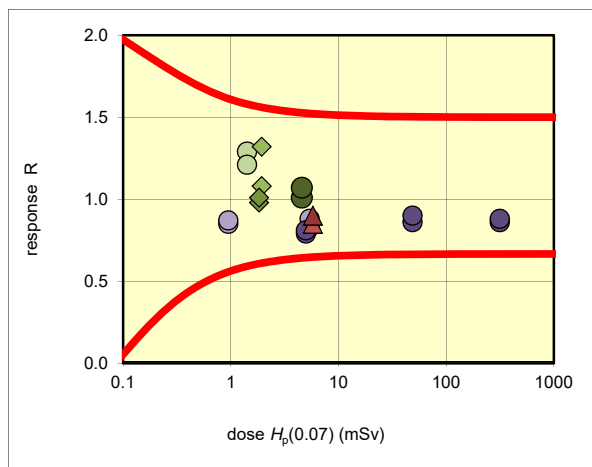
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	19	1.42	1.82	1.29	OK
		32	1.42	1.71	1.21	OK
	N-60/60°	15	1.94	2.09	1.08	OK
		1	1.94	2.55	1.32	OK
	W-110/0°	12	4.57	4.62	1.01	OK
		31	4.57	4.88	1.07	OK
	N-150/60°	5	1.83	1.79	0.98	OK
		24	1.83	1.85	1.01	OK
gamma	S-Cs-S/0°	11	0.95	0.81	0.85	OK
		10	0.95	0.83	0.87	OK
	S-Cs-L/0°	8	5.40	4.50	0.83	OK
		13	5.40	4.47	0.83	OK
		16	5.40	4.52	0.84	OK
	S-Co-L/0°	7	5.40	4.74	0.88	OK
		4	4.99	3.94	0.79	OK
	S-Co-M/0°	3	4.99	4.03	0.81	OK
		25	48.80	41.90	0.86	OK
	S-Co-H/0°	26	48.80	43.80	0.90	OK
		29	315.00	271.00	0.86	OK
	mixed	N-150/Cs-137	28	315.00	277.00	0.88
21			5.79	4.93	0.85	OK
NIR	N-150/Cs-137	22	5.79	5.20	0.90	OK
		33		0.49		
		2		0.48		
		6		0.52		
		9		0.53		
		14		0.50		
		17		0.51		
		18		0.46		
		20		0.47		
		23		0.53		
		27		0.52		
		30		0.51		
34		0.47				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.25	1.25	1.29	1.21	5%
N-60/60°	2	1.20	1.20	1.32	1.08	14%
W-110/0°	2	1.04	1.04	1.07	1.01	4%
N-150/60°	2	1.00	1.00	1.01	0.98	2%
S-Cs/0°	6	0.85	0.85	0.88	0.83	2%
S-Co/0°	6	0.86	0.85	0.90	0.79	5%
N-150/Cs-137	2	0.88	0.88	0.90	0.85	4%
All	22	0.88	0.95	1.32	0.79	16%

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 68: (TL) for dose quantity Hp(10)

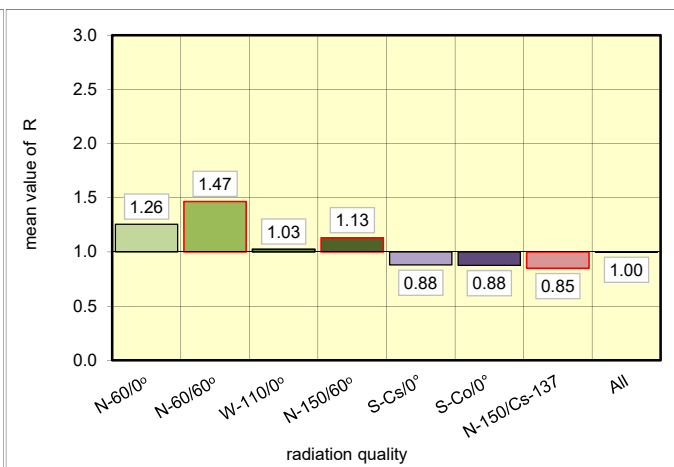
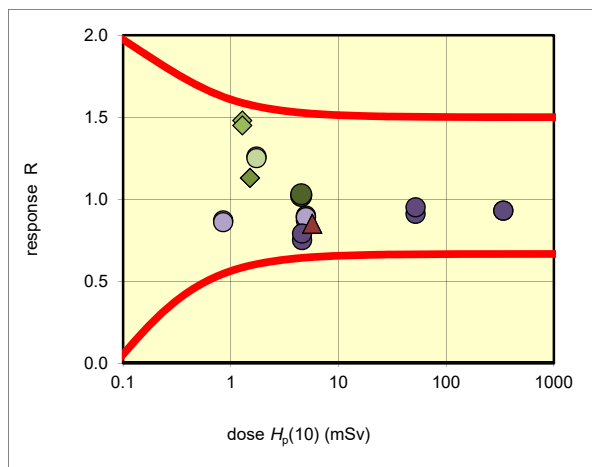
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	6	1.73	2.18	1.26	OK
		4	1.73	2.17	1.25	OK
	N-60/60°	25	1.28	1.89	1.48	OK
		15	1.28	1.85	1.45	OK
	W-110/0°	18	4.50	4.61	1.02	OK
		13	4.50	4.62	1.03	OK
N-150/60°	23	1.51	1.70	1.13	OK	
	7	1.51	1.70	1.13	OK	
gamma	S-Cs-S/0°	24	0.85	0.74	0.87	OK
		14	0.85	0.73	0.86	OK
	S-Cs-L/0°	19	5.00	4.36	0.87	OK
		11	5.00	4.49	0.90	OK
		9	5.00	4.47	0.89	OK
		20	5.00	4.47	0.89	OK
	S-Co-L/0°	12	4.60	3.45	0.75	OK
		31	4.60	3.62	0.79	OK
	S-Co-M/0°	21	52.00	47.49	0.91	OK
		8	52.00	49.33	0.95	OK
S-Co-H/0°	16	340.00	314.60	0.93	OK	
	17	340.00	315.22	0.93	OK	
mixed	N-150/Cs-137	30	5.70	4.84	0.85	OK
		34	5.70	4.86	0.85	OK
NIR	NIR	1		0.51		
		26		0.52		
		2		0.50		
		29		0.57		
		22		0.54		
		3		0.56		
		32		0.57		
		5		0.52		
		27		0.54		
		10		0.52		
		28		0.54		
		33		0.56		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.26	1.26	1.26	1.25	1%
N-60/60°	2	1.47	1.47	1.48	1.45	1%
W-110/0°	2	1.03	1.03	1.03	1.02	1%
N-150/60°	2	1.13	1.13	1.13	1.13	0%
S-Cs/0°	6	0.88	0.88	0.90	0.86	2%
S-Co/0°	6	0.92	0.88	0.95	0.75	10%
N-150/Cs-137	2	0.85	0.85	0.85	0.85	0%
<b>All</b>	<b>22</b>	<b>0.92</b>	<b>1.00</b>	<b>1.48</b>	<b>0.75</b>	<b>20%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 68: (TL) for dose quantity Hp(0.07)

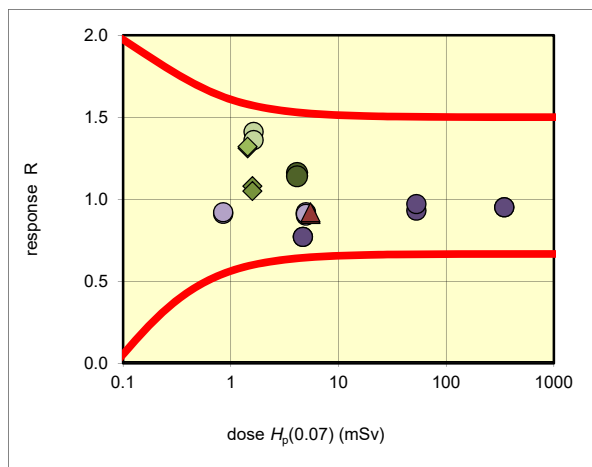
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	6	1.63	2.29	1.41	OK
		4	1.63	2.22	1.36	OK
	N-60/60°	25	1.43	1.88	1.31	OK
		15	1.43	1.89	1.32	OK
	W-110/0°	18	4.12	4.79	1.16	OK
		13	4.12	4.69	1.14	OK
	N-150/60°	23	1.59	1.71	1.08	OK
		7	1.59	1.67	1.05	OK
gamma	S-Cs-S/0°	24	0.85	0.77	0.91	OK
		14	0.85	0.78	0.92	OK
	S-Cs-L/0°	19	5.00	4.49	0.90	OK
		11	5.00	4.57	0.91	OK
		9	5.00	4.61	0.92	OK
		20	5.00	4.55	0.91	OK
	S-Co-L/0°	12	4.68	3.60	0.77	OK
		31	4.68	3.60	0.77	OK
	S-Co-M/0°	21	52.90	49.34	0.93	OK
		8	52.90	51.33	0.97	OK
	S-Co-H/0°	16	346.00	327.65	0.95	OK
		17	346.00	327.20	0.95	OK
mixed	N-150/Cs-137	30	5.50	4.98	0.91	OK
		34	5.50	5.04	0.92	OK
NIR	NIR	1		0.50		
	NIR	26		0.52		
	NIR	2		0.51		
	NIR	29		0.55		
	NIR	22		0.52		
	NIR	3		0.51		
	NIR	32		0.56		
	NIR	5		0.51		
	NIR	27		0.53		
	NIR	10		0.52		
	NIR	28		0.55		
	NIR	33		0.56		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

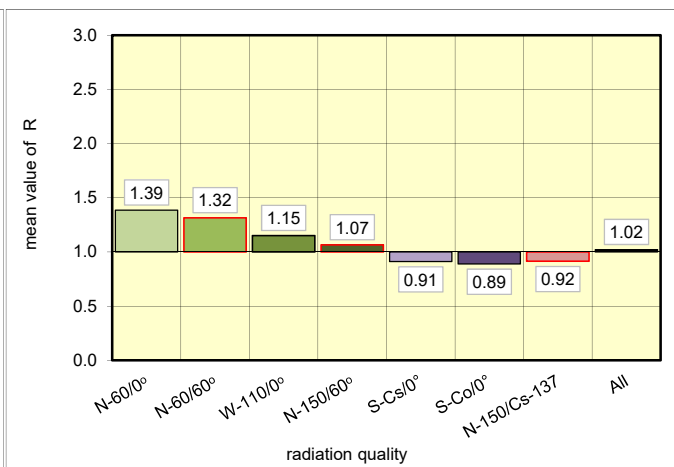
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.39	1.39	1.41	1.36	3%
N-60/60°	2	1.32	1.32	1.32	1.31	1%
W-110/0°	2	1.15	1.15	1.16	1.14	1%
N-150/60°	2	1.07	1.07	1.08	1.05	2%
S-Cs/0°	6	0.91	0.91	0.92	0.90	1%
S-Co/0°	6	0.94	0.89	0.97	0.77	11%
N-150/Cs-137	2	0.92	0.92	0.92	0.91	1%
<b>All</b>	<b>22</b>	<b>0.94</b>	<b>1.02</b>	<b>1.41</b>	<b>0.77</b>	<b>18%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 69: (TL) for dose quantity Hp(10)

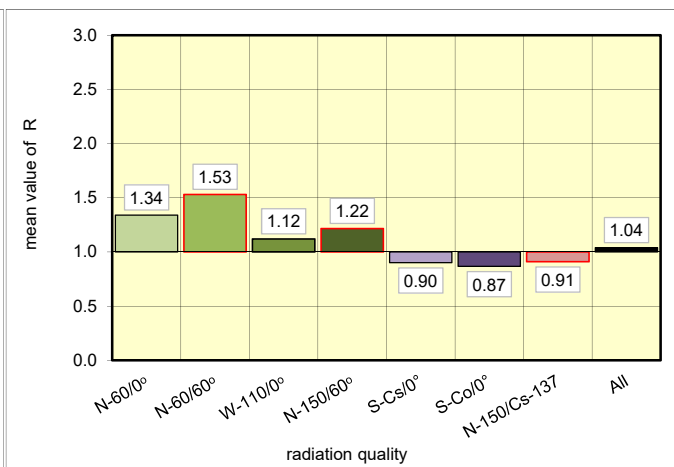
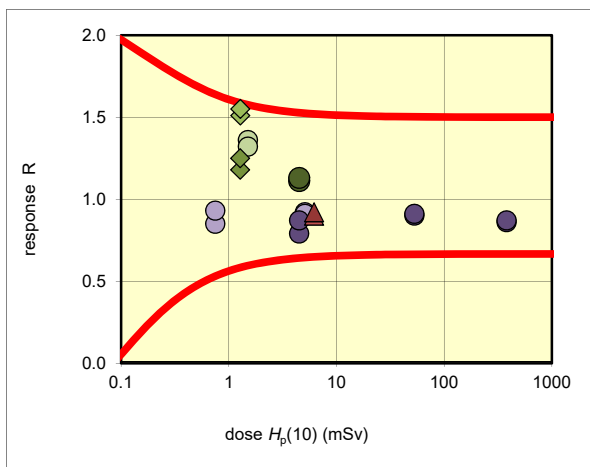
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	3	1.51	2.05	1.36	OK
		4	1.51	1.99	1.32	OK
	N-60/60°	10	1.28	1.93	1.51	OK
		13	1.28	1.98	1.55	OK
	W-110/0°	12	4.50	5.01	1.11	OK
		6	4.50	5.09	1.13	OK
gamma	N-150/60°	20	1.28	1.50	1.18	OK
		30	1.28	1.60	1.25	OK
	S-Cs-S/0°	29	0.75	0.64	0.85	OK
		15	0.75	0.70	0.93	OK
	S-Cs-L/0°	16	5.10	4.60	0.90	OK
		7	5.10	4.59	0.90	OK
		25	5.10	4.70	0.92	OK
		32	5.10	4.64	0.91	OK
	S-Co-L/0°	19	4.50	3.57	0.79	OK
		2	4.50	3.91	0.87	OK
	S-Co-M/0°	33	53.00	47.49	0.90	OK
		5	53.00	48.03	0.91	OK
S-Co-H/0°	23	380.00	328.06	0.86	OK	
	17	380.00	331.98	0.87	OK	
mixed	N-150/Cs-137	14	6.20	5.56	0.90	OK
		11	6.20	5.73	0.92	OK
mixed	WIR	9	-	-	-	-
	WIR	18	-	-	-	-
	NIR	22	-	0.68	-	-
	NIR	1	-	0.59	-	-
	NIR	8	-	0.66	-	-
	NIR	21	-	0.60	-	-
	NIR	24	-	0.55	-	-
	NIR	26	-	0.58	-	-
	NIR	27	-	0.57	-	-
	NIR	28	-	0.60	-	-
	NIR	31	-	0.60	-	-
	NIR	34	-	0.65	-	-

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.34	1.34	1.36	1.32	2%
N-60/60°	2	1.53	1.53	1.55	1.51	2%
W-110/0°	2	1.12	1.12	1.13	1.11	1%
N-150/60°	2	1.22	1.22	1.25	1.18	4%
S-Cs/0°	6	0.91	0.90	0.93	0.85	3%
S-Co/0°	6	0.87	0.87	0.91	0.79	5%
N-150/Cs-137	2	0.91	0.91	0.92	0.90	2%
<b>All</b>	<b>22</b>	<b>0.92</b>	<b>1.04</b>	<b>1.55</b>	<b>0.79</b>	<b>22%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 69: (TL) for dose quantity $H_p(0.07)$

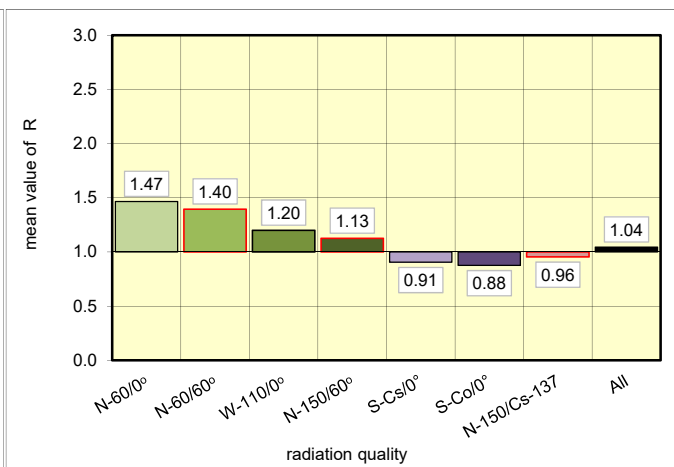
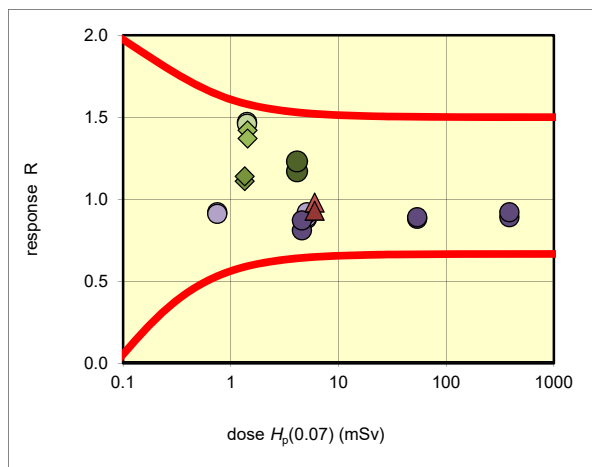
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	3	1.42	2.08	1.47	OK
		4	1.42	2.06	1.46	OK
	N-60/60°	10	1.43	2.03	1.42	OK
		13	1.43	1.96	1.37	OK
	W-110/0°	12	4.12	4.82	1.17	OK
		6	4.12	5.08	1.23	OK
N-150/60°	20	1.35	1.50	1.11	OK	
	30	1.35	1.54	1.14	OK	
gamma	S-Cs-S/0°	29	0.75	0.69	0.92	OK
		15	0.75	0.68	0.91	OK
	S-Cs-L/0°	16	5.10	4.51	0.88	OK
		7	5.10	4.55	0.89	OK
		25	5.10	4.66	0.91	OK
		32	5.10	4.71	0.92	OK
	S-Co-L/0°	19	4.58	3.69	0.81	OK
		2	4.58	3.99	0.87	OK
	S-Co-M/0°	33	53.90	47.69	0.88	OK
		5	53.90	48.00	0.89	OK
S-Co-H/0°	23	387.00	344.60	0.89	OK	
	17	387.00	357.09	0.92	OK	
mixed	N-150/Cs-137	14	6.01	5.91	0.98	OK
		11	6.01	5.60	0.93	OK
	WIR	9		-		
	WIR	18		-		
	NIR	22		0.62		
	NIR	1		0.58		
	NIR	8		0.67		
	NIR	21		0.54		
	NIR	24		0.58		
	NIR	26		0.56		
	NIR	27		0.59		
	NIR	28		0.57		
	NIR	31		0.55		
	NIR	34		0.63		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.47	1.47	1.47	1.46	0%
N-60/60°	2	1.40	1.40	1.42	1.37	3%
W-110/0°	2	1.20	1.20	1.23	1.17	4%
N-150/60°	2	1.13	1.13	1.14	1.11	2%
S-Cs/0°	6	0.91	0.91	0.92	0.88	2%
S-Co/0°	6	0.89	0.88	0.92	0.81	4%
N-150/Cs-137	2	0.96	0.96	0.98	0.93	4%
<b>All</b>	<b>22</b>	<b>0.92</b>	<b>1.04</b>	<b>1.47</b>	<b>0.81</b>	<b>21%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 70: (TL) for dose quantity $H_p(10)$

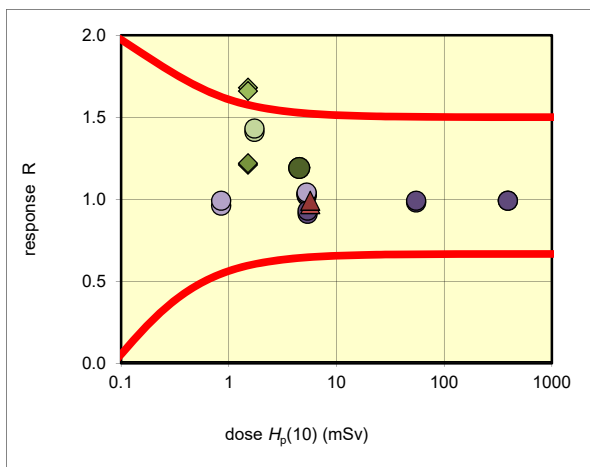
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.73	2.44	1.41	OK
		8	1.73	2.48	1.43	OK
	N-60/60°	22	1.51	2.53	1.68	outlier
		23	1.51	2.50	1.66	outlier
	W-110/0°	20	4.50	5.38	1.19	OK
		26	4.50	5.36	1.19	OK
	N-150/60°	28	1.51	1.82	1.21	OK
		31	1.51	1.83	1.22	OK
gamma	S-Cs-S/0°	9	0.85	0.82	0.96	OK
		6	0.85	0.84	0.99	OK
	S-Cs-L/0°	10	5.30	5.40	1.02	OK
		12	5.30	5.45	1.03	OK
		21	5.30	5.46	1.03	OK
		19	5.30	5.50	1.04	OK
	S-Co-L/0°	17	5.40	4.94	0.91	OK
		4	5.40	5.03	0.93	OK
	S-Co-M/0°	29	55.00	53.92	0.98	OK
		25	55.00	54.54	0.99	OK
	S-Co-H/0°	24	390.00	387.30	0.99	OK
		30	390.00	387.80	0.99	OK
mixed	N-150/Cs-137	14	5.70	5.55	0.97	OK
		18	5.70	5.62	0.99	OK
NIR	NIR	1		0.53		
	NIR	2		0.46		
	NIR	3		0.48		
	NIR	5		0.46		
	NIR	7		0.51		
	NIR	13		0.52		
	NIR	15		0.47		
	NIR	16		0.47		
	NIR	27		0.54		
	NIR	32		0.53		
	NIR	33		0.47		
	NIR	34		0.47		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

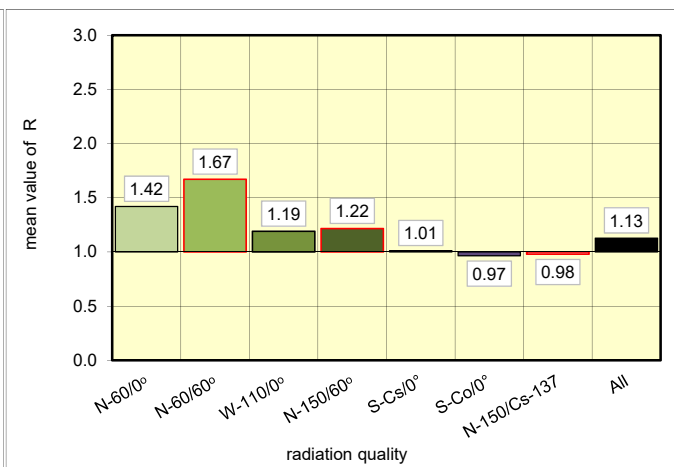
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.42	1.42	1.43	1.41	1%
N-60/60°	2	1.67	1.67	1.68	1.66	1%
W-110/0°	2	1.19	1.19	1.19	1.19	0%
N-150/60°	2	1.22	1.22	1.22	1.21	1%
S-Cs/0°	6	1.03	1.01	1.04	0.96	3%
S-Co/0°	6	0.99	0.97	0.99	0.91	4%
N-150/Cs-137	2	0.98	0.98	0.99	0.97	1%
All	22	1.03	1.13	1.68	0.91	20%

outliers: 2 of 22

Fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 70: (TL) for dose quantity $H_p(0.07)$

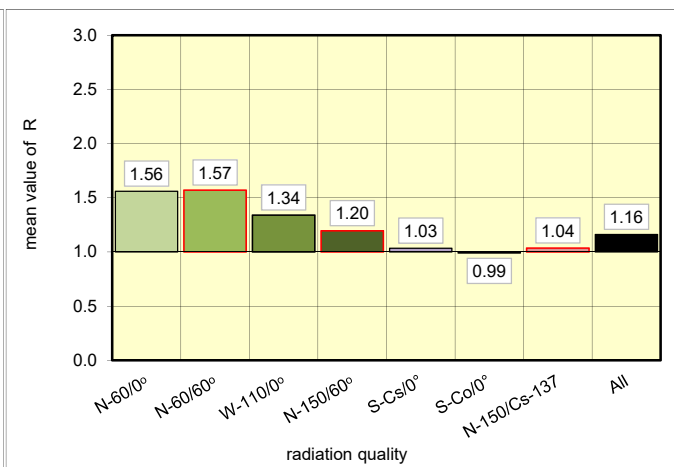
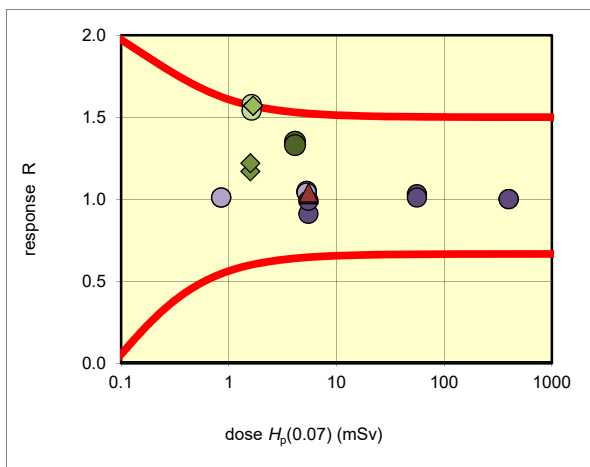
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.63	2.57	1.58	outlier
		8	1.63	2.51	1.54	OK
	N-60/60°	22	1.68	2.64	1.57	outlier
		23	1.68	2.64	1.57	outlier
	W-110/0°	20	4.12	5.54	1.35	OK
		26	4.12	5.46	1.33	OK
	N-150/60°	28	1.59	1.86	1.17	OK
		31	1.59	1.93	1.22	OK
gamma	S-Cs-S/0°	9	0.85	0.86	1.01	OK
		6	0.85	0.86	1.01	OK
	S-Cs-L/0°	10	5.30	5.59	1.05	OK
		12	5.30	5.52	1.04	OK
		21	5.30	5.58	1.05	OK
		19	5.30	5.52	1.04	OK
	S-Co-L/0°	17	5.49	5.00	0.91	OK
		4	5.49	5.42	0.99	OK
	S-Co-M/0°	29	56.00	57.60	1.03	OK
		25	56.00	56.30	1.01	OK
S-Co-H/0°	24	397.00	396.20	1.00	OK	
	30	397.00	398.90	1.00	OK	
mixed	N-150/Cs-137	14	5.51	5.66	1.03	OK
		18	5.51	5.71	1.04	OK
NIR	NIR	1		0.56		
	NIR	2		0.50		
	NIR	3		0.50		
	NIR	5		0.48		
	NIR	7		0.55		
	NIR	13		0.57		
	NIR	15		0.50		
	NIR	16		0.50		
	NIR	27		0.56		
	NIR	32		0.57		
	NIR	33		0.50		
	NIR	34		0.49		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.56	1.56	1.58	1.54	2%
N-60/60°	2	1.57	1.57	1.57	1.57	0%
W-110/0°	2	1.34	1.34	1.35	1.33	1%
N-150/60°	2	1.20	1.20	1.22	1.17	3%
S-Cs/0°	6	1.04	1.03	1.05	1.01	2%
S-Co/0°	6	1.00	0.99	1.03	0.91	4%
N-150/Cs-137	2	1.04	1.04	1.04	1.03	1%
<b>All</b>	<b>22</b>	<b>1.04</b>	<b>1.16</b>	<b>1.58</b>	<b>0.91</b>	<b>19%</b>

outliers: 3 of 22

fraction of outliers: 14%



Results: IC2018

## Reporting number 71: (TL) for dose quantity Hp(10)

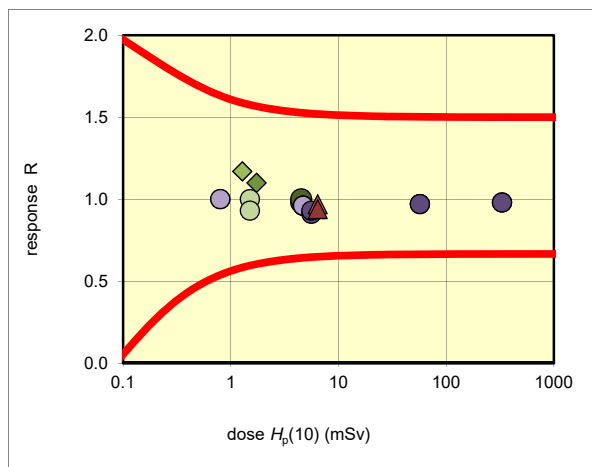
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	1	1.51	1.50	1.00	OK
		22	1.51	1.40	0.93	OK
	N-60/60°	5	1.28	1.50	1.17	OK
		17	1.28	1.50	1.17	OK
	W-110/0°	25	4.50	4.40	0.98	OK
		29	4.50	4.50	1.00	OK
	N-150/60°	21	1.73	1.90	1.10	OK
		23	1.73	1.90	1.10	OK
gamma	S-Cs-S/0°	4	0.80	0.80	1.00	OK
		13	0.80	0.80	1.00	OK
	S-Cs-L/0°	7	4.70	4.50	0.96	OK
		10	4.70	4.50	0.96	OK
		12	4.70	4.50	0.96	OK
		14	4.70	4.50	0.96	OK
	S-Co-L/0°	15	5.60	5.10	0.91	OK
		16	5.60	5.20	0.93	OK
	S-Co-M/0°	8	57.00	55.30	0.97	OK
		11	57.00	55.30	0.97	OK
	S-Co-H/0°	26	330.00	323.00	0.98	OK
		34	330.00	323.30	0.98	OK
mixed	N-150/Cs-137	18	6.40	6.20	0.97	OK
		20	6.40	6.00	0.94	OK
NIR	NIR	2		1.00		
		3		1.10		
		6		1.00		
		9		0.90		
		19		1.00		
		24		1.00		
		27		1.00		
		28		1.00		
		30		1.00		
		31		1.00		
		32		1.00		
		33		1.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

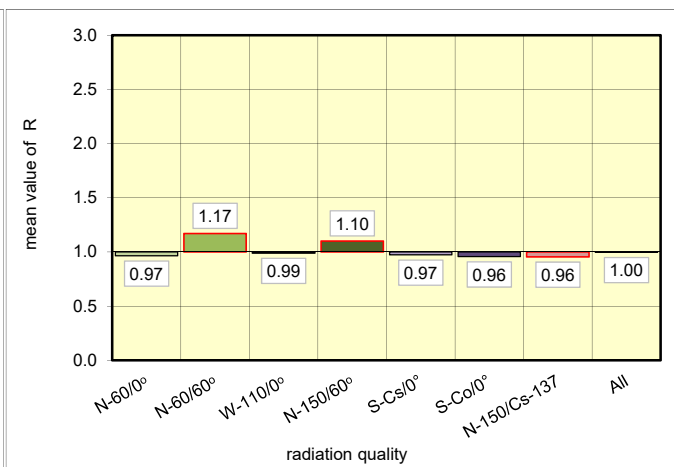
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.97</b>	0.97	1.00	0.93	5%
N-60/60°	2	<b>1.17</b>	1.17	1.17	1.17	0%
W-110/0°	2	<b>0.99</b>	0.99	1.00	0.98	1%
N-150/60°	2	<b>1.10</b>	1.10	1.10	1.10	0%
S-Cs/0°	6	<b>0.96</b>	0.97	1.00	0.96	2%
S-Co/0°	6	<b>0.97</b>	0.96	0.98	0.91	3%
N-150/Cs-137	2	<b>0.96</b>	0.96	0.97	0.94	2%
<b>All</b>	<b>22</b>	<b>0.98</b>	<b>1.00</b>	<b>1.17</b>	<b>0.91</b>	<b>7%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 71: (TL) for dose quantity Hp(0.07)

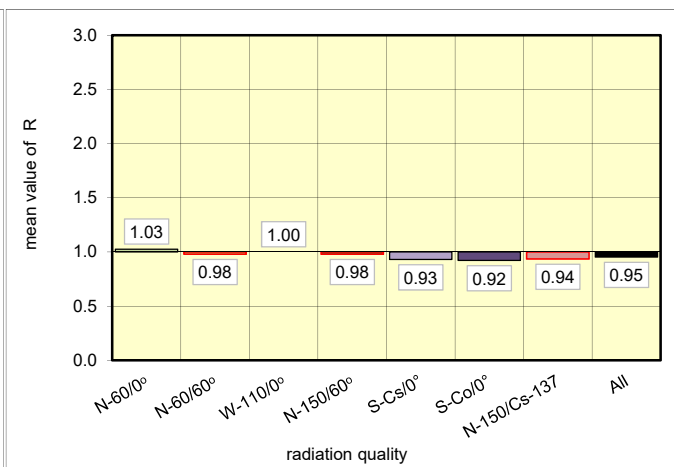
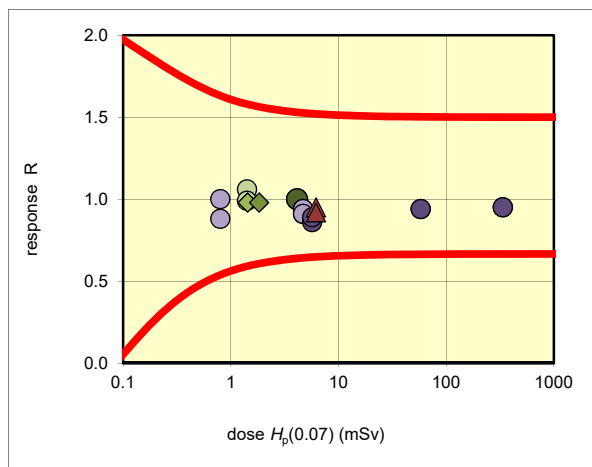
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	1	1.42	1.50	1.06	OK
		22	1.42	1.40	0.99	OK
	N-60/60°	5	1.43	1.40	0.98	OK
		17	1.43	1.40	0.98	OK
	W-110/0°	25	4.12	4.10	1.00	OK
		29	4.12	4.10	1.00	OK
	N-150/60°	21	1.83	1.80	0.98	OK
		23	1.83	1.80	0.98	OK
gamma	S-Cs-S/0°	4	0.80	0.70	0.88	OK
		13	0.80	0.80	1.00	OK
	S-Cs-L/0°	7	4.70	4.30	0.91	OK
		10	4.70	4.40	0.94	OK
		12	4.70	4.40	0.94	OK
		14	4.70	4.30	0.91	OK
	S-Co-L/0°	15	5.70	4.90	0.86	OK
		16	5.70	5.10	0.89	OK
	S-Co-M/0°	8	58.00	54.50	0.94	OK
		11	58.00	54.50	0.94	OK
	S-Co-H/0°	26	336.00	318.00	0.95	OK
		34	336.00	318.30	0.95	OK
mixed	N-150/Cs-137	18	6.19	5.90	0.95	OK
		20	6.19	5.70	0.92	OK
NIR	NIR	2		1.00		
	NIR	3		1.00		
	NIR	6		1.00		
	NIR	9		0.90		
	NIR	19		0.90		
	NIR	24		1.00		
	NIR	27		1.00		
	NIR	28		1.00		
	NIR	30		0.90		
	NIR	31		0.90		
	NIR	32		1.00		
	NIR	33		1.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.03</b>	1.03	1.06	0.99	5%
N-60/60°	2	<b>0.98</b>	0.98	0.98	0.98	0%
W-110/0°	2	<b>1.00</b>	1.00	1.00	1.00	0%
N-150/60°	2	<b>0.98</b>	0.98	0.98	0.98	0%
S-Cs/0°	6	<b>0.93</b>	0.93	1.00	0.88	4%
S-Co/0°	6	<b>0.94</b>	0.92	0.95	0.86	4%
N-150/Cs-137	2	<b>0.94</b>	0.94	0.95	0.92	2%
<b>All</b>	<b>22</b>	<b>0.95</b>	<b>0.95</b>	<b>1.06</b>	<b>0.86</b>	<b>5%</b>

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 72: (TL) for dose quantity Hp(10)

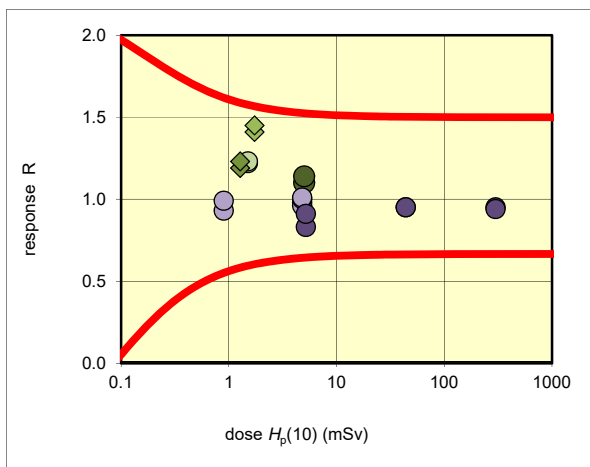
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	29	1.51	1.84	1.22	OK
		19	1.51	1.85	1.23	OK
	N-60/60°	9	1.73	2.44	1.41	OK
		10	1.73	2.52	1.45	OK
	W-110/0°	7	5.00	5.50	1.10	OK
		33	5.00	5.68	1.14	OK
	N-150/60°	6	1.28	1.52	1.19	OK
		8	1.28	1.57	1.23	OK
gamma	S-Cs-S/0°	27	0.90	0.84	0.93	OK
		21	0.90	0.89	0.99	OK
	S-Cs-L/0°	18	4.80	4.68	0.98	OK
		12	4.80	4.60	0.96	OK
		15	4.80	4.79	1.00	OK
		26	4.80	4.87	1.01	OK
	S-Co-L/0°	17	5.20	4.29	0.83	OK
		31	5.20	4.75	0.91	OK
	S-Co-M/0°	24	44.00	41.74	0.95	OK
		25	44.00	41.84	0.95	OK
	S-Co-H/0°	3	300.00	284.32	0.95	OK
		22	300.00	283.33	0.94	OK
mixed	N-150/Cs-137	4				WIR
		2				WIR
	WIR	1		-		
	WIR	5		-		
	NIR	34		0.82		
	NIR	11		0.76		
	NIR	13		0.71		
	NIR	14		0.74		
	NIR	16		0.76		
	NIR	20		0.67		
	NIR	23		0.74		
	NIR	28		0.68		
	NIR	30		0.72		
	NIR	32		0.71		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

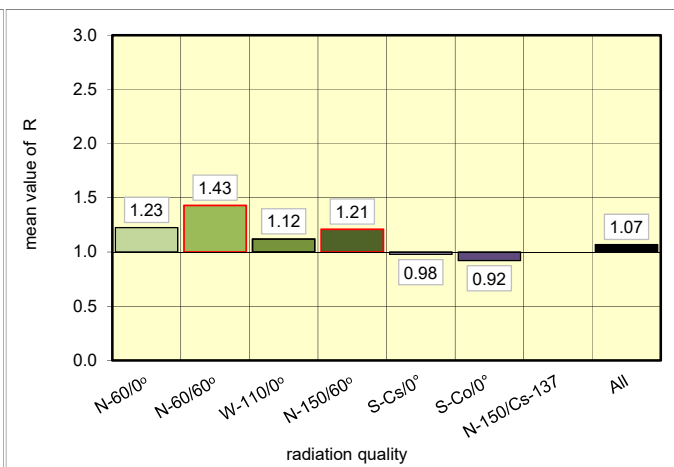
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.23	1.23	1.23	1.22	1%
N-60/60°	2	1.43	1.43	1.45	1.41	2%
W-110/0°	2	1.12	1.12	1.14	1.10	3%
N-150/60°	2	1.21	1.21	1.23	1.19	2%
S-Cs/0°	6	0.99	0.98	1.01	0.93	3%
S-Co/0°	6	0.95	0.92	0.95	0.83	5%
N-150/Cs-137	0	-	-	-	-	-
<b>All</b>	<b>20</b>	<b>1.00</b>	<b>1.07</b>	<b>1.45</b>	<b>0.83</b>	<b>16%</b>

outliers: 0 of 20

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018



## Reporting number 72: (TL) for dose quantity $H_p(0.07)$

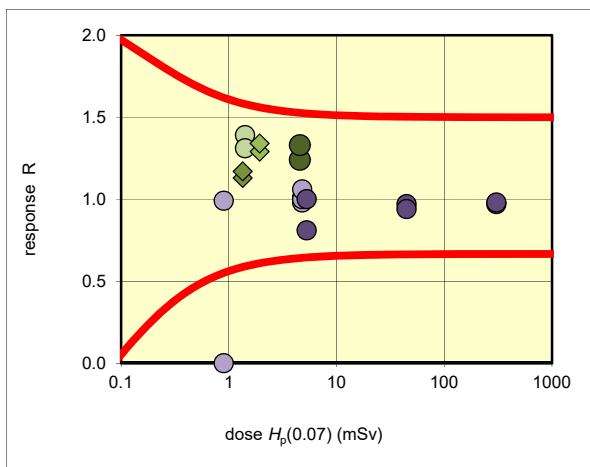
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	29	1.42	1.97	1.39	OK
		19	1.42	1.85	1.31	OK
	N-60/60°	9	1.94	2.50	1.29	OK
		10	1.94	2.60	1.34	OK
	W-110/0°	7	4.57	5.67	1.24	OK
		33	4.57	6.09	1.33	OK
	N-150/60°	6	1.35	1.52	1.13	OK
		8	1.35	1.57	1.17	OK
gamma	S-Cs-S/0°	27	0.90	x	x	missing/outlier
		21	0.90	0.89	0.99	OK
	S-Cs-L/0°	18	4.80	4.68	0.98	OK
		12	4.80	4.83	1.01	OK
		15	4.80	4.79	1.00	OK
		26	4.80	5.10	1.06	OK
	S-Co-L/0°	17	5.29	4.29	0.81	OK
		31	5.29	5.31	1.00	OK
	S-Co-M/0°	24	44.80	43.44	0.97	OK
		25	44.80	42.08	0.94	OK
	S-Co-H/0°	3	305.00	296.11	0.97	OK
		22	305.00	298.30	0.98	OK
mixed	N-150/Cs-137	4				WIR
		2				WIR
	WIR	1		-		
	WIR	5		-		
	NIR	34		0.82		
	NIR	11		0.76		
	NIR	13		0.71		
	NIR	14		0.75		
	NIR	16		0.76		
	NIR	20		0.69		
	NIR	23		0.74		
	NIR	28		0.70		
	NIR	30		0.76		
	NIR	32		0.76		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

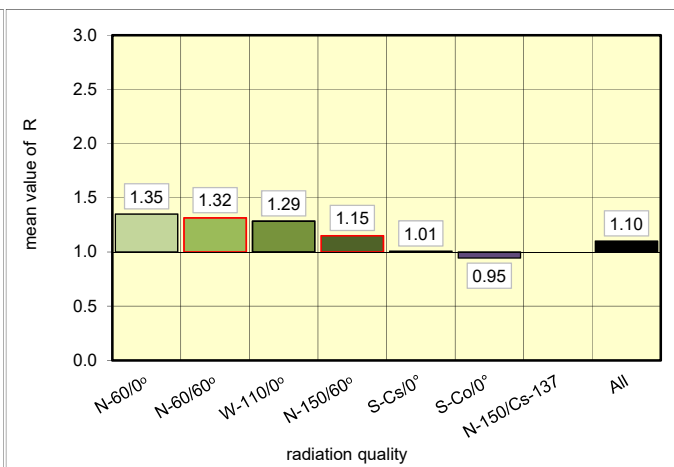
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.35	1.35	1.39	1.31	4%
N-60/60°	2	1.32	1.32	1.34	1.29	3%
W-110/0°	2	1.29	1.29	1.33	1.24	5%
N-150/60°	2	1.15	1.15	1.17	1.13	2%
S-Cs/0°	5	1.00	1.01	1.06	0.98	3%
S-Co/0°	6	0.97	0.95	1.00	0.81	7%
N-150/Cs-137	0	-	-	-	-	-
<b>All</b>	<b>19</b>	<b>1.01</b>	<b>1.10</b>	<b>1.39</b>	<b>0.81</b>	<b>15%</b>

outliers: 1 of 20

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 73: (TL) for dose quantity Hp(10)

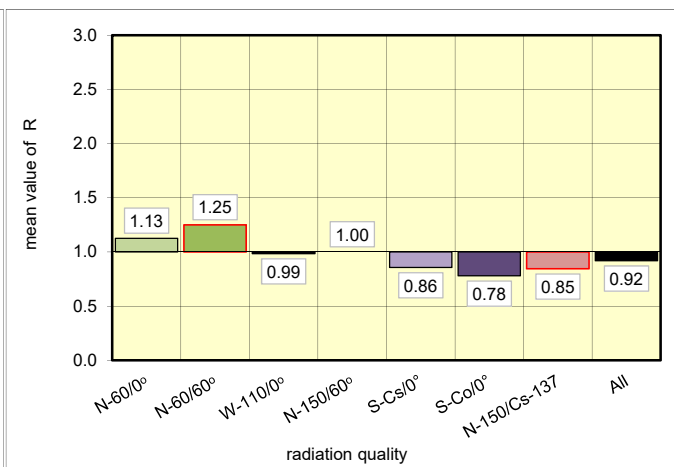
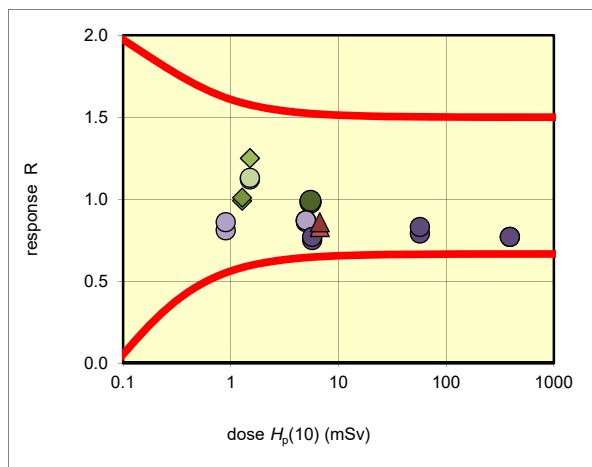
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	30	1.51	1.69	1.12	OK
		31	1.51	1.71	1.13	OK
	N-60/60°	24	1.51	1.89	1.25	OK
		34	1.51	1.89	1.25	OK
	W-110/0°	13	5.50	5.38	0.98	OK
		14	5.50	5.46	0.99	OK
	N-150/60°	15	1.28	1.26	0.99	OK
		26	1.28	1.29	1.01	OK
gamma	S-Cs-S/0°	27	0.90	0.73	0.81	OK
		21	0.90	0.77	0.86	OK
	S-Cs-L/0°	3	5.00	4.29	0.86	OK
		6	5.00	4.36	0.87	OK
		20	5.00	4.34	0.87	OK
		23	5.00	4.37	0.87	OK
	S-Co-L/0°	11	5.70	4.25	0.75	OK
		33	5.70	4.41	0.77	OK
	S-Co-M/0°	8	57.00	45.27	0.79	OK
		9	57.00	47.26	0.83	OK
	S-Co-H/0°	12	390.00	300.32	0.77	OK
		19	390.00	299.10	0.77	OK
mixed	N-150/Cs-137	18	6.70	5.56	0.83	OK
		16	6.70	5.77	0.86	OK
NIR	NIR	1		0.15		
	NIR	2		0.16		
	NIR	4		0.19		
	NIR	5		0.14		
	NIR	7		0.15		
	NIR	10		0.13		
	NIR	17		0.14		
	NIR	22		0.14		
	NIR	25		0.17		
	NIR	28		0.18		
	NIR	29		0.18		
	NIR	32		0.19		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.13</b>	1.13	1.13	1.12	1%
N-60/60°	2	<b>1.25</b>	1.25	1.25	1.25	0%
W-110/0°	2	<b>0.99</b>	0.99	0.99	0.98	1%
N-150/60°	2	<b>1.00</b>	1.00	1.01	0.99	1%
S-Cs/0°	6	<b>0.87</b>	0.86	0.87	0.81	3%
S-Co/0°	6	<b>0.77</b>	0.78	0.83	0.75	4%
N-150/Cs-137	2	<b>0.85</b>	0.85	0.86	0.83	3%
<b>All</b>	<b>22</b>	<b>0.87</b>	<b>0.92</b>	<b>1.25</b>	<b>0.75</b>	<b>16%</b>

outliers: 0 of 22

fraction of outliers: 0%



Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 74: (TL) for dose quantity Hp(10)

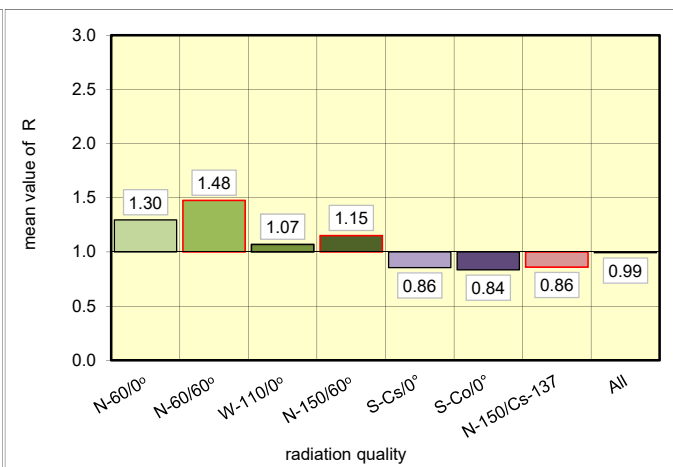
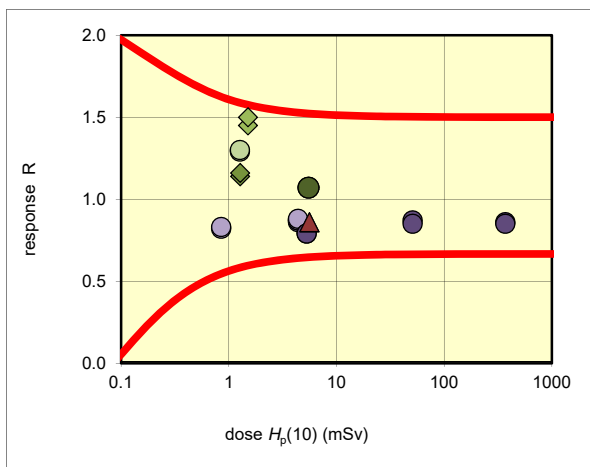
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	2	1.27	1.64	1.29	OK
		25	1.27	1.65	1.30	OK
	N-60/60°	1	1.51	2.19	1.45	OK
		14	1.51	2.26	1.50	OK
	W-110/0°	4	5.50	5.87	1.07	OK
		10	5.50	5.87	1.07	OK
	N-150/60°	19	1.28	1.45	1.14	OK
		23	1.28	1.48	1.16	OK
gamma	S-Cs-S/0°	3	0.85	0.70	0.82	OK
		28	0.85	0.71	0.83	OK
	S-Cs-L/0°	34	4.40	3.79	0.86	OK
		5	4.40	3.84	0.87	OK
		29	4.40	3.81	0.87	OK
		16	4.40	3.87	0.88	OK
	S-Co-L/0°	20	5.30	4.20	0.79	OK
		22	5.30	4.17	0.79	OK
	S-Co-M/0°	30	51.00	44.14	0.87	OK
		13	51.00	43.43	0.85	OK
	S-Co-H/0°	6	370.00	316.39	0.86	OK
		17	370.00	315.96	0.85	OK
mixed	N-150/Cs-137	27	5.60	4.80	0.86	OK
		32	5.60	4.80	0.86	OK
NIR	7			0.57		
	8			0.56		
	9			0.67		
	11			0.68		
	12			0.59		
	15			0.63		
	18			0.66		
	21			0.58		
	24			0.56		
	26			0.65		
	31			0.59		
	33			0.58		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.30	1.30	1.30	1.29	1%
N-60/60°	2	1.48	1.48	1.50	1.45	2%
W-110/0°	2	1.07	1.07	1.07	1.07	0%
N-150/60°	2	1.15	1.15	1.16	1.14	1%
S-Cs/0°	6	0.87	0.86	0.88	0.82	3%
S-Co/0°	6	0.85	0.84	0.87	0.79	4%
N-150/Cs-137	2	0.86	0.86	0.86	0.86	0%
<b>All</b>	<b>22</b>	<b>0.87</b>	<b>0.99</b>	<b>1.50</b>	<b>0.79</b>	<b>22%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 74: (TL) for dose quantity $H_p(0.07)$

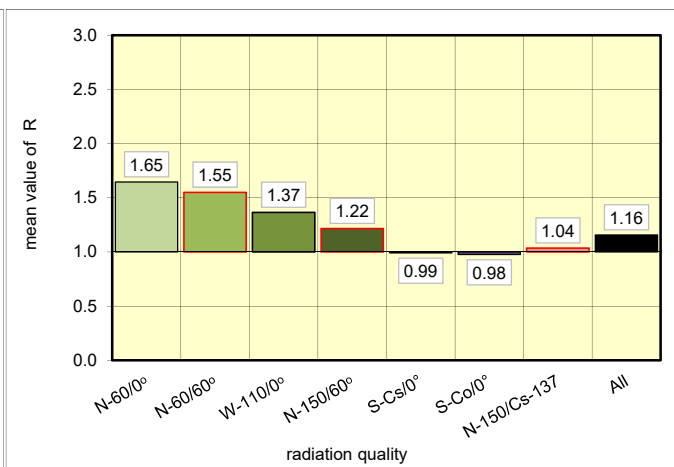
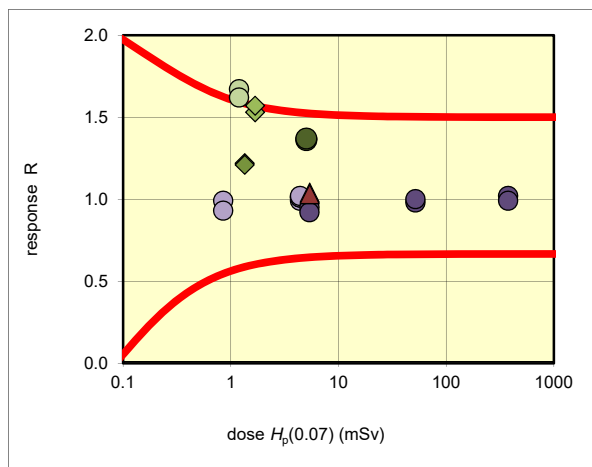
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	2	1.20	2.00	1.67	outlier
		25	1.20	1.94	1.62	outlier
	N-60/60°	1	1.68	2.58	1.53	OK
		14	1.68	2.65	1.57	outlier
	W-110/0°	4	5.03	6.83	1.36	OK
		10	5.03	6.91	1.37	OK
	N-150/60°	19	1.35	1.65	1.22	OK
		23	1.35	1.63	1.21	OK
gamma	S-Cs-S/0°	3	0.85	0.84	0.99	OK
		28	0.85	0.79	0.93	OK
	S-Cs-L/0°	34	4.40	4.38	0.99	OK
		5	4.40	4.43	1.01	OK
		29	4.40	4.46	1.01	OK
		16	4.40	4.48	1.02	OK
	S-Co-L/0°	20	5.39	5.11	0.95	OK
		22	5.39	4.93	0.92	OK
	S-Co-M/0°	30	51.90	50.95	0.98	OK
		13	51.90	51.86	1.00	OK
	S-Co-H/0°	6	376.00	383.40	1.02	OK
		17	376.00	373.89	0.99	OK
mixed	N-150/Cs-137	27	5.40	5.61	1.04	OK
		32	5.40	5.57	1.03	OK
NIR	NIR	7		0.65		
	NIR	8		0.64		
	NIR	9		0.73		
	NIR	11		0.77		
	NIR	12		0.69		
	NIR	15		0.71		
	NIR	18		0.72		
	NIR	21		0.63		
	NIR	24		0.70		
	NIR	26		0.70		
	NIR	31		0.66		
	NIR	33		0.64		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.65	1.65	1.67	1.62	2%
N-60/60°	2	1.55	1.55	1.57	1.53	2%
W-110/0°	2	1.37	1.37	1.37	1.36	1%
N-150/60°	2	1.22	1.22	1.22	1.21	1%
S-Cs/0°	6	1.00	0.99	1.02	0.93	3%
S-Co/0°	6	0.99	0.98	1.02	0.92	4%
N-150/Cs-137	2	1.04	1.04	1.04	1.03	1%
All	22	1.02	1.16	1.67	0.92	21%

outliers: 3 of 22

fraction of outliers: 14%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 75: (TL) for dose quantity Hp(10)

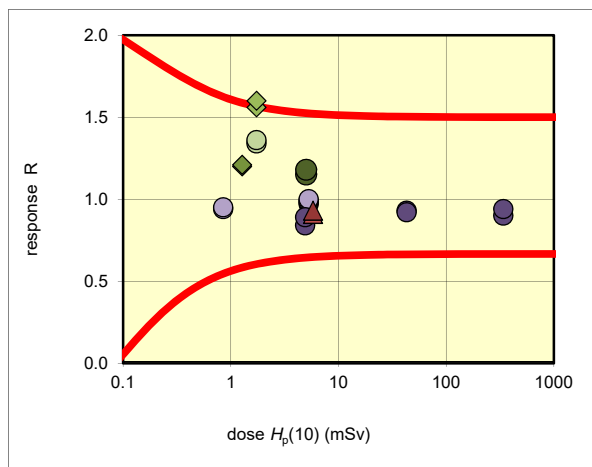
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	16	1.73	2.32	1.34	OK
		21	1.73	2.36	1.36	OK
	N-60/60°	4	1.73	2.70	1.56	OK
		24	1.73	2.77	1.60	outlier
	W-110/0°	28	5.00	5.77	1.15	OK
		3	5.00	5.91	1.18	OK
N-150/60°	27	1.28	1.53	1.20	OK	
	30	1.28	1.54	1.21	OK	
gamma	S-Cs-S/0°	26	0.85	0.80	0.94	OK
		15	0.85	0.81	0.95	OK
	S-Cs-L/0°	6	5.30	5.16	0.97	OK
		22	5.30	5.17	0.98	OK
		23	5.30	5.27	0.99	OK
	S-Co-L/0°	1	5.30	5.28	1.00	OK
		20	4.90	4.13	0.84	OK
	S-Co-M/0°	19	4.90	4.38	0.89	OK
		9	43.00	39.88	0.93	OK
	S-Co-H/0°	29	43.00	39.60	0.92	OK
7		340.00	307.14	0.90	OK	
mixed	N-150/Cs-137	14	340.00	318.19	0.94	OK
		13	5.80	5.29	0.91	OK
NIR	N-150/Cs-137	12	5.80	5.39	0.93	OK
		34		0.21		
		2		0.28		
		5		0.25		
		8		0.22		
		10		0.20		
		11		0.20		
		17		0.23		
		18		0.26		
		25		0.20		
31		0.20				
32		0.25				
33		0.20				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

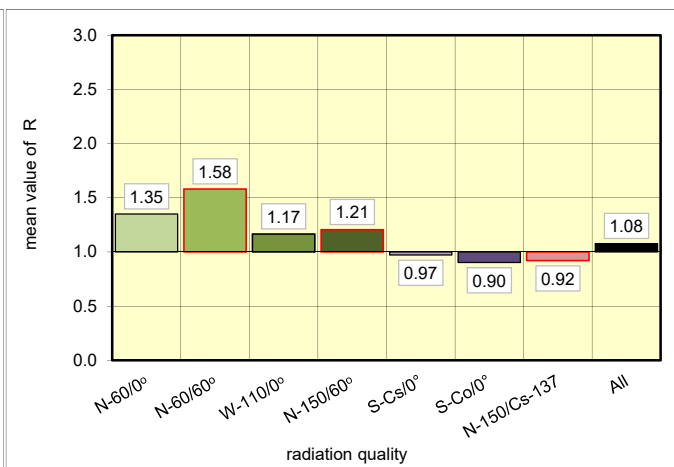
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.35	1.35	1.36	1.34	1%
N-60/60°	2	1.58	1.58	1.60	1.56	2%
W-110/0°	2	1.17	1.17	1.18	1.15	2%
N-150/60°	2	1.21	1.21	1.21	1.20	1%
S-Cs/0°	6	0.98	0.97	1.00	0.94	2%
S-Co/0°	6	0.91	0.90	0.94	0.84	4%
N-150/Cs-137	2	0.92	0.92	0.93	0.91	2%
All	22	0.98	1.08	1.60	0.84	20%

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 75: (TL) for dose quantity Hp(0.07)

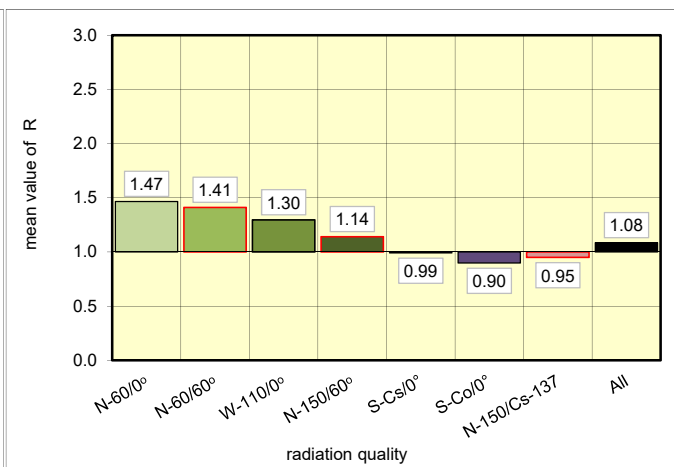
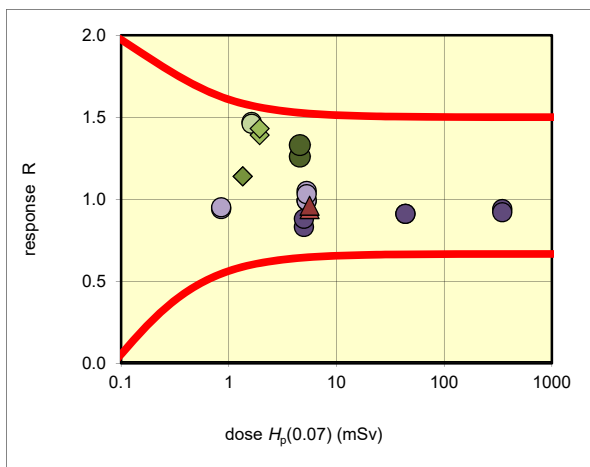
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	16	1.63	2.40	1.47	OK
		21	1.63	2.38	1.46	OK
	N-60/60°	4	1.94	2.70	1.39	OK
		24	1.94	2.77	1.43	OK
	W-110/0°	28	4.57	5.77	1.26	OK
		3	4.57	6.09	1.33	OK
	N-150/60°	27	1.35	1.53	1.14	OK
		30	1.35	1.54	1.14	OK
gamma	S-Cs-S/0°	26	0.85	0.80	0.94	OK
		15	0.85	0.81	0.95	OK
	S-Cs-L/0°	6	5.30	5.55	1.05	OK
		22	5.30	5.23	0.99	OK
		23	5.30	5.27	0.99	OK
		1	5.30	5.46	1.03	OK
	S-Co-L/0°	20	4.99	4.13	0.83	OK
		19	4.99	4.38	0.88	OK
	S-Co-M/0°	9	43.70	39.88	0.91	OK
		29	43.70	39.60	0.91	OK
	S-Co-H/0°	7	346.00	326.09	0.94	OK
		14	346.00	318.90	0.92	OK
mixed	N-150/Cs-137	13	5.62	5.29	0.94	OK
		12	5.62	5.39	0.96	OK
NIR	NIR	34		0.19		
	NIR	2		0.26		
	NIR	5		0.26		
	NIR	8		0.21		
	NIR	10		0.22		
	NIR	11		0.19		
	NIR	17		0.22		
	NIR	18		0.23		
	NIR	25		0.19		
	NIR	31		0.22		
	NIR	32		0.37		
	NIR	33		0.19		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.47</b>	1.47	1.47	1.46	0%
N-60/60°	2	<b>1.41</b>	1.41	1.43	1.39	2%
W-110/0°	2	<b>1.30</b>	1.30	1.33	1.26	4%
N-150/60°	2	<b>1.14</b>	1.14	1.14	1.14	0%
S-Cs/0°	6	<b>0.99</b>	0.99	1.05	0.94	4%
S-Co/0°	6	<b>0.91</b>	0.90	0.94	0.83	4%
N-150/Cs-137	2	<b>0.95</b>	0.95	0.96	0.94	1%
<b>All</b>	<b>22</b>	<b>0.99</b>	<b>1.08</b>	<b>1.47</b>	<b>0.83</b>	<b>19%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 76: (TL) for dose quantity $H_p(10)$

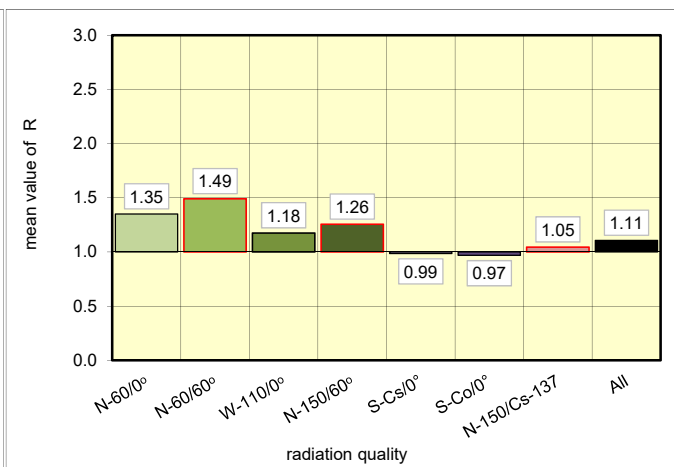
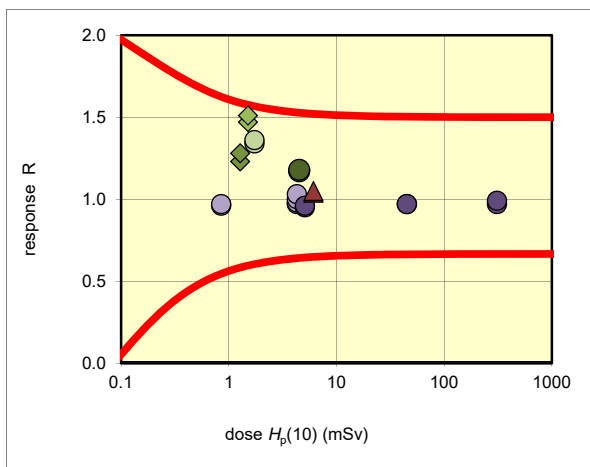
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	9	1.73	2.33	1.34	OK
		33	1.73	2.35	1.36	OK
	N-60/60°	8	1.51	2.21	1.47	OK
		24	1.51	2.27	1.51	OK
	W-110/0°	27	4.50	5.25	1.17	OK
		11	4.50	5.32	1.18	OK
	N-150/60°	29	1.28	1.57	1.23	OK
		20	1.28	1.63	1.28	OK
gamma	S-Cs-S/0°	5	0.85	0.82	0.96	OK
		22	0.85	0.82	0.97	OK
	S-Cs-L/0°	16	4.30	4.17	0.97	OK
		21	4.30	4.23	0.98	OK
		18	4.30	4.31	1.00	OK
		17	4.30	4.43	1.03	OK
	S-Co-L/0°	2	5.10	4.83	0.95	OK
		1	5.10	4.89	0.96	OK
	S-Co-M/0°	23	45.00	43.80	0.97	OK
		34	45.00	43.72	0.97	OK
	S-Co-H/0°	6	310.00	300.45	0.97	OK
		13	310.00	307.90	0.99	OK
mixed	N-150/Cs-137	25	6.10	6.36	1.04	OK
		26	6.10	6.38	1.05	OK
NIR	NIR	3		0.02		
	NIR	4		0.00		
	NIR	7		0.00		
	NIR	10		0.00		
	NIR	12		0.00		
	NIR	14		0.03		
	NIR	15		0.00		
	NIR	19		0.03		
	NIR	28		0.00		
	NIR	30		0.02		
	NIR	31		0.00		
	NIR	32		0.03		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.35	1.35	1.36	1.34	1%
N-60/60°	2	1.49	1.49	1.51	1.47	2%
W-110/0°	2	1.18	1.18	1.18	1.17	1%
N-150/60°	2	1.26	1.26	1.28	1.23	3%
S-Cs/0°	6	0.98	0.99	1.03	0.96	3%
S-Co/0°	6	0.97	0.97	0.99	0.95	1%
N-150/Cs-137	2	1.05	1.05	1.05	1.04	1%
All	22	1.02	1.11	1.51	0.95	16%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



No dose values for  $H_p(0.07)$  submitted.

## Reporting number 77: (TL) for dose quantity Hp(10)

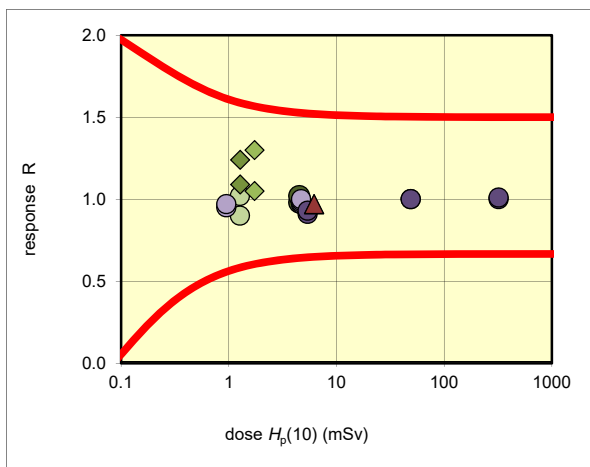
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	31	1.27	1.30	1.02	OK
		7	1.27	1.14	0.90	OK
	N-60/60°	3	1.73	2.26	1.30	OK
		23	1.73	1.82	1.05	OK
	W-110/0°	14	4.50	4.43	0.98	OK
		20	4.50	4.61	1.02	OK
	N-150/60°	1	1.28	1.39	1.09	OK
		4	1.28	1.58	1.24	OK
gamma	S-Cs-S/0°	12	0.95	0.90	0.95	OK
		2	0.95	0.92	0.97	OK
	S-Cs-L/0°	25	4.70	4.58	0.97	OK
		24	4.70	4.61	0.98	OK
		5	4.70	4.66	0.99	OK
		6	4.70	4.70	1.00	OK
	S-Co-L/0°	33	5.40	4.93	0.91	OK
		32	5.40	5.04	0.93	OK
	S-Co-M/0°	8	49.00	48.79	1.00	OK
		10	49.00	49.20	1.00	OK
	S-Co-H/0°	28	320.00	318.44	1.00	OK
		9	320.00	321.78	1.01	OK
mixed	N-150/Cs-137	29	6.20	6.04	0.97	OK
		30	6.20	6.02	0.97	OK
NIR	NIR	15		0.51		
	NIR	11		0.43		
	NIR	13		0.47		
	NIR	16		0.49		
	NIR	17		0.48		
	NIR	18		0.53		
	NIR	19		0.41		
	NIR	21		0.44		
	NIR	22		0.49		
	NIR	26		0.48		
	NIR	27		0.46		
	NIR	34		0.57		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

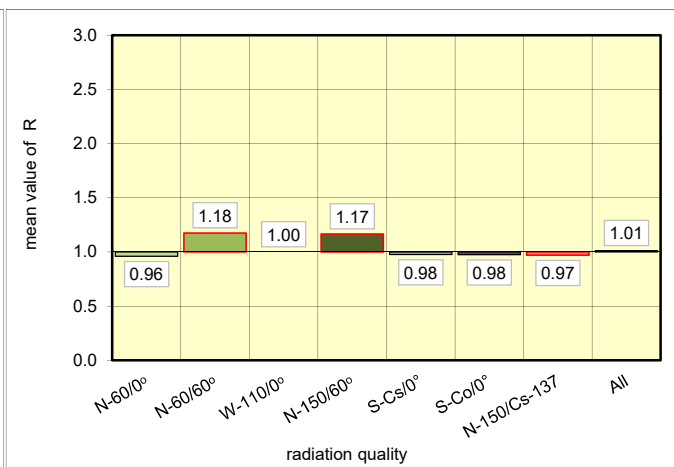
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.96</b>	0.96	1.02	0.90	9%
N-60/60°	2	<b>1.18</b>	1.18	1.30	1.05	15%
W-110/0°	2	<b>1.00</b>	1.00	1.02	0.98	3%
N-150/60°	2	<b>1.17</b>	1.17	1.24	1.09	9%
S-Cs/0°	6	<b>0.98</b>	0.98	1.00	0.95	2%
S-Co/0°	6	<b>1.00</b>	0.98	1.01	0.91	4%
N-150/Cs-137	2	<b>0.97</b>	0.97	0.97	0.97	0%
<b>All</b>	<b>22</b>	<b>1.00</b>	<b>1.01</b>	<b>1.30</b>	<b>0.90</b>	<b>9%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 77: (TL) for dose quantity Hp(0.07)

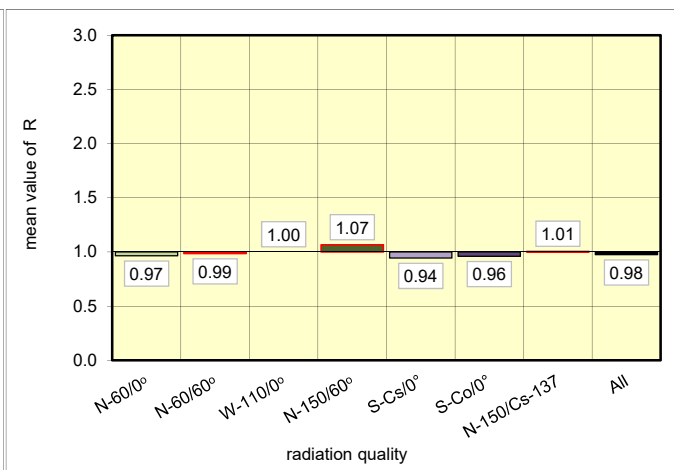
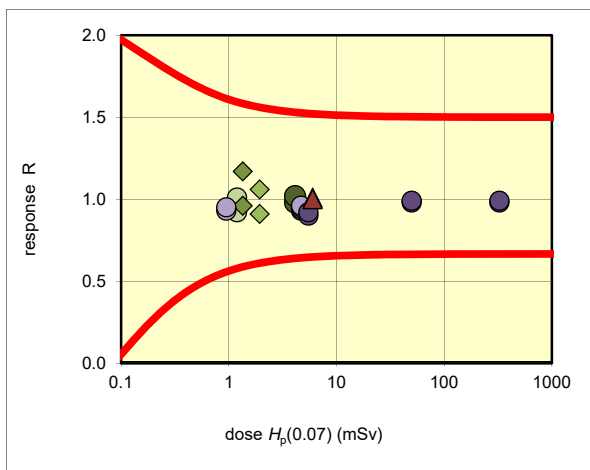
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	31	1.20	1.21	1.01	OK
		7	1.20	1.10	0.92	OK
	N-60/60°	3	1.94	2.06	1.06	OK
		23	1.94	1.76	0.91	OK
	W-110/0°	14	4.12	4.05	0.98	OK
		20	4.12	4.21	1.02	OK
N-150/60°	1	1.35	1.29	0.96	OK	
	4	1.35	1.58	1.17	OK	
gamma	S-Cs-S/0°	12	0.95	0.88	0.93	OK
		2	0.95	0.90	0.95	OK
	S-Cs-L/0°	25	4.70	4.38	0.93	OK
		24	4.70	4.40	0.94	OK
		5	4.70	4.46	0.95	OK
		6	4.70	4.49	0.96	OK
	S-Co-L/0°	33	5.49	4.93	0.90	OK
		32	5.49	5.04	0.92	OK
	S-Co-M/0°	8	49.90	48.79	0.98	OK
		10	49.90	49.20	0.99	OK
S-Co-H/0°	28	326.00	318.44	0.98	OK	
	9	326.00	321.78	0.99	OK	
mixed	N-150/Cs-137	29	6.00	6.04	1.01	OK
		30	6.00	6.02	1.00	OK
NIR	NIR	15		0.51		
	NIR	11		0.42		
	NIR	13		0.47		
	NIR	16		0.48		
	NIR	17		0.46		
	NIR	18		0.52		
	NIR	19		0.40		
	NIR	21		0.44		
	NIR	22		0.48		
	NIR	26		0.48		
	NIR	27		0.43		
NIR	34		0.56			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.97</b>	0.97	1.01	0.92	7%
N-60/60°	2	<b>0.99</b>	0.99	1.06	0.91	11%
W-110/0°	2	<b>1.00</b>	1.00	1.02	0.98	3%
N-150/60°	2	<b>1.07</b>	1.07	1.17	0.96	14%
S-Cs/0°	6	<b>0.95</b>	0.94	0.96	0.93	1%
S-Co/0°	6	<b>0.98</b>	0.96	0.99	0.90	4%
N-150/Cs-137	2	<b>1.01</b>	1.01	1.01	1.00	1%
<b>All</b>	<b>22</b>	<b>0.97</b>	<b>0.98</b>	<b>1.17</b>	<b>0.90</b>	<b>6%</b>

outliers: 0 of 22

Fraction of outliers: 0%



Results: IC2018

## Reporting number 78: (TL) for dose quantity Hp(10)

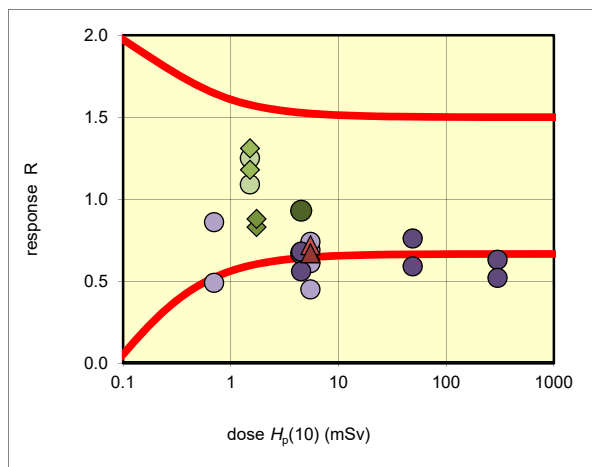
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	4	1.51	1.88	1.25	OK
		3	1.51	1.64	1.09	OK
	N-60/60°	18	1.51	1.79	1.18	OK
		16	1.51	1.98	1.31	OK
	W-110/0°	12	4.50	3.03	0.67	OK
		1	4.50	4.18	0.93	OK
N-150/60°	21	1.73	1.43	0.83	OK	
	24	1.73	1.53	0.88	OK	
gamma	S-Cs-S/0°	26	0.70	0.34	0.49	outlier
		27	0.70	0.60	0.86	OK
	S-Cs-L/0°	6	5.50	2.49	0.45	outlier
		14	5.50	3.33	0.61	outlier
		29	5.50	3.80	0.69	OK
		28	5.50	4.09	0.74	OK
	S-Co-L/0°	25	4.50	2.53	0.56	outlier
		13	4.50	3.07	0.68	OK
	S-Co-M/0°	10	49.00	28.69	0.59	outlier
		2	49.00	37.44	0.76	OK
	S-Co-H/0°	15	300.00	189.60	0.63	outlier
		8	300.00	154.69	0.52	outlier
mixed	N-150/Cs-137	20	5.50	3.99	0.72	OK
		19	5.50	3.68	0.67	OK
NIR	NIR	7		0.54		
	NIR	33		0.51		
	NIR	30		0.51		
	NIR	5		0.43		
	NIR	9		0.38		
	NIR	11		0.43		
	NIR	17		0.49		
	NIR	22		0.48		
	NIR	23		0.41		
	NIR	31		0.50		
	NIR	32		0.52		
	NIR	34		0.38		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

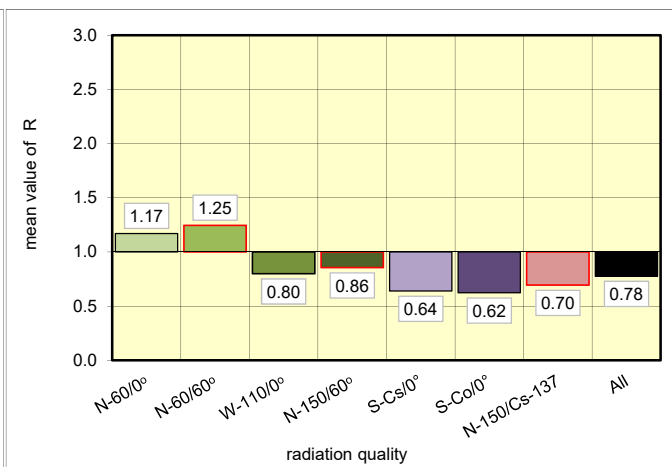
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.17	1.17	1.25	1.09	10%
N-60/60°	2	1.25	1.25	1.31	1.18	7%
W-110/0°	2	0.80	0.80	0.93	0.67	23%
N-150/60°	2	0.86	0.86	0.88	0.83	4%
S-Cs/0°	6	0.65	0.64	0.86	0.45	24%
S-Co/0°	6	0.61	0.62	0.76	0.52	14%
N-150/Cs-137	2	0.70	0.70	0.72	0.67	5%
<b>All</b>	<b>22</b>	<b>0.71</b>	<b>0.78</b>	<b>1.31</b>	<b>0.45</b>	<b>31%</b>

outliers: 7 of 22

fraction of outliers: 32%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 78: (TL) for dose quantity $H_p(0.07)$

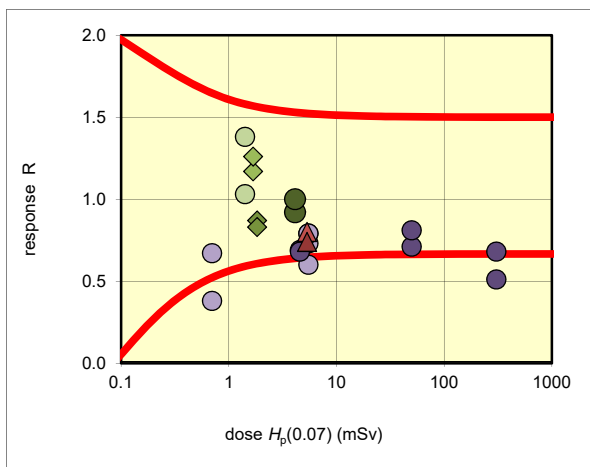
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	4	1.42	1.95	1.38	OK
		3	1.42	1.46	1.03	OK
	N-60/60°	18	1.68	1.96	1.17	OK
		16	1.68	2.12	1.26	OK
	W-110/0°	12	4.12	3.80	0.92	OK
		1	4.12	4.10	1.00	OK
N-150/60°	21	1.83	1.59	0.87	OK	
	24	1.83	1.53	0.83	OK	
gamma	S-Cs-S/0°	26	0.70	0.27	0.38	outlier
		27	0.70	0.47	0.67	OK
	S-Cs-L/0°	6	5.50	3.32	0.60	outlier
		14	5.50	4.02	0.73	OK
		29	5.50	4.34	0.79	OK
		28	5.50	4.32	0.79	OK
	S-Co-L/0°	25	4.58	3.15	0.69	OK
		13	4.58	3.10	0.68	OK
	S-Co-M/0°	10	49.90	35.42	0.71	OK
		2	49.90	40.41	0.81	OK
	S-Co-H/0°	15	305.00	206.48	0.68	OK
		8	305.00	156.39	0.51	outlier
mixed	N-150/Cs-137	20	5.32	4.23	0.80	OK
		19	5.32	3.93	0.74	OK
NIR	NIR	7		0.52		
	NIR	33		0.55		
	NIR	30		0.52		
	NIR	5		0.51		
	NIR	9		0.44		
	NIR	11		0.44		
	NIR	17		0.49		
	NIR	22		0.42		
	NIR	23		0.50		
	NIR	31		0.51		
	NIR	32		0.53		
	NIR	34		0.45		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

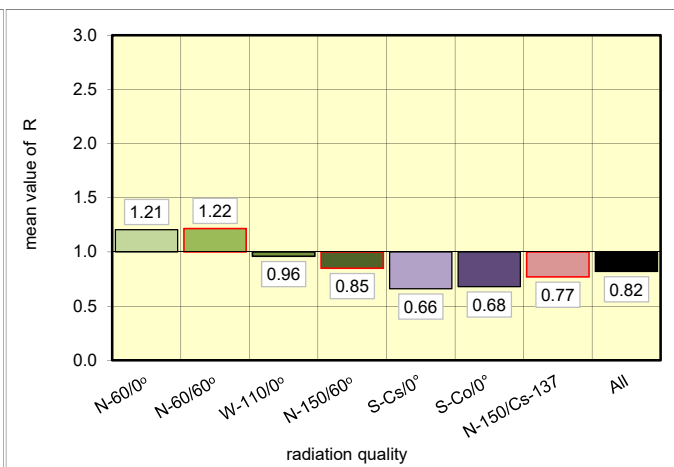
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.21	1.21	1.38	1.03	21%
N-60/60°	2	1.22	1.22	1.26	1.17	5%
W-110/0°	2	0.96	0.96	1.00	0.92	6%
N-150/60°	2	0.85	0.85	0.87	0.83	3%
S-Cs/0°	6	0.70	0.66	0.79	0.38	24%
S-Co/0°	6	0.69	0.68	0.81	0.51	14%
N-150/Cs-137	2	0.77	0.77	0.80	0.74	6%
<b>All</b>	<b>22</b>	<b>0.79</b>	<b>0.82</b>	<b>1.38</b>	<b>0.38</b>	<b>29%</b>

outliers: 3 of 22

fraction of outliers: 14%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 79: (TL) for dose quantity Hp(10)

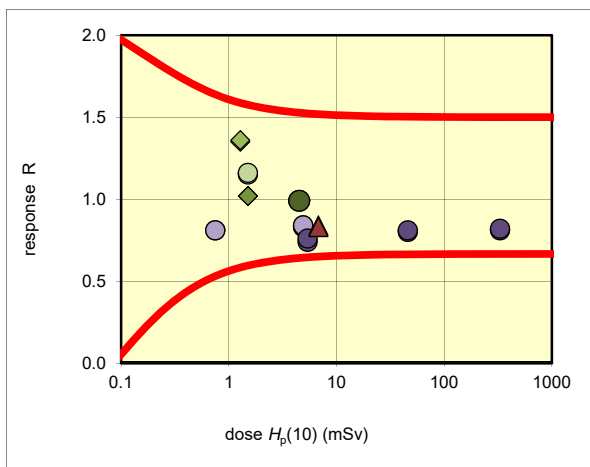
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.51	1.74	1.15	OK
		21	1.51	1.75	1.16	OK
	N-60/60°	17	1.28	1.73	1.35	OK
		19	1.28	1.74	1.36	OK
	W-110/0°	25	4.50	4.48	0.99	OK
		4	4.50	4.46	0.99	OK
N-150/60°	13	1.51	1.53	1.02	OK	
	31	1.51	1.54	1.02	OK	
gamma	S-Cs-S/0°	29	0.75	0.61	0.81	OK
		11	0.75	0.61	0.81	OK
	S-Cs-L/0°	7	4.90	4.10	0.84	OK
		5	4.90	4.08	0.83	OK
		23	4.90	4.09	0.83	OK
		34	4.90	4.14	0.84	OK
	S-Co-L/0°	10	5.40	3.98	0.74	OK
		32	5.40	4.12	0.76	OK
	S-Co-M/0°	30	46.00	36.64	0.80	OK
		8	46.00	37.31	0.81	OK
S-Co-H/0°	18	330.00	267.28	0.81	OK	
	22	330.00	269.46	0.82	OK	
mixed	N-150/Cs-137	28	6.80	5.72	0.84	OK
		33	6.80	5.63	0.83	OK
NIR	NIR	6		0.17		
	NIR	14		0.17		
	NIR	15		0.16		
	NIR	26		0.16		
	NIR	27		0.15		
	NIR	1		0.16		
	NIR	2		0.21		
	NIR	3		0.21		
	NIR	9		0.21		
	NIR	12		0.24		
	NIR	16		0.16		
	NIR	20		0.21		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

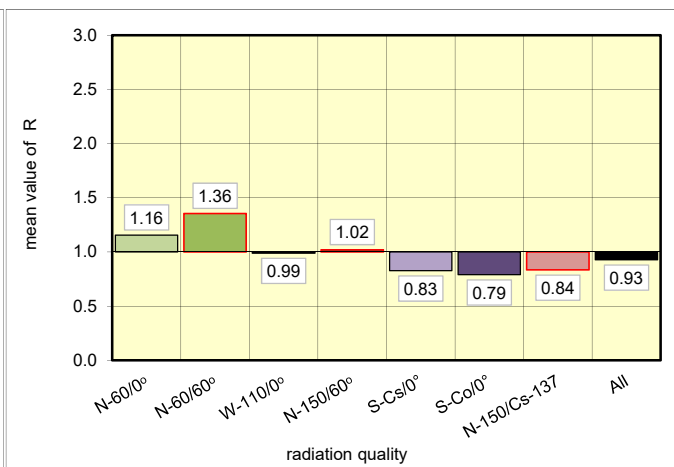
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.16</b>	1.16	1.16	1.15	1%
N-60/60°	2	<b>1.36</b>	1.36	1.36	1.35	1%
W-110/0°	2	<b>0.99</b>	0.99	0.99	0.99	0%
N-150/60°	2	<b>1.02</b>	1.02	1.02	1.02	0%
S-Cs/0°	6	<b>0.83</b>	0.83	0.84	0.81	2%
S-Co/0°	6	<b>0.81</b>	0.79	0.82	0.74	4%
N-150/Cs-137	2	<b>0.84</b>	0.84	0.84	0.83	1%
<b>All</b>	<b>22</b>	<b>0.84</b>	<b>0.93</b>	<b>1.36</b>	<b>0.74</b>	<b>20%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 79: (TL) for dose quantity Hp(0.07)

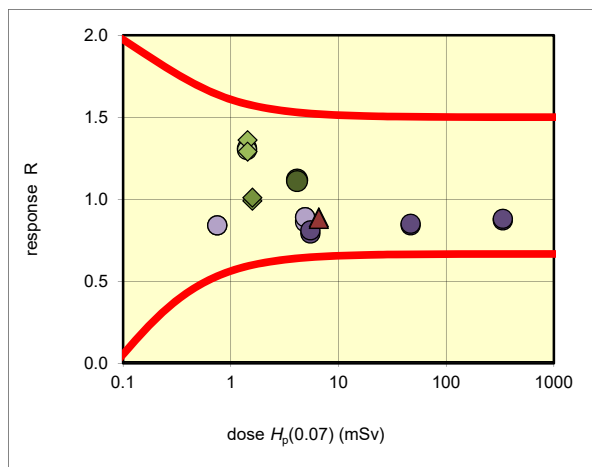
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.42	1.85	1.31	OK
		21	1.42	1.84	1.30	OK
	N-60/60°	17	1.43	1.94	1.36	OK
		19	1.43	1.85	1.29	OK
	W-110/0°	25	4.12	4.61	1.12	OK
		4	4.12	4.59	1.11	OK
	N-150/60°	13	1.59	1.57	0.99	OK
		31	1.59	1.60	1.01	OK
gamma	S-Cs-S/0°	29	0.75	0.63	0.84	OK
		11	0.75	0.63	0.84	OK
	S-Cs-L/0°	7	4.90	4.36	0.89	OK
		5	4.90	4.27	0.87	OK
		23	4.90	4.23	0.86	OK
		34	4.90	4.35	0.89	OK
	S-Co-L/0°	10	5.49	4.31	0.79	OK
		32	5.49	4.47	0.81	OK
	S-Co-M/0°	30	46.80	39.23	0.84	OK
		8	46.80	39.94	0.85	OK
	S-Co-H/0°	18	336.00	291.05	0.87	OK
		22	336.00	296.13	0.88	OK
mixed	N-150/Cs-137	28	6.56	5.81	0.89	OK
		33	6.56	5.75	0.88	OK
NIR	NIR	6		0.17		
	NIR	14		0.15		
	NIR	15		0.14		
	NIR	26		0.15		
	NIR	27		0.15		
	NIR	1		0.16		
	NIR	2		0.19		
	NIR	3		0.21		
	NIR	9		0.21		
	NIR	12		0.28		
	NIR	16		0.16		
	NIR	20		0.21		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

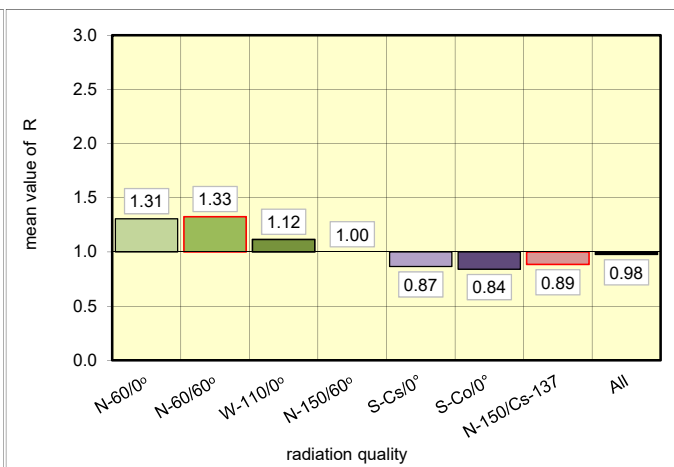
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.31	1.31	1.31	1.30	1%
N-60/60°	2	1.33	1.33	1.36	1.29	4%
W-110/0°	2	1.12	1.12	1.12	1.11	1%
N-150/60°	2	1.00	1.00	1.01	0.99	1%
S-Cs/0°	6	0.87	0.87	0.89	0.84	3%
S-Co/0°	6	0.85	0.84	0.88	0.79	4%
N-150/Cs-137	2	0.89	0.89	0.89	0.88	1%
All	22	0.89	0.98	1.36	0.79	19%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 80: (TL) for dose quantity Hp(10)

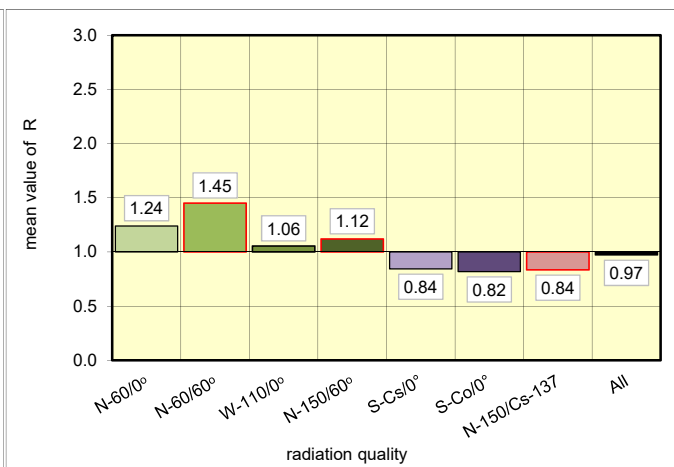
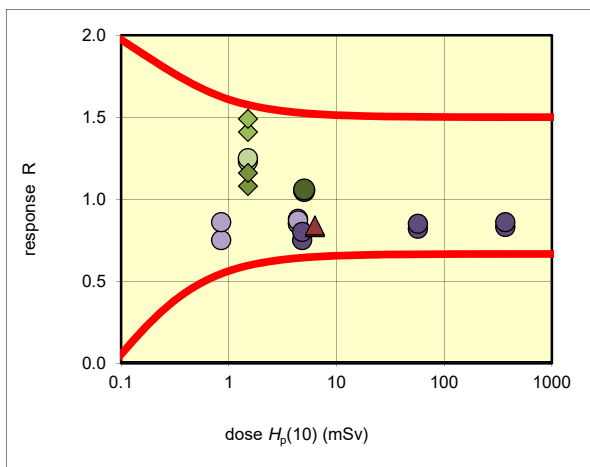
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	23	1.51	1.86	1.23	OK
		16	1.51	1.89	1.25	OK
	N-60/60°	13	1.51	2.12	1.41	OK
		17	1.51	2.24	1.49	OK
	W-110/0°	29	5.00	5.25	1.05	OK
		24	5.00	5.30	1.06	OK
	N-150/60°	7	1.51	1.62	1.08	OK
		20	1.51	1.74	1.16	OK
gamma	S-Cs-S/0°	8	0.85	0.64	0.75	OK
		22	0.85	0.73	0.86	OK
	S-Cs-L/0°	4	4.40	3.76	0.85	OK
		1	4.40	3.72	0.85	OK
		19	4.40	3.86	0.88	OK
	S-Co-L/0°	21	4.40	3.82	0.87	OK
		28	4.80	3.59	0.75	OK
	S-Co-M/0°	30	4.80	3.85	0.80	OK
		34	57.00	46.90	0.82	OK
	S-Co-H/0°	25	57.00	48.30	0.85	OK
6		370.00	307.00	0.83	OK	
mixed	N-150/Cs-137	18	370.00	318.00	0.86	OK
		5	6.30	5.21	0.83	OK
		3	6.30	5.31	0.84	OK
	WIR	10		-		
	WIR	26		-		
	NIR	2		0.56		
	NIR	9		0.55		
	NIR	11		0.60		
	NIR	12		0.57		
	NIR	14		0.64		
	NIR	15		0.61		
	NIR	27		0.59		
	NIR	31		0.60		
	NIR	32		0.61		
	NIR	33		0.61		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.24	1.24	1.25	1.23	1%
N-60/60°	2	1.45	1.45	1.49	1.41	4%
W-110/0°	2	1.06	1.06	1.06	1.05	1%
N-150/60°	2	1.12	1.12	1.16	1.08	5%
S-Cs/0°	6	0.86	0.84	0.88	0.75	6%
S-Co/0°	6	0.83	0.82	0.86	0.75	5%
N-150/Cs-137	2	0.84	0.84	0.84	0.83	1%
<b>All</b>	<b>22</b>	<b>0.86</b>	<b>0.97</b>	<b>1.49</b>	<b>0.75</b>	<b>22%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 80: (TL) for dose quantity $H_p(0.07)$

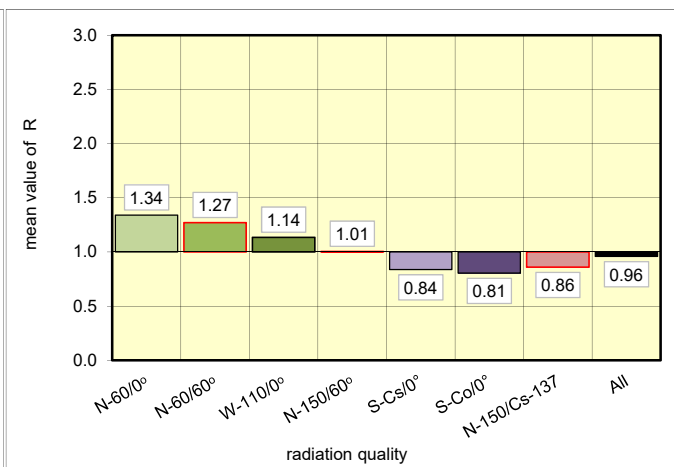
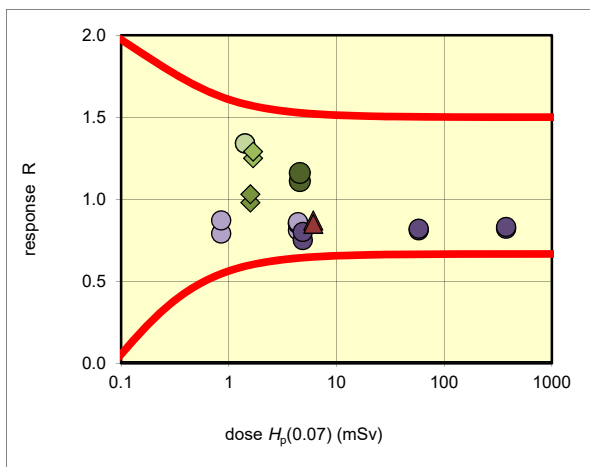
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	23	1.42	1.90	1.34	OK
		16	1.42	1.89	1.34	OK
	N-60/60°	13	1.68	2.10	1.25	OK
		17	1.68	2.18	1.29	OK
	W-110/0°	29	4.57	5.08	1.11	OK
		24	4.57	5.29	1.16	OK
	N-150/60°	7	1.59	1.55	0.98	OK
		20	1.59	1.63	1.03	OK
gamma	S-Cs-S/0°	8	0.85	0.67	0.79	OK
		22	0.85	0.74	0.87	OK
	S-Cs-L/0°	4	4.40	3.57	0.81	OK
		1	4.40	3.73	0.85	OK
		19	4.40	3.75	0.85	OK
	S-Co-L/0°	21	4.40	3.79	0.86	OK
		28	4.88	3.65	0.75	OK
	S-Co-M/0°	30	4.88	3.89	0.80	OK
		34	58.00	47.20	0.81	OK
	S-Co-H/0°	25	58.00	47.30	0.82	OK
		6	376.00	310.00	0.82	OK
	mixed	N-150/Cs-137	18	376.00	313.00	0.83
5			6.08	5.26	0.87	OK
3			6.08	5.14	0.85	OK
	WIR	10		-		
	WIR	26		-		
	NIR	2		0.52		
	NIR	9		0.53		
	NIR	11		0.59		
	NIR	12		0.53		
	NIR	14		0.60		
	NIR	15		0.59		
	NIR	27		0.56		
	NIR	31		0.57		
	NIR	32		0.56		
	NIR	33		0.55		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.34	1.34	1.34	1.34	0%
N-60/60°	2	1.27	1.27	1.29	1.25	2%
W-110/0°	2	1.14	1.14	1.16	1.11	3%
N-150/60°	2	1.01	1.01	1.03	0.98	4%
S-Cs/0°	6	0.85	0.84	0.87	0.79	4%
S-Co/0°	6	0.82	0.81	0.83	0.75	4%
N-150/Cs-137	2	0.86	0.86	0.87	0.85	2%
<b>All</b>	<b>22</b>	<b>0.86</b>	<b>0.96</b>	<b>1.34</b>	<b>0.75</b>	<b>21%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 81: (TL) for dose quantity Hp(10)

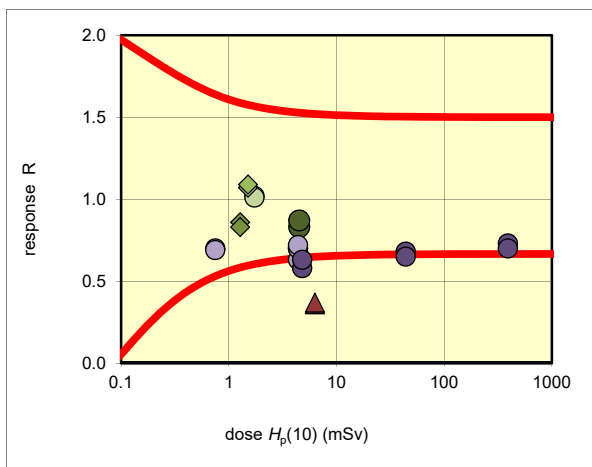
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.73	1.77	1.02	OK
		14	1.73	1.76	1.01	OK
	N-60/60°	31	1.51	1.61	1.07	OK
		27	1.51	1.65	1.09	OK
	W-110/0°	6	4.50	3.74	0.83	OK
		10	4.50	3.94	0.87	OK
N-150/60°	34	1.28	1.10	0.86	OK	
	25	1.28	1.06	0.83	OK	
gamma	S-Cs-S/0°	33	0.75	0.53	0.70	OK
		5	0.75	0.52	0.69	OK
	S-Cs-L/0°	26	4.40	2.77	0.63	outlier
		12	4.40	3.08	0.70	OK
		22	4.40	3.10	0.70	OK
		7	4.40	3.19	0.72	OK
	S-Co-L/0°	13	4.80	2.78	0.58	outlier
		8	4.80	3.01	0.63	outlier
	S-Co-M/0°	21	44.00	29.91	0.68	OK
		16	44.00	28.40	0.65	outlier
S-Co-H/0°	19	390.00	283.84	0.73	OK	
	4	390.00	273.87	0.70	OK	
mixed	N-150/Cs-137	30	6.30	2.29	0.36	outlier
		11	6.30	2.32	0.37	outlier
NIR	NIR	32		0.47		
	NIR	2		0.42		
	NIR	1		0.42		
	NIR	3		0.47		
	NIR	9		0.41		
	NIR	15		0.41		
	NIR	17		0.45		
	NIR	18		0.44		
	NIR	20		0.42		
	NIR	23		0.41		
	NIR	28		0.38		
NIR	29		0.39			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

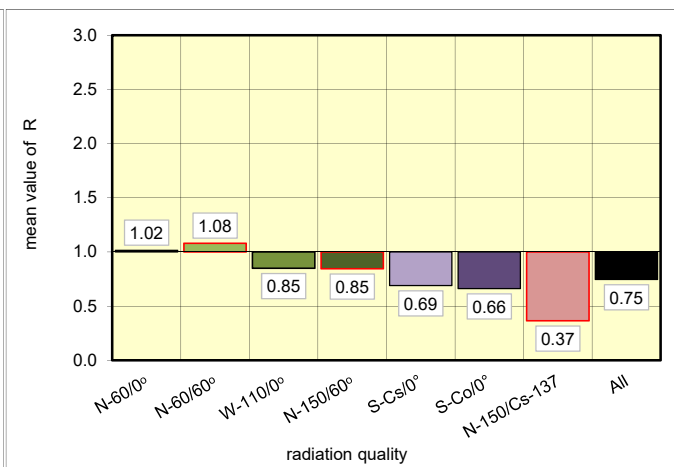
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.02	1.02	1.02	1.01	1%
N-60/60°	2	1.08	1.08	1.09	1.07	1%
W-110/0°	2	0.85	0.85	0.87	0.83	3%
N-150/60°	2	0.85	0.85	0.86	0.83	3%
S-Cs/0°	6	0.70	0.69	0.72	0.63	4%
S-Co/0°	6	0.67	0.66	0.73	0.58	8%
N-150/Cs-137	2	0.37	0.37	0.37	0.36	2%
All	22	0.70	0.75	1.09	0.36	26%

outliers: 6 of 22

fraction of outliers: 27%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 81: (TL) for dose quantity Hp(0.07)

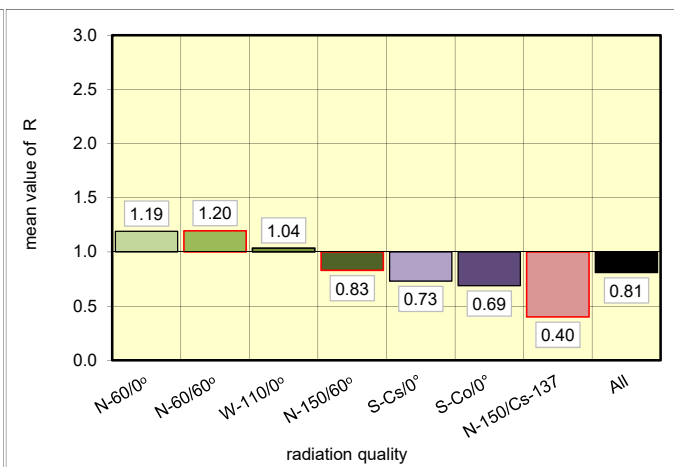
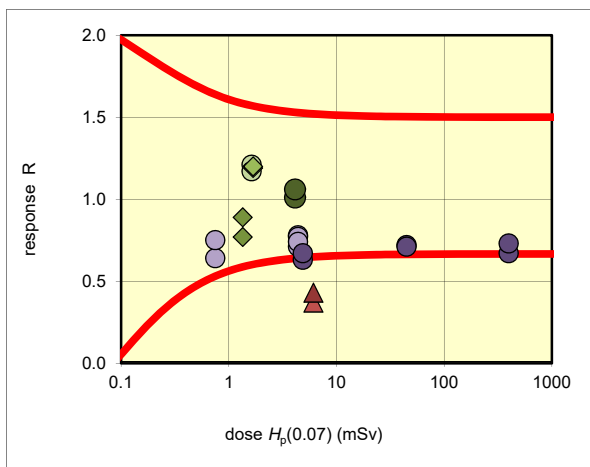
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.63	1.97	1.21	OK
		14	1.63	1.90	1.17	OK
	N-60/60°	31	1.68	2.00	1.19	OK
		27	1.68	2.01	1.20	OK
	W-110/0°	6	4.12	4.15	1.01	OK
		10	4.12	4.36	1.06	OK
	N-150/60°	34	1.35	1.03	0.77	OK
		25	1.35	1.19	0.89	OK
gamma	S-Cs-S/0°	33	0.75	0.48	0.64	OK
		5	0.75	0.56	0.75	OK
	S-Cs-L/0°	26	4.40	3.43	0.78	OK
		12	4.40	3.38	0.77	OK
		22	4.40	3.14	0.71	OK
		7	4.40	3.26	0.74	OK
	S-Co-L/0°	13	4.88	3.05	0.63	outlier
		8	4.88	3.25	0.67	OK
	S-Co-M/0°	21	44.80	32.22	0.72	OK
		16	44.80	31.61	0.71	OK
	S-Co-H/0°	19	397.00	264.90	0.67	OK
		4	397.00	290.07	0.73	OK
mixed	N-150/Cs-137	30	6.10	2.26	0.37	outlier
		11	6.10	2.65	0.43	outlier
NIR	NIR	32		0.48		
	NIR	2		0.39		
	NIR	1		0.44		
	NIR	3		0.48		
	NIR	9		0.42		
	NIR	15		0.45		
	NIR	17		0.45		
	NIR	18		0.47		
	NIR	20		0.43		
	NIR	23		0.46		
	NIR	28		0.40		
	NIR	29		0.40		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.19	1.19	1.21	1.17	2%
N-60/60°	2	1.20	1.20	1.20	1.19	1%
W-110/0°	2	1.04	1.04	1.06	1.01	3%
N-150/60°	2	0.83	0.83	0.89	0.77	10%
S-Cs/0°	6	0.75	0.73	0.78	0.64	7%
S-Co/0°	6	0.69	0.69	0.73	0.63	6%
N-150/Cs-137	2	0.40	0.40	0.43	0.37	11%
All	22	0.75	0.81	1.21	0.37	29%

outliers: 3 of 22

fraction of outliers: 14%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 82: (TL) for dose quantity Hp(10)

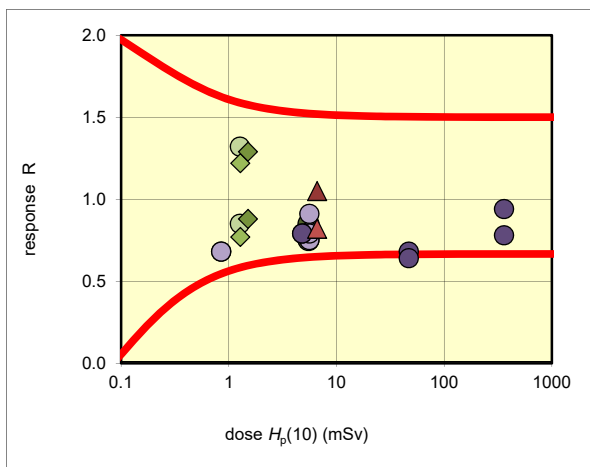
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	32	1.27	1.68	1.32	OK
		6	1.27	1.08	0.85	OK
	N-60/60°	12	1.28	0.98	0.77	OK
		16	1.28	1.56	1.22	OK
	W-110/0°	22	5.50	4.70	0.85	OK
		34	5.50	4.10	0.75	OK
N-150/60°	14	1.51	1.32	0.88	OK	
	7	1.51	1.94	1.29	OK	
gamma	S-Cs-S/0°	18	0.85	0.58	0.68	OK
		27	0.85	0.58	0.68	OK
	S-Cs-L/0°	4	5.60	4.20	0.75	OK
		3	5.60	4.50	0.80	OK
		1	5.60	4.40	0.79	OK
		10	5.60	5.10	0.91	OK
	S-Co-L/0°	30	4.80	3.80	0.79	OK
		24	4.80	3.80	0.79	OK
	S-Co-M/0°	8	47.00	32.00	0.68	OK
		5	47.00	30.00	0.64	outlier
S-Co-H/0°	28	360.00	280.00	0.78	OK	
	25	360.00	338.00	0.94	OK	
mixed	N-150/Cs-137	17	6.60	5.40	0.82	OK
		13	6.60	6.90	1.05	OK
NIR	WIR	21	-	-	-	-
	WIR	23	-	-	-	-
	NIR	2	0.00	0.00	0.00	0.00
	NIR	9	0.00	0.00	0.00	0.00
	NIR	11	0.00	0.00	0.00	0.00
	NIR	15	0.00	0.00	0.00	0.00
	NIR	19	0.00	0.00	0.00	0.00
	NIR	20	0.00	0.00	0.00	0.00
	NIR	26	0.00	0.00	0.00	0.00
	NIR	29	0.00	0.00	0.00	0.00
	NIR	31	0.00	0.00	0.00	0.00
NIR	33	0.00	0.00	0.00	0.00	

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

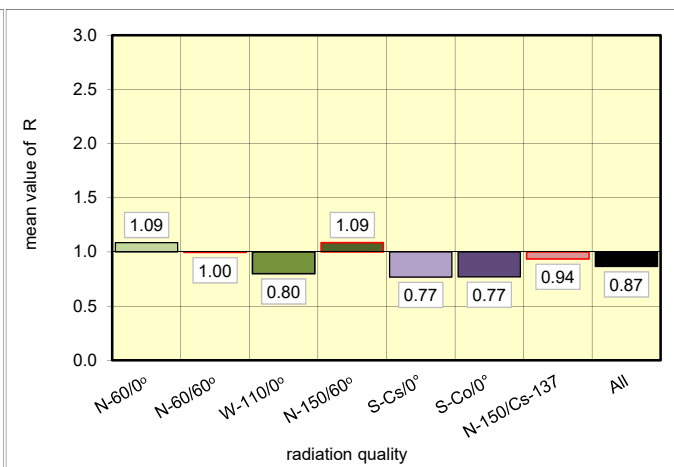
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.09	1.09	1.32	0.85	31%
N-60/60°	2	1.00	1.00	1.22	0.77	32%
W-110/0°	2	0.80	0.80	0.85	0.75	9%
N-150/60°	2	1.09	1.09	1.29	0.88	27%
S-Cs/0°	6	0.77	0.77	0.91	0.68	11%
S-Co/0°	6	0.79	0.77	0.94	0.64	14%
N-150/Cs-137	2	0.94	0.94	1.05	0.82	17%
<b>All</b>	<b>22</b>	<b>0.80</b>	<b>0.87</b>	<b>1.32</b>	<b>0.64</b>	<b>22%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 82: (TL) for dose quantity Hp(0.07)

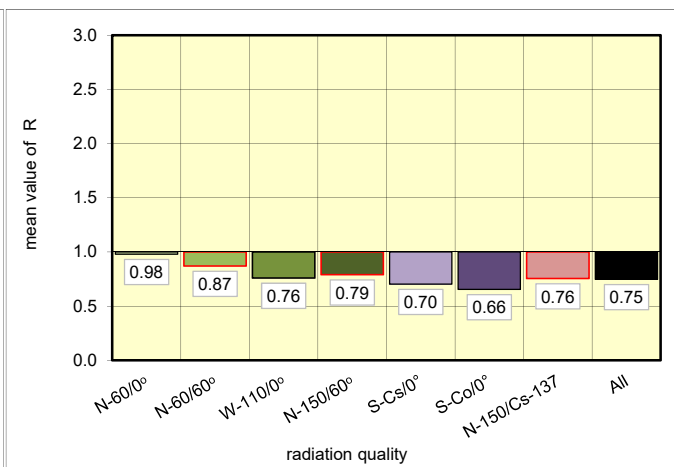
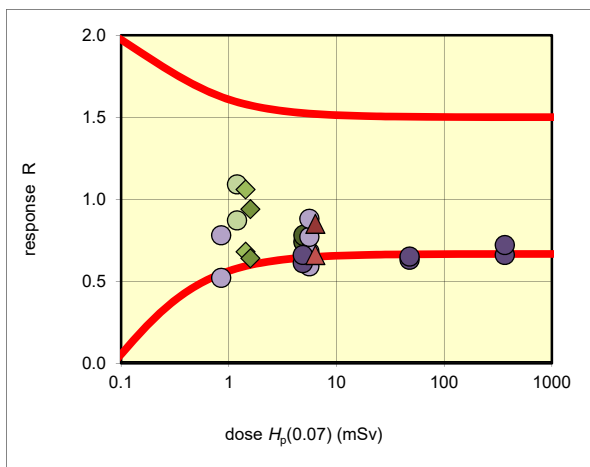
true values reported by the irradiating laboratory				values reported by participant		results	
radiation quality		dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv		response R (reported/true)	
x-ray	N-60/0°	32	1.20	1.30	1.09	OK	
		6	1.20	1.04	0.87	OK	
	N-60/60°	12	1.43	0.98	0.68	OK	
		16	1.43	1.52	1.06	OK	
	W-110/0°	22	5.03	3.70	0.74	OK	
		34	5.03	3.90	0.78	OK	
	N-150/60°	14	1.59	1.02	0.64	OK	
		7	1.59	1.50	0.94	OK	
gamma	S-Cs-S/0°	18	0.85	0.44	0.52	outlier	
		27	0.85	0.66	0.78	OK	
	S-Cs-L/0°	4	5.60	3.30	0.59	outlier	
		3	5.60	3.80	0.68	OK	
		1	5.60	4.30	0.77	OK	
		10	5.60	4.90	0.88	OK	
	S-Co-L/0°	30	4.88	3.00	0.61	outlier	
		24	4.88	3.20	0.66	OK	
	S-Co-M/0°	8	47.80	30.00	0.63	outlier	
		5	47.80	31.00	0.65	outlier	
	S-Co-H/0°	28	366.00	240.00	0.66	outlier	
		25	366.00	263.00	0.72	OK	
mixed	N-150/Cs-137	17	6.36	4.20	0.66	OK	
		13	6.36	5.40	0.85	OK	
NIR	WIR	21	-	-	-	-	
	WIR	23	-	-	-	-	
	NIR	2	0.00	0.00	0.00	0.00	
	NIR	9	0.00	0.00	0.00	0.00	
	NIR	11	0.00	0.00	0.00	0.00	
	NIR	15	0.00	0.00	0.00	0.00	
	NIR	19	0.00	0.00	0.00	0.00	
	NIR	20	0.00	0.00	0.00	0.00	
	NIR	26	0.00	0.00	0.00	0.00	
	NIR	29	0.00	0.00	0.00	0.00	
	NIR	31	0.00	0.00	0.00	0.00	
NIR	33	0.00	0.00	0.00	0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.98</b>	0.98	1.09	0.87	16%
N-60/60°	2	<b>0.87</b>	0.87	1.06	0.68	31%
W-110/0°	2	<b>0.76</b>	0.76	0.78	0.74	4%
N-150/60°	2	<b>0.79</b>	0.79	0.94	0.64	27%
S-Cs/0°	6	<b>0.73</b>	0.70	0.88	0.52	19%
S-Co/0°	6	<b>0.66</b>	0.66	0.72	0.61	6%
N-150/Cs-137	2	<b>0.76</b>	0.76	0.85	0.66	18%
<b>All</b>	<b>22</b>	<b>0.70</b>	<b>0.75</b>	<b>1.09</b>	<b>0.52</b>	<b>20%</b>

outliers: 6 of 22

fraction of outliers: 27%



Results: IC2018

## Reporting number 83: (TL) for dose quantity Hp(10)

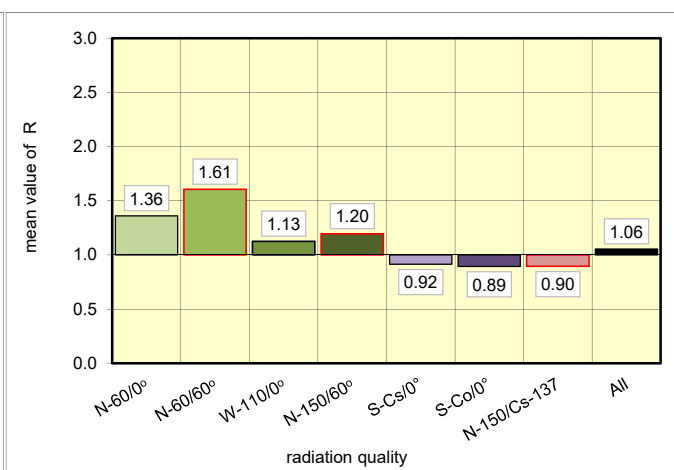
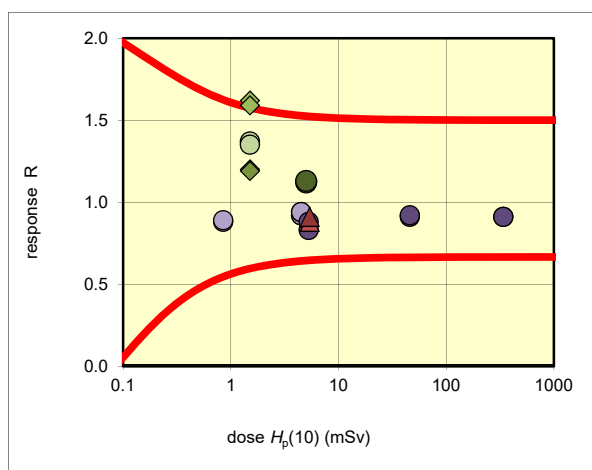
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	29	1.51	2.07	1.37	OK
		22	1.51	2.03	1.35	OK
	N-60/60°	13	1.51	2.44	1.62	outlier
		5	1.51	2.39	1.59	outlier
	W-110/0°	2	5.00	5.58	1.12	OK
		34	5.00	5.63	1.13	OK
N-150/60°	1	1.51	1.80	1.20	OK	
	30	1.51	1.79	1.19	OK	
gamma	S-Cs-S/0°	3	0.85	0.75	0.88	OK
		16	0.85	0.76	0.89	OK
	S-Cs-L/0°	18	4.50	4.13	0.92	OK
		20	4.50	4.15	0.92	OK
		4	4.50	4.25	0.94	OK
		7	4.50	4.21	0.94	OK
	S-Co-L/0°	14	5.30	4.39	0.83	OK
		11	5.30	4.64	0.88	OK
	S-Co-M/0°	10	46.00	42.06	0.91	OK
		31	46.00	42.16	0.92	OK
	S-Co-H/0°	17	340.00	310.80	0.91	OK
		32	340.00	308.50	0.91	OK
mixed	N-150/Cs-137	21	5.40	4.74	0.88	OK
		19	5.40	4.91	0.91	OK
NIR	NIR	6		0.61		
	NIR	8		0.65		
	NIR	9		0.58		
	NIR	12		0.60		
	NIR	15		0.56		
	NIR	23		0.55		
	NIR	24		0.54		
	NIR	25		0.58		
	NIR	26		0.57		
	NIR	27		0.66		
	NIR	28		0.64		
	NIR	33		0.54		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.36	1.36	1.37	1.35	1%
N-60/60°	2	1.61	1.61	1.62	1.59	1%
W-110/0°	2	1.13	1.13	1.13	1.12	1%
N-150/60°	2	1.20	1.20	1.20	1.19	1%
S-Cs/0°	6	0.92	0.92	0.94	0.88	3%
S-Co/0°	6	0.91	0.89	0.92	0.83	4%
N-150/Cs-137	2	0.90	0.90	0.91	0.88	2%
<b>All</b>	<b>22</b>	<b>0.92</b>	<b>1.06</b>	<b>1.62</b>	<b>0.83</b>	<b>22%</b>

outliers: 2 of 22

Fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 83: (TL) for dose quantity $H_p(0.07)$

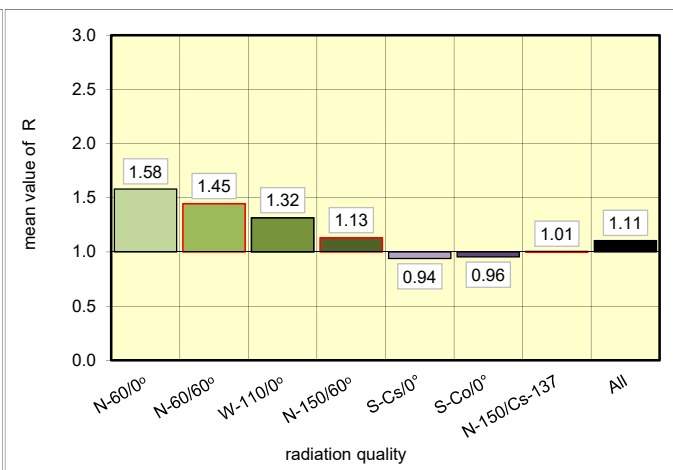
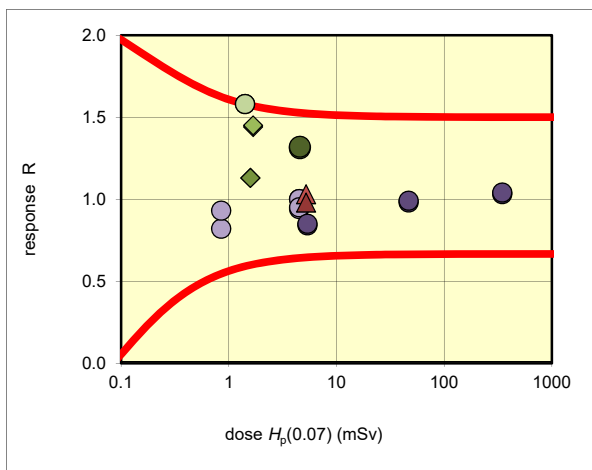
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	29	1.42	2.24	1.58	OK
		22	1.42	2.23	1.58	OK
	N-60/60°	13	1.68	2.43	1.44	OK
		5	1.68	2.45	1.45	OK
	W-110/0°	2	4.57	5.98	1.31	OK
		34	4.57	6.04	1.32	OK
N-150/60°	1	1.59	1.79	1.13	OK	
	30	1.59	1.79	1.13	OK	
gamma	S-Cs-S/0°	3	0.85	0.70	0.82	OK
		16	0.85	0.79	0.93	OK
	S-Cs-L/0°	18	4.50	4.49	1.00	OK
		20	4.50	4.49	1.00	OK
		4	4.50	4.25	0.94	OK
		7	4.50	4.26	0.95	OK
	S-Co-L/0°	14	5.39	4.54	0.84	OK
		11	5.39	4.59	0.85	OK
	S-Co-M/0°	10	46.80	45.84	0.98	OK
		31	46.80	46.19	0.99	OK
	S-Co-H/0°	17	346.00	355.90	1.03	OK
		32	346.00	358.80	1.04	OK
mixed	N-150/Cs-137	21	5.22	5.36	1.03	OK
		19	5.22	5.12	0.98	OK
NIR	NIR	6		0.71		
	NIR	8		0.81		
	NIR	9		0.64		
	NIR	12		0.81		
	NIR	15		0.64		
	NIR	23		0.73		
	NIR	24		0.68		
	NIR	25		0.83		
	NIR	26		0.76		
	NIR	27		0.85		
	NIR	28		0.71		
NIR	33		0.67			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.58	1.58	1.58	1.58	0%
N-60/60°	2	1.45	1.45	1.45	1.44	0%
W-110/0°	2	1.32	1.32	1.32	1.31	1%
N-150/60°	2	1.13	1.13	1.13	1.13	0%
S-Cs/0°	6	0.95	0.94	1.00	0.82	7%
S-Co/0°	6	0.99	0.96	1.04	0.84	9%
N-150/Cs-137	2	1.01	1.01	1.03	0.98	4%
All	22	1.02	1.11	1.58	0.82	21%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 84: (TL) for dose quantity Hp(10)

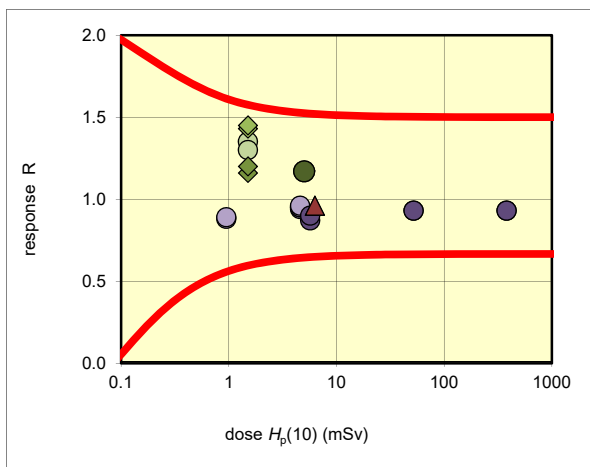
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.51	2.04	1.35	OK
		8	1.51	1.96	1.30	OK
	N-60/60°	20	1.51	2.16	1.43	OK
		33	1.51	2.19	1.45	OK
	W-110/0°	9	5.00	5.86	1.17	OK
		19	5.00	5.87	1.17	OK
N-150/60°	7	1.51	1.74	1.16	OK	
	21	1.51	1.81	1.20	OK	
gamma	S-Cs-S/0°	22	0.95	0.84	0.88	OK
		26	0.95	0.85	0.89	OK
	S-Cs-L/0°	1	4.60	4.34	0.94	OK
		23	4.60	4.35	0.95	OK
		28	4.60	4.37	0.95	OK
		2	4.60	4.42	0.96	OK
	S-Co-L/0°	11	5.70	4.98	0.87	OK
		10	5.70	5.11	0.90	OK
	S-Co-M/0°	16	52.00	48.20	0.93	OK
		34	52.00	48.28	0.93	OK
S-Co-H/0°	3	380.00	351.70	0.93	OK	
	17	380.00	354.05	0.93	OK	
mixed	N-150/Cs-137	13	6.30	6.03	0.96	OK
		14	6.30	6.03	0.96	OK
NIR	NIR	4		0.57		
		5		0.57		
		6		0.56		
		12		0.57		
		15		0.67		
		18		0.65		
		25		0.65		
		27		0.66		
		29		0.66		
		30		0.57		
		31		0.60		
		32		0.59		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

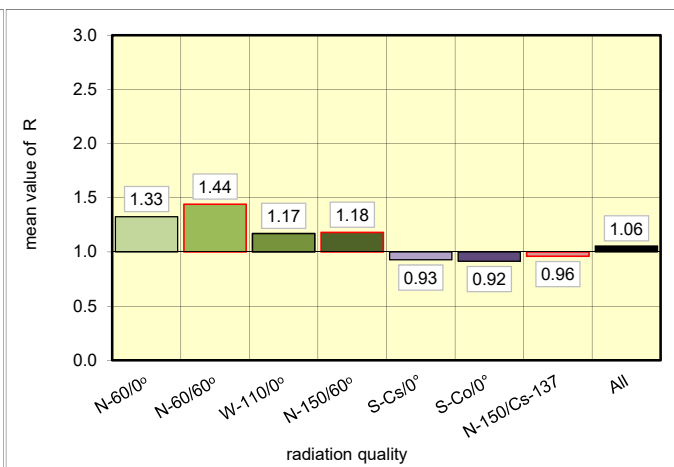
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.33	1.33	1.35	1.30	3%
N-60/60°	2	1.44	1.44	1.45	1.43	1%
W-110/0°	2	1.17	1.17	1.17	1.17	0%
N-150/60°	2	1.18	1.18	1.20	1.16	2%
S-Cs/0°	6	0.95	0.93	0.96	0.88	4%
S-Co/0°	6	0.93	0.92	0.93	0.87	3%
N-150/Cs-137	2	0.96	0.96	0.96	0.96	0%
<b>All</b>	<b>22</b>	<b>0.96</b>	<b>1.06</b>	<b>1.45</b>	<b>0.87</b>	<b>18%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018



## Reporting number 84: (TL) for dose quantity $H_p(0.07)$

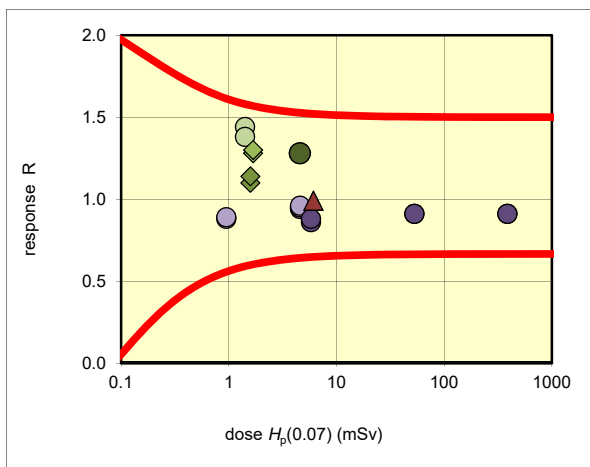
true values reported by the irradiating laboratory				values reported by participant	results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.42	2.04	1.44	OK
		8	1.42	1.96	1.38	OK
	N-60/60°	20	1.68	2.16	1.28	OK
		33	1.68	2.19	1.30	OK
	W-110/0°	9	4.57	5.86	1.28	OK
		19	4.57	5.87	1.28	OK
	N-150/60°	7	1.59	1.74	1.10	OK
		21	1.59	1.81	1.14	OK
gamma	S-Cs-S/0°	22	0.95	0.84	0.88	OK
		26	0.95	0.85	0.89	OK
	S-Cs-L/0°	1	4.60	4.34	0.94	OK
		23	4.60	4.35	0.95	OK
		28	4.60	4.37	0.95	OK
		2	4.60	4.42	0.96	OK
	S-Co-L/0°	11	5.80	4.98	0.86	OK
		10	5.80	5.11	0.88	OK
	S-Co-M/0°	16	52.90	48.20	0.91	OK
		34	52.90	48.28	0.91	OK
	S-Co-H/0°	3	387.00	351.70	0.91	OK
		17	387.00	354.05	0.91	OK
mixed	N-150/Cs-137	13	6.11	6.03	0.99	OK
		14	6.11	6.03	0.99	OK
NIR	4			0.57		
	5			0.57		
	6			0.56		
	12			0.57		
	15			0.67		
	18			0.65		
	25			0.65		
	27			0.66		
	29			0.66		
	30			0.57		
	31			0.60		
	32			0.59		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

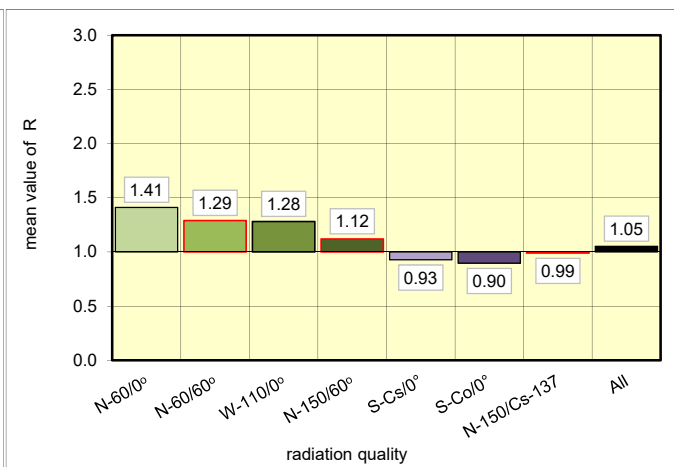
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.41	1.41	1.44	1.38	3%
N-60/60°	2	1.29	1.29	1.30	1.28	1%
W-110/0°	2	1.28	1.28	1.28	1.28	0%
N-150/60°	2	1.12	1.12	1.14	1.10	3%
S-Cs/0°	6	0.95	0.93	0.96	0.88	4%
S-Co/0°	6	0.91	0.90	0.91	0.86	2%
N-150/Cs-137	2	0.99	0.99	0.99	0.99	0%
<b>All</b>	<b>22</b>	<b>0.96</b>	<b>1.05</b>	<b>1.44</b>	<b>0.86</b>	<b>18%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 85: (TL) for dose quantity Hp(10)

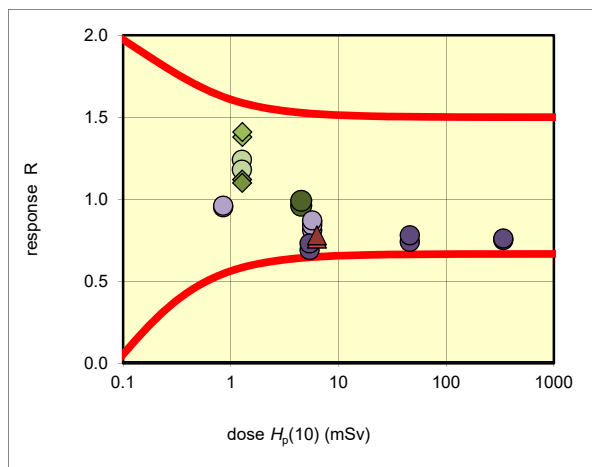
true values reported by the irradiating laboratory			values reported by participant		results		
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)			
x-ray	N-60/0°	18	1.27	1.58	1.24	OK	
		15	1.27	1.50	1.18	OK	
	N-60/60°	14	1.28	1.77	1.38	OK	
		28	1.28	1.81	1.41	OK	
	W-110/0°	22	4.50	4.31	0.96	OK	
		12	4.50	4.47	0.99	OK	
N-150/60°	23	1.28	1.43	1.12	OK		
	21	1.28	1.41	1.10	OK		
gamma	S-Cs-S/0°	11	0.85	0.81	0.95	OK	
		27	0.85	0.82	0.96	OK	
	S-Cs-L/0°	16	5.70	4.62	0.81	OK	
		30	5.70	4.88	0.86	OK	
		31	5.70	4.79	0.84	OK	
	S-Co-L/0°	13	5.70	4.98	0.87	OK	
		20	5.40	3.75	0.69	OK	
	S-Co-M/0°	24	5.40	3.92	0.73	OK	
		9	46.00	33.86	0.74	OK	
	S-Co-H/0°	8	46.00	36.02	0.78	OK	
3		340.00	254.40	0.75	OK		
mixed	N-150/Cs-137	2	340.00	257.19	0.76	OK	
		17	6.30	4.79	0.76	OK	
		19	6.30	4.94	0.78	OK	
		NIR	1		0.19		
		NIR	4		0.19		
		NIR	5		0.20		
		NIR	6		0.16		
		NIR	7		0.19		
		NIR	10		0.16		
		NIR	25		0.17		
		NIR	26		0.16		
		NIR	29		0.19		
		NIR	32		0.16		
		NIR	33		0.15		
NIR	34		0.18				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

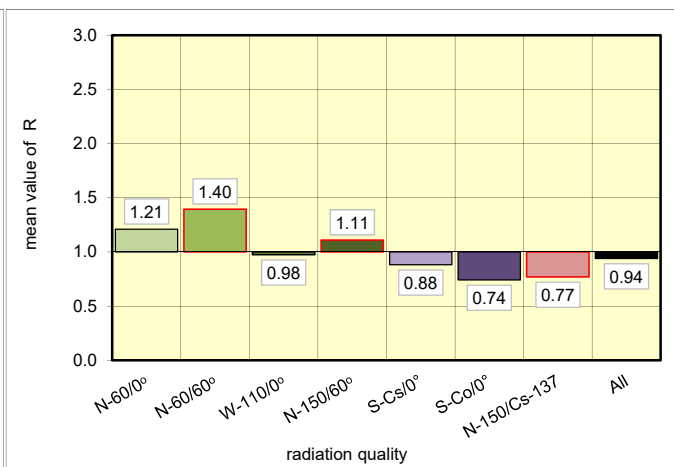
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.21	1.21	1.24	1.18	4%
N-60/60°	2	1.40	1.40	1.41	1.38	2%
W-110/0°	2	0.98	0.98	0.99	0.96	2%
N-150/60°	2	1.11	1.11	1.12	1.10	1%
S-Cs/0°	6	0.87	0.88	0.96	0.81	7%
S-Co/0°	6	0.75	0.74	0.78	0.69	4%
N-150/Cs-137	2	0.77	0.77	0.78	0.76	2%
All	22	0.87	0.94	1.41	0.69	23%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 85: (TL) for dose quantity Hp(0.07)

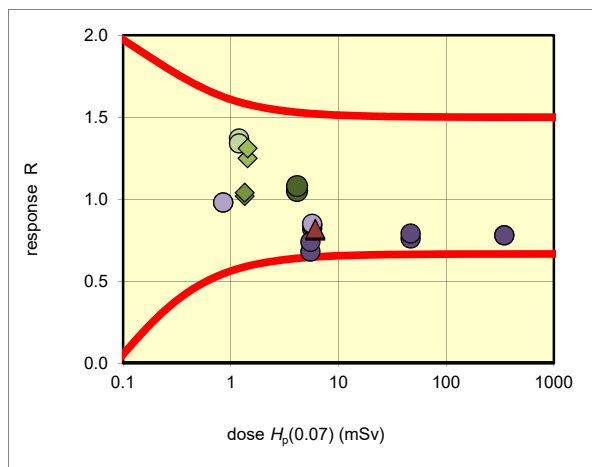
true values reported by the irradiating laboratory			values reported by participant		results		
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)			
x-ray	N-60/0°	18	1.20	1.64	1.37	OK	
		15	1.20	1.60	1.34	OK	
	N-60/60°	14	1.43	1.78	1.25	OK	
		28	1.43	1.87	1.31	OK	
	W-110/0°	22	4.12	4.31	1.05	OK	
		12	4.12	4.44	1.08	OK	
	N-150/60°	23	1.35	1.37	1.02	OK	
		21	1.35	1.40	1.04	OK	
gamma	S-Cs-S/0°	11	0.85	0.84	0.98	OK	
		27	0.85	0.83	0.98	OK	
	S-Cs-L/0°	16	5.70	4.68	0.82	OK	
		30	5.70	4.81	0.84	OK	
		31	5.70	4.80	0.84	OK	
	S-Co-L/0°	13	5.70	4.86	0.85	OK	
		20	5.49	3.74	0.68	OK	
	S-Co-M/0°	24	5.49	4.07	0.74	OK	
		9	46.80	35.50	0.76	OK	
	S-Co-H/0°	8	46.80	36.86	0.79	OK	
3		346.00	269.56	0.78	OK		
mixed	N-150/Cs-137	2	346.00	271.16	0.78	OK	
		17	6.09	4.96	0.81	OK	
NIR	N-150/Cs-137	19	6.09	5.02	0.82	OK	
		1		0.21			
		4		0.20			
		5		0.20			
		6		0.17			
		7		0.19			
		10		0.17			
		25		0.18			
		26		0.17			
		29		0.20			
		32		0.17			
		33		0.16			
34		0.19					

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

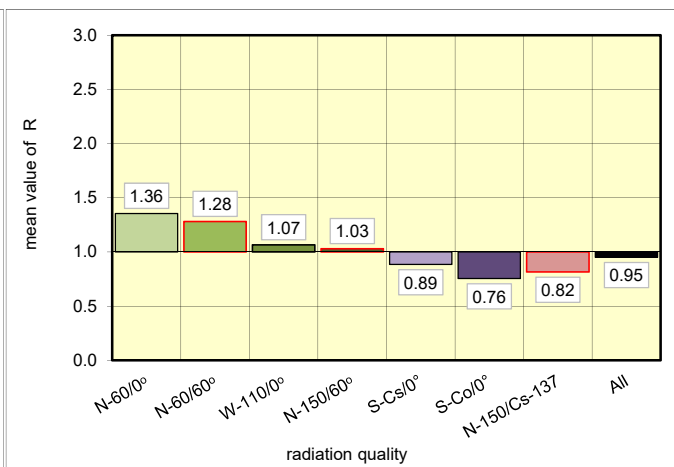
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.36	1.36	1.37	1.34	2%
N-60/60°	2	1.28	1.28	1.31	1.25	3%
W-110/0°	2	1.07	1.07	1.08	1.05	2%
N-150/60°	2	1.03	1.03	1.04	1.02	1%
S-Cs/0°	6	0.85	0.89	0.98	0.82	8%
S-Co/0°	6	0.77	0.76	0.79	0.68	5%
N-150/Cs-137	2	0.82	0.82	0.82	0.81	1%
All	22	0.85	0.95	1.37	0.68	22%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 86: (TL) for dose quantity Hp(10)

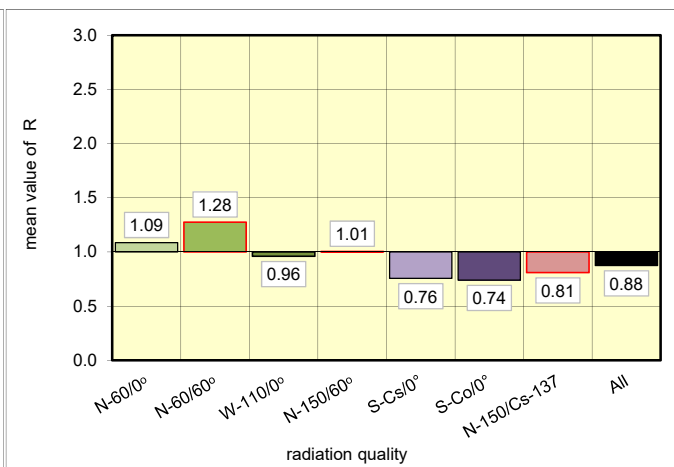
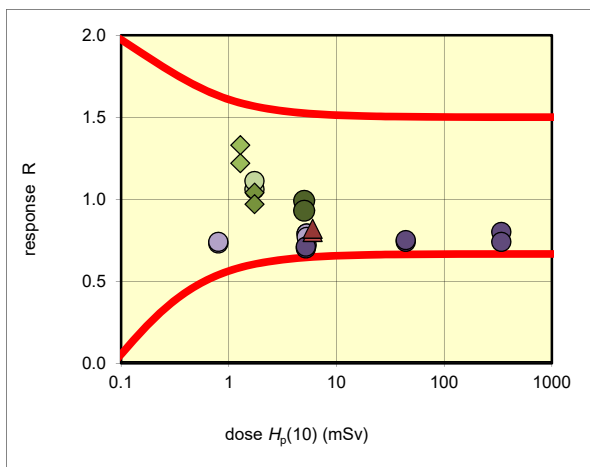
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.73	1.84	1.06	OK
		13	1.73	1.93	1.11	OK
	N-60/60°	21	1.28	1.56	1.22	OK
		14	1.28	1.70	1.33	OK
	W-110/0°	3	5.00	4.94	0.99	OK
		18	5.00	4.67	0.93	OK
N-150/60°	10	1.73	1.81	1.04	OK	
	6	1.73	1.68	0.97	OK	
gamma	S-Cs-S/0°	4	0.80	0.58	0.73	OK
		12	0.80	0.59	0.74	OK
	S-Cs-L/0°	5	5.30	4.17	0.79	OK
		11	5.30	3.80	0.72	OK
		32	5.30	4.18	0.79	OK
		27	5.30	4.11	0.77	OK
	S-Co-L/0°	30	5.20	3.62	0.70	OK
		31	5.20	3.69	0.71	OK
	S-Co-M/0°	25	44.00	32.66	0.74	OK
		29	44.00	32.87	0.75	OK
S-Co-H/0°	34	340.00	273.02	0.80	OK	
	20	340.00	250.21	0.74	OK	
mixed	N-150/Cs-137	17	6.00	4.80	0.80	OK
		15	6.00	4.91	0.82	OK
NIR	NIR	7		0.20		
	NIR	1		0.19		
	NIR	2		0.24		
	NIR	8		0.21		
	NIR	9		0.19		
	NIR	16		0.20		
	NIR	19		0.24		
	NIR	22		0.25		
	NIR	23		0.25		
	NIR	26		0.24		
	NIR	28		0.21		
	NIR	33		0.20		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.09	1.09	1.11	1.06	3%
N-60/60°	2	1.28	1.28	1.33	1.22	6%
W-110/0°	2	0.96	0.96	0.99	0.93	4%
N-150/60°	2	1.01	1.01	1.04	0.97	5%
S-Cs/0°	6	0.76	0.76	0.79	0.72	4%
S-Co/0°	6	0.74	0.74	0.80	0.70	5%
N-150/Cs-137	2	0.81	0.81	0.82	0.80	2%
<b>All</b>	<b>22</b>	<b>0.80</b>	<b>0.88</b>	<b>1.33</b>	<b>0.70</b>	<b>21%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 86: (TL) for dose quantity $H_p(0.07)$

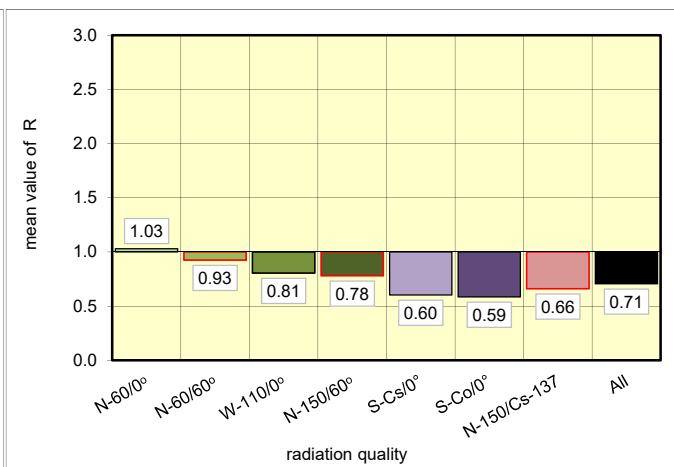
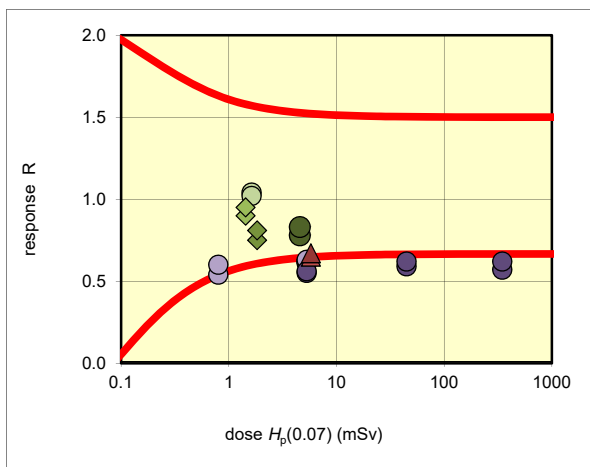
true values reported by the irradiating laboratory				values reported by participant	results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.63	1.69	1.04	OK
		13	1.63	1.66	1.02	OK
	N-60/60°	21	1.43	1.29	0.90	OK
		14	1.43	1.36	0.95	OK
	W-110/0°	3	4.57	3.57	0.78	OK
		18	4.57	3.80	0.83	OK
	N-150/60°	10	1.83	1.38	0.75	OK
		6	1.83	1.48	0.81	OK
gamma	S-Cs-S/0°	4	0.80	0.43	0.54	OK
		12	0.80	0.48	0.60	OK
	S-Cs-L/0°	5	5.30	3.24	0.61	outlier
		11	5.30	3.29	0.62	outlier
		32	5.30	3.29	0.62	outlier
		27	5.30	3.34	0.63	outlier
	S-Co-L/0°	30	5.29	2.90	0.55	outlier
		31	5.29	2.98	0.56	outlier
	S-Co-M/0°	25	44.80	26.40	0.59	outlier
		29	44.80	27.65	0.62	outlier
	S-Co-H/0°	34	346.00	198.78	0.57	outlier
		20	346.00	213.19	0.62	outlier
mixed	N-150/Cs-137	17	5.78	3.74	0.65	OK
		15	5.78	3.86	0.67	OK
NIR	NIR	7		0.17		
	NIR	1		0.17		
	NIR	2		0.24		
	NIR	8		0.17		
	NIR	9		0.17		
	NIR	16		0.19		
	NIR	19		0.21		
	NIR	22		0.24		
	NIR	23		0.20		
	NIR	26		0.20		
	NIR	28		0.18		
	NIR	33		0.16		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.03</b>	1.03	1.04	1.02	1%
N-60/60°	2	<b>0.93</b>	0.93	0.95	0.90	4%
W-110/0°	2	<b>0.81</b>	0.81	0.83	0.78	4%
N-150/60°	2	<b>0.78</b>	0.78	0.81	0.75	5%
S-Cs/0°	6	<b>0.62</b>	0.60	0.63	0.54	5%
S-Co/0°	6	<b>0.58</b>	0.59	0.62	0.55	5%
N-150/Cs-137	2	<b>0.66</b>	0.66	0.67	0.65	2%
<b>All</b>	<b>22</b>	<b>0.63</b>	<b>0.71</b>	<b>1.04</b>	<b>0.54</b>	<b>22%</b>

outliers: 10 of 22

fraction of outliers: 45%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 87: (TL) for dose quantity Hp(10)

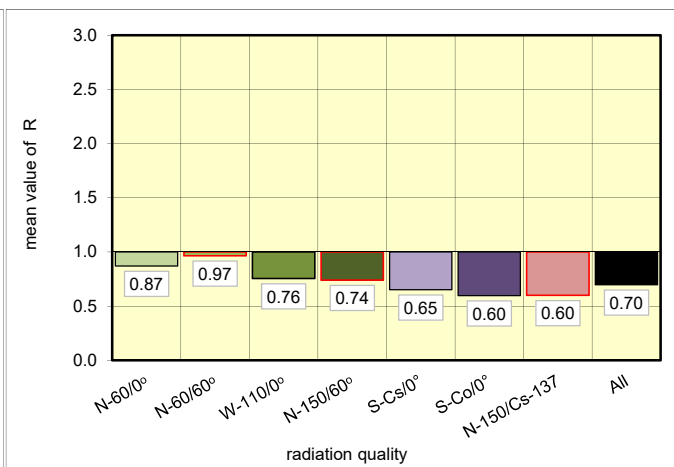
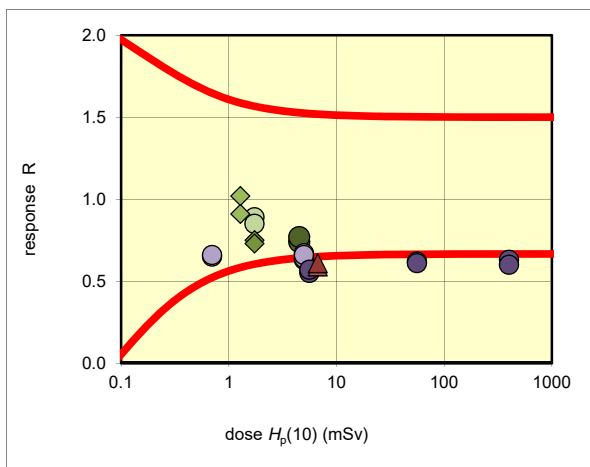
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	13	1.73	1.55	0.89	OK
		1	1.73	1.47	0.85	OK
	N-60/60°	27	1.28	1.17	0.91	OK
		4	1.28	1.31	1.02	OK
	W-110/0°	32	4.50	3.32	0.74	OK
		34	4.50	3.48	0.77	OK
N-150/60°	6	1.73	1.30	0.75	OK	
	11	1.73	1.26	0.73	OK	
gamma	S-Cs-S/0°	33	0.70	0.46	0.65	OK
		23	0.70	0.46	0.66	OK
	S-Cs-L/0°	3	5.00	3.13	0.63	outlier
		22	5.00	3.33	0.67	OK
		21	5.00	3.20	0.64	outlier
		2	5.00	3.32	0.66	OK
	S-Co-L/0°	12	5.60	3.06	0.55	outlier
		8	5.60	3.21	0.57	outlier
	S-Co-M/0°	16	56.00	34.90	0.62	outlier
		20	56.00	34.30	0.61	outlier
S-Co-H/0°	15	400.00	253.00	0.63	outlier	
	5	400.00	241.00	0.60	outlier	
mixed	N-150/Cs-137	26	6.70	3.95	0.59	outlier
		19	6.70	4.06	0.61	outlier
NIR	NIR	18		0.11		
	NIR	24		0.13		
	NIR	17		0.11		
	NIR	7		0.14		
	NIR	9		0.10		
	NIR	10		0.14		
	NIR	14		0.10		
	NIR	25		0.13		
	NIR	28		0.10		
	NIR	29		0.10		
	NIR	30		0.13		
NIR	31		0.11			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.87</b>	0.87	0.89	0.85	3%
N-60/60°	2	<b>0.97</b>	0.97	1.02	0.91	8%
W-110/0°	2	<b>0.76</b>	0.76	0.77	0.74	3%
N-150/60°	2	<b>0.74</b>	0.74	0.75	0.73	2%
S-Cs/0°	6	<b>0.66</b>	0.65	0.67	0.63	2%
S-Co/0°	6	<b>0.61</b>	0.60	0.63	0.55	5%
N-150/Cs-137	2	<b>0.60</b>	0.60	0.61	0.59	2%
<b>All</b>	<b>22</b>	<b>0.66</b>	<b>0.70</b>	<b>1.02</b>	<b>0.55</b>	<b>18%</b>

outliers: 10 of 22

fraction of outliers: 45%



Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 88: (TL) for dose quantity $H_p(10)$

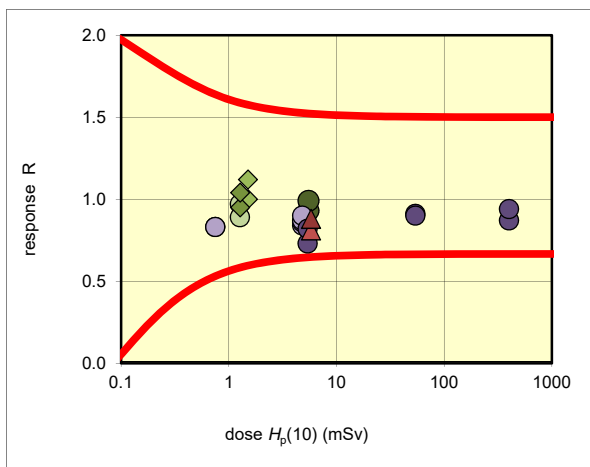
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	3	1.27	1.23	0.97	OK
		30	1.27	1.13	0.89	OK
	N-60/60°	24	1.51	1.51	1.00	OK
		13	1.51	1.69	1.12	OK
	W-110/0°	33	5.50	5.14	0.93	OK
		11	5.50	5.45	0.99	OK
N-150/60°	26	1.28	1.21	0.95	OK	
	34	1.28	1.33	1.04	OK	
gamma	S-Cs-S/0°	1	0.75	0.62	0.83	OK
		28	0.75	0.62	0.83	OK
	S-Cs-L/0°	6	4.80	4.03	0.84	OK
		17	4.80	4.13	0.86	OK
		25	4.80	4.16	0.87	OK
	S-Co-L/0°	2	4.80	4.33	0.90	OK
		14	5.40	3.95	0.73	OK
	S-Co-M/0°	15	5.40	4.41	0.82	OK
		29	54.00	49.16	0.91	OK
	S-Co-H/0°	19	54.00	48.42	0.90	OK
21		400.00	347.26	0.87	OK	
mixed	N-150/Cs-137	8	400.00	377.90	0.94	OK
		22	5.80	4.68	0.81	OK
	20	5.80	5.13	0.88	OK	
NIR	NIR	4		0.00		
		5		0.00		
		7		0.00		
		9		0.00		
		10		0.00		
		12		0.00		
		16		0.00		
		18		0.00		
		23		0.00		
		27		0.00		
		31		0.00		
		32		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

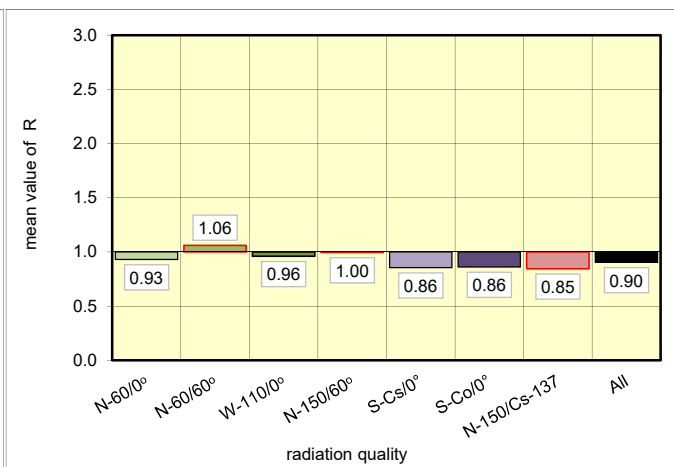
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.93</b>	0.93	0.97	0.89	6%
N-60/60°	2	<b>1.06</b>	1.06	1.12	1.00	8%
W-110/0°	2	<b>0.96</b>	0.96	0.99	0.93	4%
N-150/60°	2	<b>1.00</b>	1.00	1.04	0.95	6%
S-Cs/0°	6	<b>0.85</b>	0.86	0.90	0.83	3%
S-Co/0°	6	<b>0.89</b>	0.86	0.94	0.73	9%
N-150/Cs-137	2	<b>0.85</b>	0.85	0.88	0.81	6%
<b>All</b>	<b>22</b>	<b>0.90</b>	<b>0.90</b>	<b>1.12</b>	<b>0.73</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018



## Reporting number 88: (TL) for dose quantity Hp(0.07)

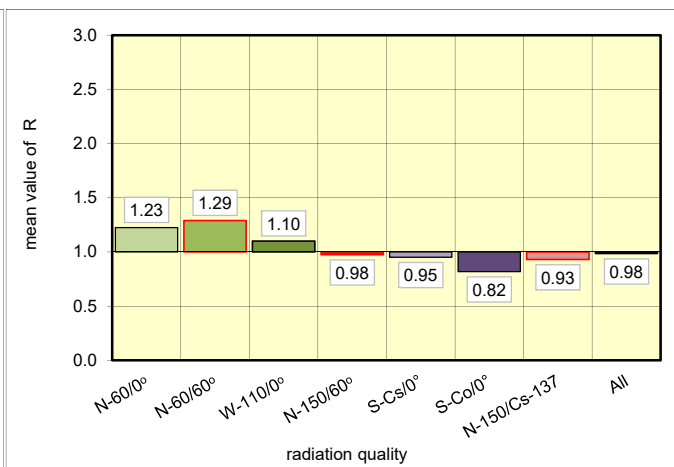
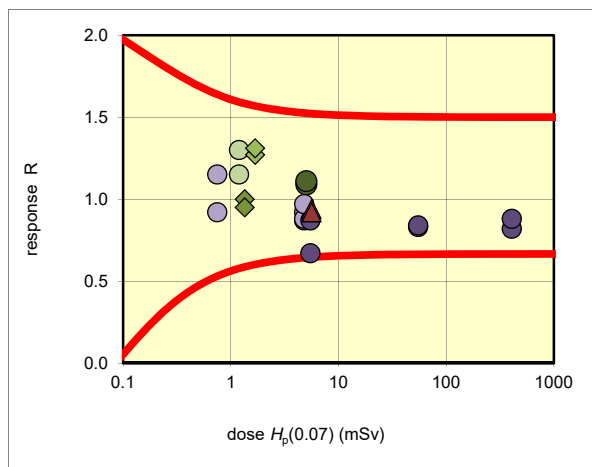
true values reported by the irradiating laboratory				values reported by participant	results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	3	1.20	1.55	1.30	OK
		30	1.20	1.37	1.15	OK
	N-60/60°	24	1.68	2.14	1.27	OK
		13	1.68	2.20	1.31	OK
	W-110/0°	33	5.03	5.47	1.09	OK
		11	5.03	5.60	1.11	OK
	N-150/60°	26	1.35	1.34	1.00	OK
		34	1.35	1.28	0.95	OK
gamma	S-Cs-S/0°	1	0.75	0.69	0.92	OK
		28	0.75	0.86	1.15	OK
	S-Cs-L/0°	6	4.80	4.43	0.92	OK
		17	4.80	4.16	0.87	OK
		25	4.80	4.21	0.88	OK
	S-Co-L/0°	2	4.80	4.66	0.97	OK
		14	5.49	3.69	0.67	OK
	S-Co-M/0°	15	5.49	4.79	0.87	OK
		29	54.90	45.71	0.83	OK
	S-Co-H/0°	19	54.90	46.36	0.84	OK
		21	407.00	334.51	0.82	OK
	mixed	N-150/Cs-137	8	407.00	358.28	0.88
22			5.62	5.30	0.94	OK
NIR	N-150/Cs-137	20	5.62	5.19	0.92	OK
		4		0.00		
		5		0.00		
		7		0.00		
		9		0.00		
		10		0.00		
		12		0.00		
		16		0.00		
		18		0.00		
		23		0.00		
27		0.00				
31		0.00				
32		0.00				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.23	1.23	1.30	1.15	9%
N-60/60°	2	1.29	1.29	1.31	1.27	2%
W-110/0°	2	1.10	1.10	1.11	1.09	1%
N-150/60°	2	0.98	0.98	1.00	0.95	4%
S-Cs/0°	6	0.92	0.95	1.15	0.87	11%
S-Co/0°	6	0.84	0.82	0.88	0.67	9%
N-150/Cs-137	2	0.93	0.93	0.94	0.92	2%
All	22	0.93	0.98	1.31	0.67	17%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 89: (TL) for dose quantity Hp(10)

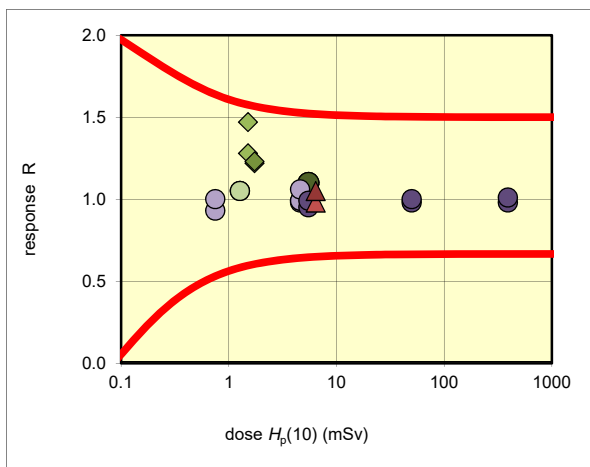
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose Hp(10) mSv	dose Hp(10) mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.27	1.34	1.05	OK
		4	1.27	1.33	1.05	OK
	N-60/60°	24	1.51	1.93	1.28	OK
		7	1.51	2.22	1.47	OK
	W-110/0°	1	5.50	6.03	1.10	OK
		22	5.50	6.03	1.10	OK
N-150/60°	25	1.73	2.12	1.22	OK	
	18	1.73	2.13	1.23	OK	
gamma	S-Cs-S/0°	33	0.75	0.70	0.93	OK
		34	0.75	0.75	1.00	OK
	S-Cs-L/0°	12	4.60	4.52	0.98	OK
		15	4.60	4.55	0.99	OK
		23	4.60	4.56	0.99	OK
		28	4.60	4.88	1.06	OK
	S-Co-L/0°	11	5.50	5.24	0.95	OK
		9	5.50	5.45	0.99	OK
	S-Co-M/0°	21	50.00	48.89	0.98	OK
		30	50.00	49.81	1.00	OK
S-Co-H/0°	5	390.00	382.73	0.98	OK	
	8	390.00	395.39	1.01	OK	
mixed	N-150/Cs-137	16	6.40	6.29	0.98	OK
		32	6.40	6.73	1.05	OK
NIR	NIR	2		0.00		
	NIR	3		0.00		
	NIR	6		0.00		
	NIR	13		0.00		
	NIR	14		0.00		
	NIR	17		0.00		
	NIR	19		0.00		
	NIR	20		0.00		
	NIR	26		0.00		
	NIR	27		0.00		
	NIR	29		0.00		
NIR	31		0.00			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

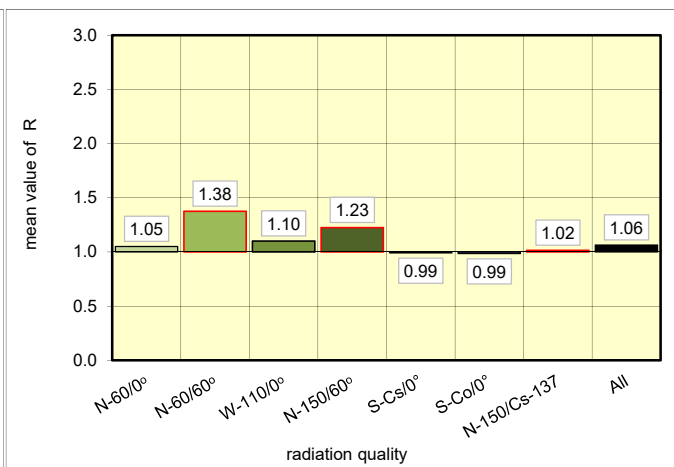
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.05	1.05	1.05	1.05	0%
N-60/60°	2	1.38	1.38	1.47	1.28	10%
W-110/0°	2	1.10	1.10	1.10	1.10	0%
N-150/60°	2	1.23	1.23	1.23	1.22	1%
S-Cs/0°	6	0.99	0.99	1.06	0.93	4%
S-Co/0°	6	0.99	0.99	1.01	0.95	2%
N-150/Cs-137	2	1.02	1.02	1.05	0.98	5%
All	22	1.01	1.06	1.47	0.93	12%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 89: (TL) for dose quantity Hp(0.07)

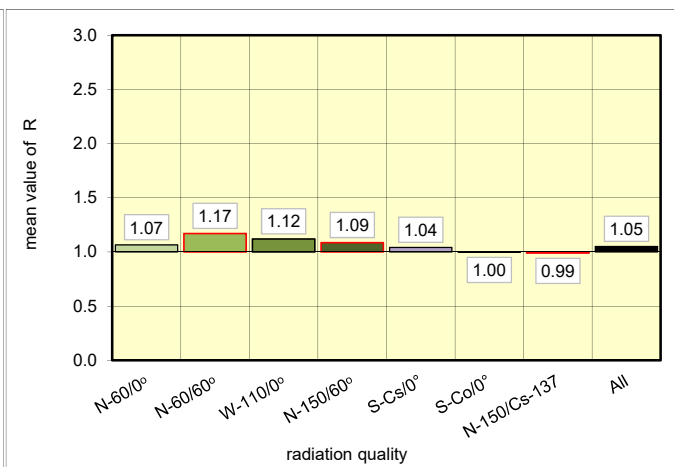
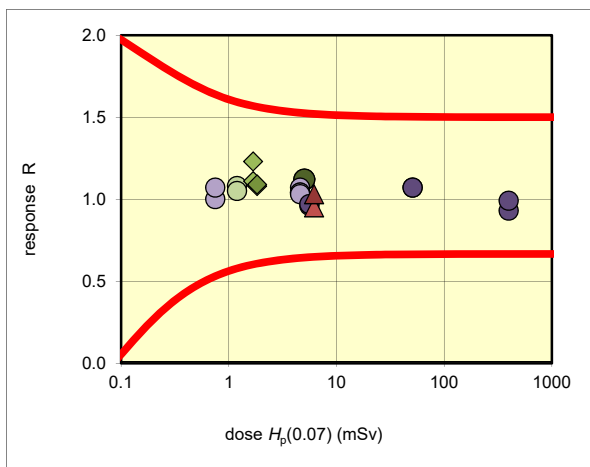
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.20	1.29	1.08	OK
		4	1.20	1.26	1.05	OK
	N-60/60°	24	1.68	1.87	1.11	OK
		7	1.68	2.07	1.23	OK
	W-110/0°	1	5.03	5.61	1.12	OK
		22	5.03	5.62	1.12	OK
	N-150/60°	25	1.83	1.97	1.08	OK
		18	1.83	1.99	1.09	OK
gamma	S-Cs-S/0°	33	0.75	0.75	1.00	OK
		34	0.75	0.80	1.07	OK
	S-Cs-L/0°	12	4.60	4.90	1.07	OK
		15	4.60	4.79	1.04	OK
		23	4.60	4.77	1.04	OK
		28	4.60	4.75	1.03	OK
	S-Co-L/0°	11	5.60	5.35	0.96	OK
		9	5.60	5.42	0.97	OK
	S-Co-M/0°	21	50.90	54.65	1.07	OK
		30	50.90	54.49	1.07	OK
	S-Co-H/0°	5	397.00	368.81	0.93	OK
		8	397.00	394.08	0.99	OK
mixed	N-150/Cs-137	16	6.20	5.86	0.95	OK
		32	6.20	6.41	1.03	OK
NIR	NIR	2		0.00		
	NIR	3		0.00		
	NIR	6		0.00		
	NIR	13		0.00		
	NIR	14		0.00		
	NIR	17		0.00		
	NIR	19		0.00		
	NIR	20		0.00		
	NIR	26		0.00		
	NIR	27		0.00		
	NIR	29		0.00		
	NIR	31		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.07	1.07	1.08	1.05	2%
N-60/60°	2	1.17	1.17	1.23	1.11	7%
W-110/0°	2	1.12	1.12	1.12	1.12	0%
N-150/60°	2	1.09	1.09	1.09	1.08	1%
S-Cs/0°	6	1.04	1.04	1.07	1.00	3%
S-Co/0°	6	0.98	1.00	1.07	0.93	6%
N-150/Cs-137	2	0.99	0.99	1.03	0.95	6%
<b>All</b>	<b>22</b>	<b>1.06</b>	<b>1.05</b>	<b>1.23</b>	<b>0.93</b>	<b>6%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 90: (TL) for dose quantity Hp(10)

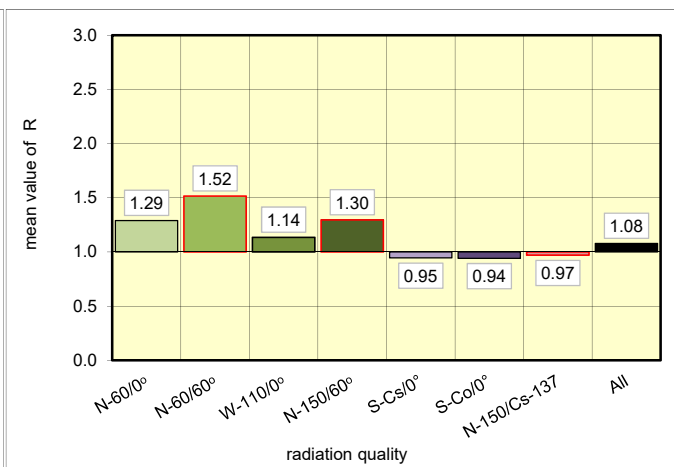
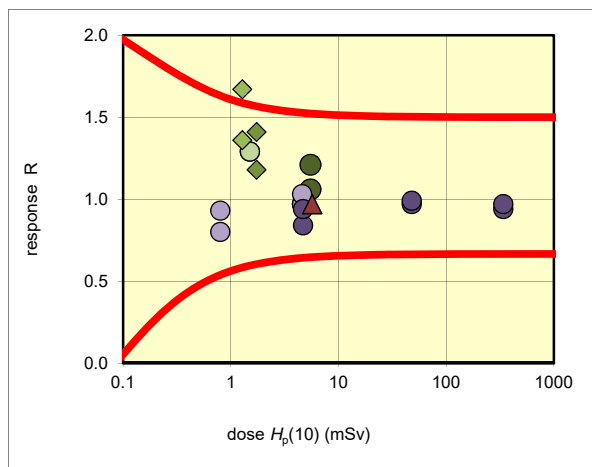
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	4	1.51	1.94	1.29	OK
		7	1.51	1.94	1.29	OK
	N-60/60°	32	1.28	1.74	1.36	OK
		20	1.28	2.14	1.67	outlier
	W-110/0°	6	5.50	5.84	1.06	OK
		5	5.50	6.64	1.21	OK
	N-150/60°	25	1.73	2.04	1.18	OK
		8	1.73	2.44	1.41	OK
gamma	S-Cs-S/0°	15	0.80	0.64	0.80	OK
		1	0.80	0.74	0.93	OK
	S-Cs-L/0°	24	4.60	4.44	0.97	OK
		30	4.60	4.44	0.97	OK
		31	4.60	4.44	0.97	OK
		26	4.60	4.74	1.03	OK
	S-Co-L/0°	12	4.70	3.94	0.84	OK
		9	4.70	4.44	0.94	OK
	S-Co-M/0°	19	48.00	46.74	0.97	OK
		3	48.00	47.34	0.99	OK
	S-Co-H/0°	18	340.00	321.14	0.94	OK
		21	340.00	330.94	0.97	OK
mixed	N-150/Cs-137	13	5.70	5.54	0.97	OK
		14	5.70	5.54	0.97	OK
NIR	WIR	16	-	-	-	-
	WIR	17	-	-	-	-
	NIR	2	-	0.40	-	-
	NIR	10	-	0.30	-	-
	NIR	11	-	0.40	-	-
	NIR	22	-	0.30	-	-
	NIR	23	-	0.40	-	-
	NIR	27	-	0.30	-	-
	NIR	28	-	0.40	-	-
	NIR	29	-	0.40	-	-
	NIR	33	-	0.30	-	-
	NIR	34	-	0.40	-	-

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.29	1.29	1.29	1.29	0%
N-60/60°	2	1.52	1.52	1.67	1.36	14%
W-110/0°	2	1.14	1.14	1.21	1.06	9%
N-150/60°	2	1.30	1.30	1.41	1.18	13%
S-Cs/0°	6	0.97	0.95	1.03	0.80	8%
S-Co/0°	6	0.96	0.94	0.99	0.84	6%
N-150/Cs-137	2	0.97	0.97	0.97	0.97	0%
All	22	0.97	1.08	1.67	0.80	20%

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 90: (TL) for dose quantity Hp(0.07)

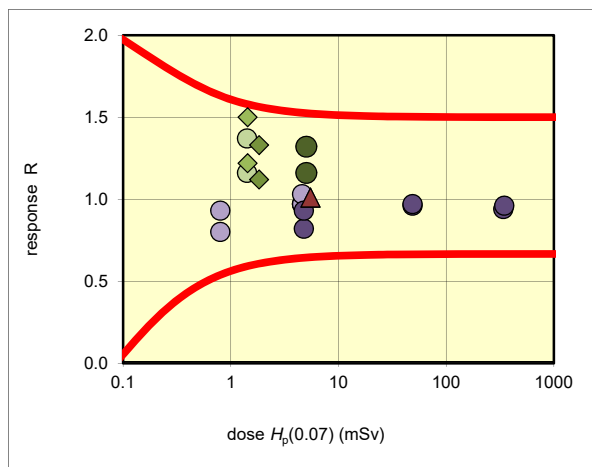
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	4	1.42	1.94	1.37	OK
		7	1.42	1.64	1.16	OK
	N-60/60°	32	1.43	1.74	1.22	OK
		20	1.43	2.14	1.50	OK
	W-110/0°	6	5.03	5.84	1.16	OK
		5	5.03	6.64	1.32	OK
	N-150/60°	25	1.83	2.04	1.12	OK
		8	1.83	2.44	1.33	OK
gamma	S-Cs-S/0°	15	0.80	0.64	0.80	OK
		1	0.80	0.74	0.93	OK
	S-Cs-L/0°	24	4.60	4.44	0.97	OK
		30	4.60	4.44	0.97	OK
		31	4.60	4.44	0.97	OK
		26	4.60	4.74	1.03	OK
	S-Co-L/0°	12	4.78	3.94	0.82	OK
		9	4.78	4.44	0.93	OK
	S-Co-M/0°	19	48.80	46.74	0.96	OK
		3	48.80	47.34	0.97	OK
	S-Co-H/0°	18	340.00	321.14	0.94	OK
		21	346.00	330.94	0.96	OK
mixed	N-150/Cs-137	13	5.49	5.54	1.01	OK
		14	5.49	5.54	1.01	OK
NIR	WIR	16	-	-	-	-
	WIR	17	-	-	-	-
	NIR	2	-	0.40	-	-
	NIR	10	-	0.30	-	-
	NIR	11	-	0.40	-	-
	NIR	22	-	0.30	-	-
	NIR	23	-	0.40	-	-
	NIR	27	-	0.30	-	-
	NIR	28	-	0.40	-	-
	NIR	29	-	0.40	-	-
	NIR	33	-	0.30	-	-
	NIR	34	-	0.40	-	-

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

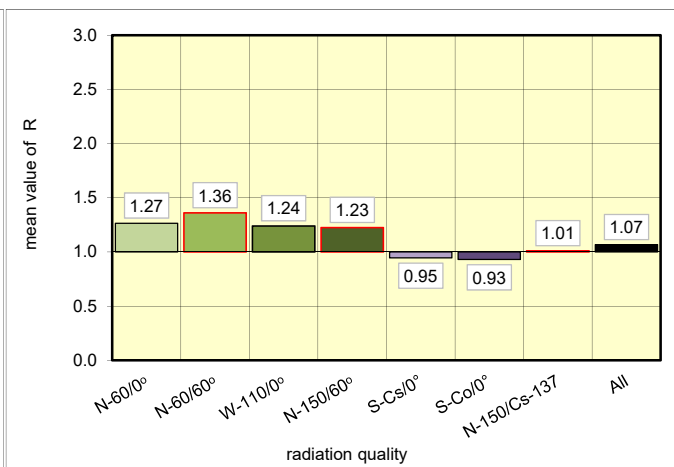
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.27	1.27	1.37	1.16	12%
N-60/60°	2	1.36	1.36	1.50	1.22	15%
W-110/0°	2	1.24	1.24	1.32	1.16	9%
N-150/60°	2	1.23	1.23	1.33	1.12	12%
S-Cs/0°	6	0.97	0.95	1.03	0.80	8%
S-Co/0°	6	0.95	0.93	0.97	0.82	6%
N-150/Cs-137	2	1.01	1.01	1.01	1.01	0%
All	22	0.99	1.07	1.50	0.80	17%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 91: (TL) for dose quantity Hp(10)

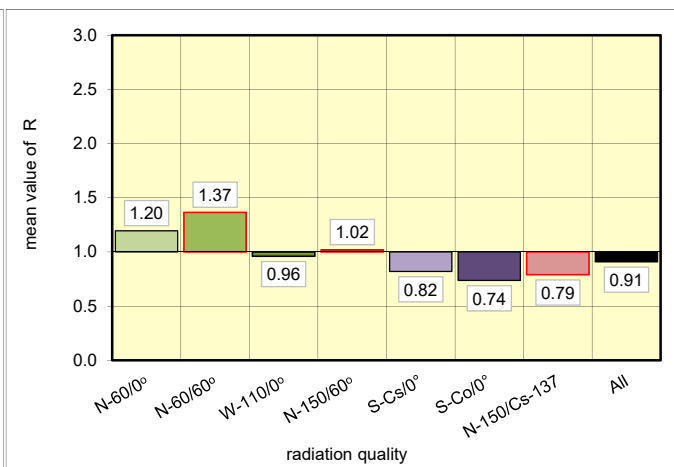
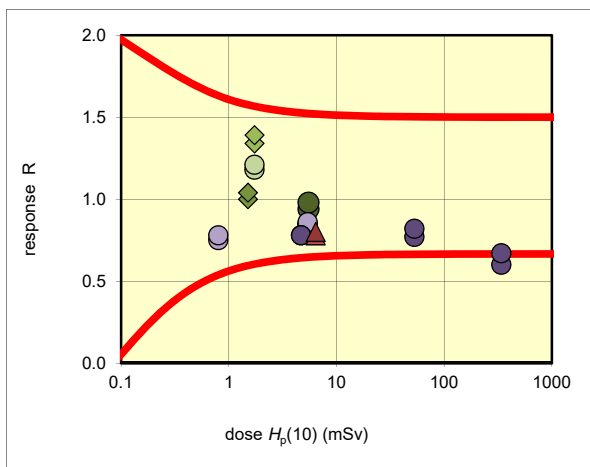
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	28	1.73	2.04	1.18	OK
		31	1.73	2.09	1.21	OK
	N-60/60°	32	1.73	2.32	1.34	OK
		29	1.73	2.40	1.39	OK
	W-110/0°	7	5.50	5.16	0.94	OK
		26	5.50	5.41	0.98	OK
N-150/60°	1	1.51	1.51	1.00	OK	
	22	1.51	1.56	1.04	OK	
gamma	S-Cs-S/0°	27	0.80	0.60	0.75	OK
		24	0.80	0.62	0.78	OK
	S-Cs-L/0°	33	5.40	4.51	0.84	OK
		34	5.40	4.53	0.84	OK
		21	5.40	4.60	0.85	OK
		19	5.40	4.66	0.86	OK
	S-Co-L/0°	17	4.70	3.65	0.78	OK
		18	4.70	3.65	0.78	OK
	S-Co-M/0°	16	53.00	40.94	0.77	OK
		15	53.00	43.41	0.82	OK
	S-Co-H/0°	11	340.00	205.62	0.60	outlier
		12	340.00	227.65	0.67	OK
mixed	N-150/Cs-137	4	6.40	5.00	0.78	OK
		2	6.40	5.12	0.80	OK
NIR	NIR	3		0.61		
	NIR	5		0.63		
	NIR	6		0.66		
	NIR	8		0.58		
	NIR	9		0.63		
	NIR	10		0.65		
	NIR	13		0.54		
	NIR	14		0.65		
	NIR	20		0.68		
	NIR	23		0.59		
	NIR	25		0.64		
	NIR	30		0.59		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.20	1.20	1.21	1.18	2%
N-60/60°	2	1.37	1.37	1.39	1.34	3%
W-110/0°	2	0.96	0.96	0.98	0.94	3%
N-150/60°	2	1.02	1.02	1.04	1.00	3%
S-Cs/0°	6	0.84	0.82	0.86	0.75	5%
S-Co/0°	6	0.78	0.74	0.82	0.60	11%
N-150/Cs-137	2	0.79	0.79	0.80	0.78	2%
All	22	0.84	0.91	1.39	0.60	23%

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 92: (TL) for dose quantity Hp(10)

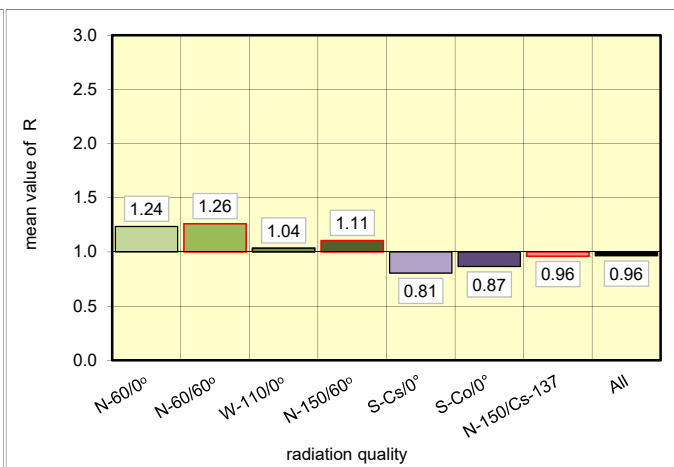
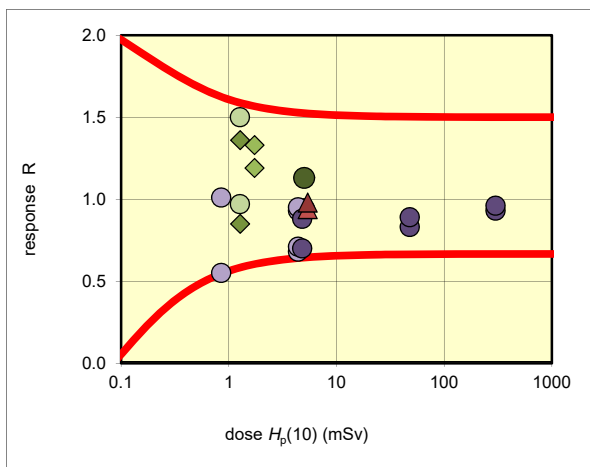
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	23	1.27	1.91	1.50	OK
		22	1.27	1.23	0.97	OK
	N-60/60°	28	1.73	2.07	1.19	OK
		20	1.73	2.31	1.33	OK
	W-110/0°	15	5.00	4.72	0.94	OK
		24	5.00	5.67	1.13	OK
	N-150/60°	12	1.28	1.08	0.85	OK
		10	1.28	1.74	1.36	OK
gamma	S-Cs-S/0°	13	0.85	0.47	0.55	OK
		21	0.85	0.86	1.01	OK
	S-Cs-L/0°	16	4.40	2.98	0.68	OK
		17	4.40	3.12	0.71	OK
		1	4.40	4.08	0.93	OK
		3	4.40	4.19	0.95	OK
	S-Co-L/0°	27	4.80	3.35	0.70	OK
		29	4.80	4.24	0.88	OK
	S-Co-M/0°	31	48.00	39.84	0.83	OK
		26	48.00	42.86	0.89	OK
	S-Co-H/0°	33	300.00	278.22	0.93	OK
		14	300.00	288.97	0.96	OK
mixed	N-150/Cs-137	8	5.40	5.07	0.94	OK
		4	5.40	5.29	0.98	OK
NIR	NIR	2		0.51		
	NIR	5		0.43		
	NIR	6		0.45		
	NIR	7		0.44		
	NIR	9		0.48		
	NIR	11		0.47		
	NIR	18		0.33		
	NIR	19		0.37		
	NIR	25		0.49		
	NIR	30		0.38		
	NIR	32		0.51		
	NIR	34		0.37		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.24</b>	1.24	1.50	0.97	30%
N-60/60°	2	<b>1.26</b>	1.26	1.33	1.19	8%
W-110/0°	2	<b>1.04</b>	1.04	1.13	0.94	13%
N-150/60°	2	<b>1.11</b>	1.11	1.36	0.85	33%
S-Cs/0°	6	<b>0.82</b>	0.81	1.01	0.55	23%
S-Co/0°	6	<b>0.89</b>	0.87	0.96	0.70	11%
N-150/Cs-137	2	<b>0.96</b>	0.96	0.98	0.94	3%
<b>All</b>	<b>22</b>	<b>0.94</b>	<b>0.96</b>	<b>1.50</b>	<b>0.55</b>	<b>24%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 92: (TL) for dose quantity Hp(0.07)

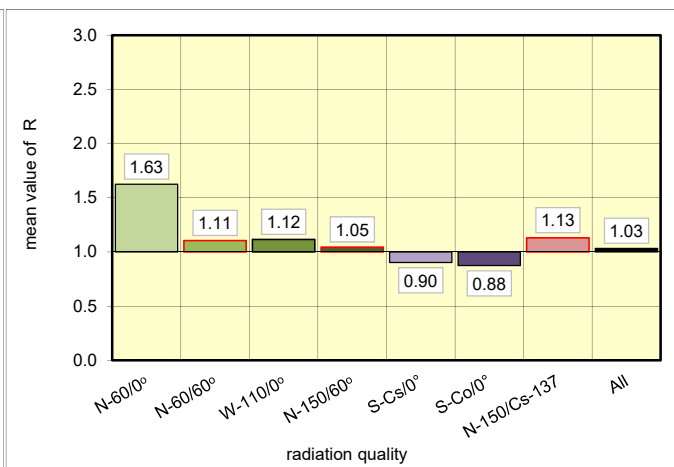
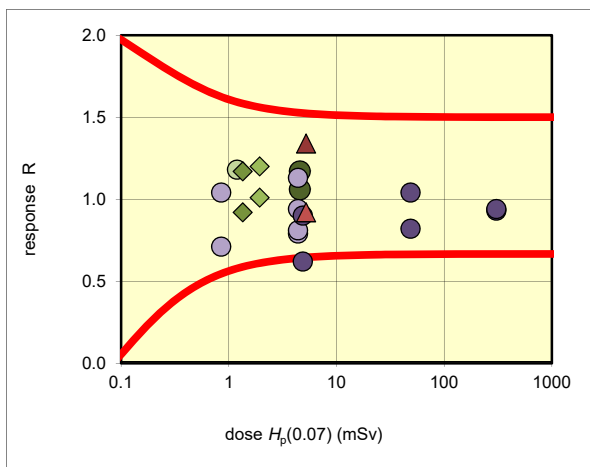
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	23	1.20	2.48	2.07	outlier
		22	1.20	1.41	1.18	OK
	N-60/60°	28	1.94	1.96	1.01	OK
		20	1.94	2.33	1.20	OK
	W-110/0°	15	4.57	5.37	1.17	OK
		24	4.57	4.85	1.06	OK
	N-150/60°	12	1.35	1.24	0.92	OK
		10	1.35	1.57	1.17	OK
gamma	S-Cs-S/0°	13	0.85	0.60	0.71	OK
		21	0.85	0.88	1.04	OK
	S-Cs-L/0°	16	4.40	3.47	0.79	OK
		17	4.40	3.56	0.81	OK
		1	4.40	4.98	1.13	OK
	S-Co-L/0°	3	4.40	4.12	0.94	OK
		27	4.88	3.03	0.62	outlier
	S-Co-M/0°	29	4.88	4.37	0.90	OK
		31	48.80	39.91	0.82	OK
	S-Co-H/0°	26	48.80	50.66	1.04	OK
		33	305.00	284.33	0.93	OK
	mixed	N-150/Cs-137	14	305.00	285.48	0.94
8			5.22	4.80	0.92	OK
NIR	N-150/Cs-137	4	5.22	7.00	1.34	OK
		2		0.51		
		5		0.41		
		6		0.43		
		7		0.44		
		9		0.46		
		11		0.49		
		18		0.33		
		19		0.37		
		25		0.60		
30		0.42				
32		0.51				
34		0.31				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.63	1.63	2.07	1.18	39%
N-60/60°	2	1.11	1.11	1.20	1.01	12%
W-110/0°	2	1.12	1.12	1.17	1.06	7%
N-150/60°	2	1.05	1.05	1.17	0.92	17%
S-Cs/0°	6	0.88	0.90	1.13	0.71	18%
S-Co/0°	6	0.92	0.88	1.04	0.62	16%
N-150/Cs-137	2	1.13	1.13	1.34	0.92	26%
<b>All</b>	<b>22</b>	<b>0.98</b>	<b>1.03</b>	<b>2.07</b>	<b>0.62</b>	<b>28%</b>

outliers: 2 of 22

fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

1 point outside diagramme (> 2)

Results: IC2018

## Reporting number 93: (TL) for dose quantity Hp(10)

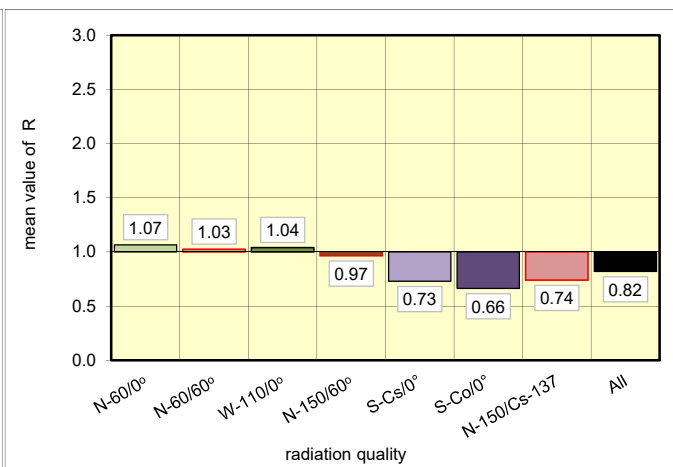
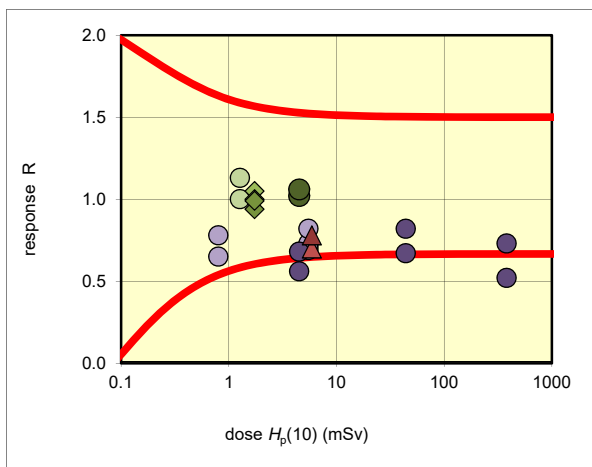
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.27	1.44	1.13	OK
		19	1.27	1.27	1.00	OK
	N-60/60°	11	1.73	1.82	1.05	OK
		18	1.73	1.73	1.00	OK
	W-110/0°	21	4.50	4.61	1.02	OK
		32	4.50	4.77	1.06	OK
	N-150/60°	27	1.73	1.63	0.94	OK
		6	1.73	1.72	0.99	OK
gamma	S-Cs-S/0°	25	0.80	0.52	0.65	OK
		14	0.80	0.62	0.78	OK
	S-Cs-L/0°	7	5.50	3.82	0.69	OK
		34	5.50	3.92	0.71	OK
		8	5.50	4.04	0.73	OK
		29	5.50	4.52	0.82	OK
	S-Co-L/0°	12	4.50	2.51	0.56	outlier
		26	4.50	3.07	0.68	OK
	S-Co-M/0°	33	44.00	29.52	0.67	OK
		15	44.00	36.17	0.82	OK
	S-Co-H/0°	3	380.00	198.32	0.52	outlier
		24	380.00	276.12	0.73	OK
mixed	N-150/Cs-137	1	5.90	4.15	0.70	OK
		2	5.90	4.59	0.78	OK
NIR	NIR	4		0.35		
	NIR	5		0.40		
	NIR	9		0.32		
	NIR	13		0.48		
	NIR	16		0.39		
	NIR	17		0.42		
	NIR	20		0.43		
	NIR	22		0.38		
	NIR	23		0.36		
	NIR	28		0.40		
	NIR	30		0.38		
	NIR	31		0.37		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.07	1.07	1.13	1.00	9%
N-60/60°	2	1.03	1.03	1.05	1.00	3%
W-110/0°	2	1.04	1.04	1.06	1.02	3%
N-150/60°	2	0.97	0.97	0.99	0.94	4%
S-Cs/0°	6	0.72	0.73	0.82	0.65	8%
S-Co/0°	6	0.68	0.66	0.82	0.52	17%
N-150/Cs-137	2	0.74	0.74	0.78	0.70	8%
All	22	0.78	0.82	1.13	0.52	21%

outliers: 2 of 22

Fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 93: (TL) for dose quantity Hp(0.07)

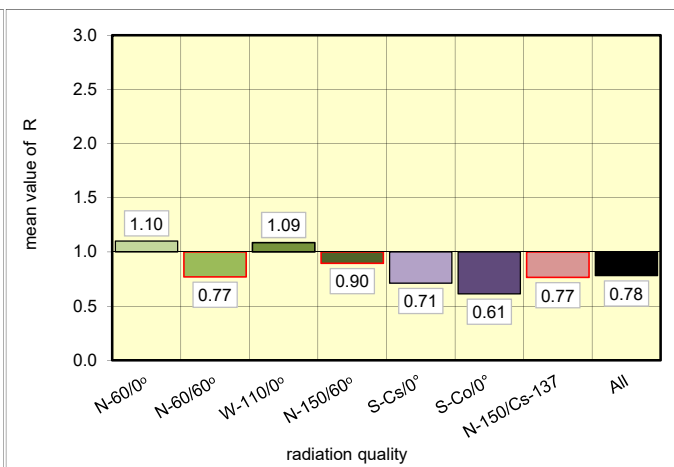
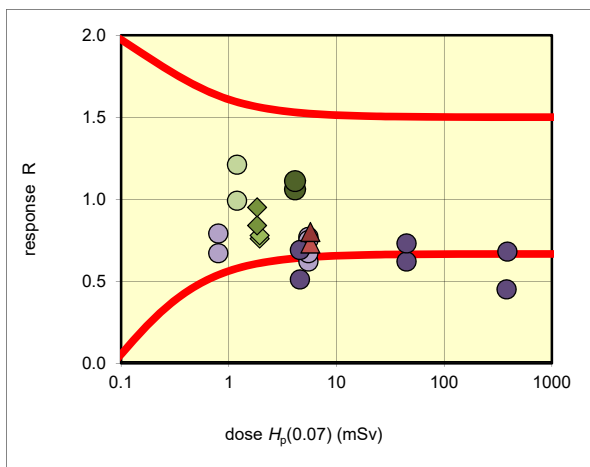
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.20	1.44	1.21	OK
		19	1.20	1.18	0.99	OK
	N-60/60°	11	1.94	1.46	0.76	OK
		18	1.94	1.50	0.78	OK
	W-110/0°	21	4.12	4.35	1.06	OK
		32	4.12	4.57	1.11	OK
N-150/60°	27	1.83	1.54	0.84	OK	
	6	1.83	1.73	0.95	OK	
gamma	S-Cs-S/0°	25	0.80	0.53	0.67	OK
		14	0.80	0.63	0.79	OK
	S-Cs-L/0°	7	5.50	3.38	0.62	outlier
		34	5.50	3.70	0.67	OK
		8	5.50	4.25	0.77	OK
		29	5.50	4.13	0.75	OK
	S-Co-L/0°	12	4.58	2.34	0.51	outlier
		26	4.58	3.17	0.69	OK
	S-Co-M/0°	33	44.80	27.82	0.62	outlier
		15	44.80	32.61	0.73	OK
S-Co-H/0°	3	380.00	169.51	0.45	outlier	
	24	387.00	262.60	0.68	OK	
mixed	N-150/Cs-137	1	5.72	4.19	0.73	OK
		2	5.72	4.58	0.80	OK
NIR	NIR	4		0.35		
	NIR	5		0.40		
	NIR	9		0.25		
	NIR	13		0.41		
	NIR	16		0.37		
	NIR	17		0.41		
	NIR	20		0.42		
	NIR	22		0.45		
	NIR	23		0.36		
	NIR	28		0.40		
	NIR	30		0.33		
NIR	31		0.37			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.10	1.10	1.21	0.99	14%
N-60/60°	2	0.77	0.77	0.78	0.76	2%
W-110/0°	2	1.09	1.09	1.11	1.06	3%
N-150/60°	2	0.90	0.90	0.95	0.84	9%
S-Cs/0°	6	0.71	0.71	0.79	0.62	10%
S-Co/0°	6	0.65	0.61	0.73	0.45	18%
N-150/Cs-137	2	0.77	0.77	0.80	0.73	6%
All	22	0.76	0.78	1.21	0.45	24%

outliers: 4 of 22

fraction of outliers: 18%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 94: (TL) for dose quantity Hp(10)

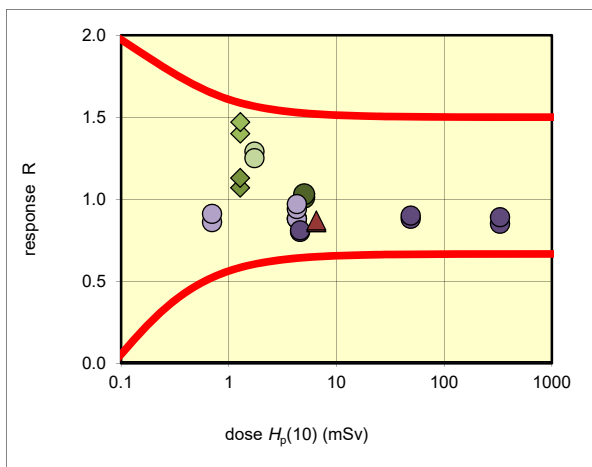
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	5	1.73	2.23	1.29	OK
		23	1.73	2.17	1.25	OK
	N-60/60°	18	1.28	1.79	1.40	OK
		28	1.28	1.88	1.47	OK
	W-110/0°	30	5.00	5.06	1.01	OK
		16	5.00	5.14	1.03	OK
gamma	N-150/60°	13	1.28	1.36	1.07	OK
		32	1.28	1.44	1.13	OK
	S-Cs-S/0°	27	0.70	0.60	0.86	OK
		20	0.70	0.64	0.91	OK
	S-Cs-L/0°	24	4.30	3.80	0.88	OK
		26	4.30	3.77	0.88	OK
4		4.30	4.05	0.94	OK	
S-Co-L/0°	7	4.30	4.16	0.97	OK	
	2	4.60	3.69	0.80	OK	
S-Co-M/0°	6	4.60	3.74	0.81	OK	
	31	49.00	43.20	0.88	OK	
S-Co-H/0°	9	49.00	43.96	0.90	OK	
	21	330.00	279.36	0.85	OK	
mixed	N-150/Cs-137	17	330.00	293.26	0.89	OK
		19	6.50	5.59	0.86	OK
	NIR	15	6.50	5.68	0.87	OK
		1		0.34		
		3		0.27		
		8		0.34		
		10		0.36		
		11		0.29		
		12		0.32		
		14		0.34		
		22		0.27		
		25		0.28		
29		0.29				
33		0.30				
34		0.28				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

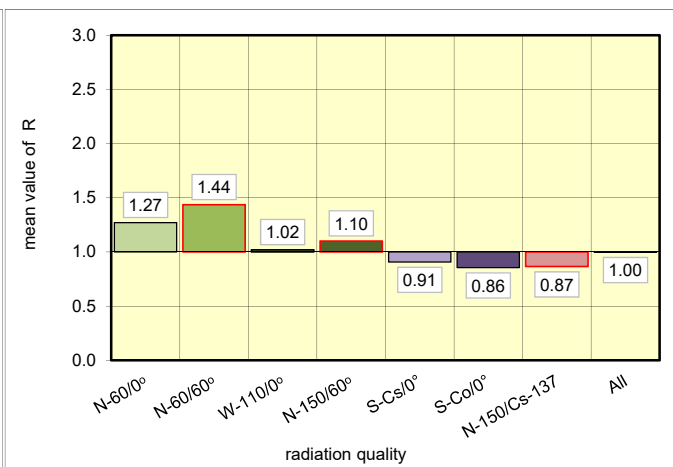
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.27	1.27	1.29	1.25	2%
N-60/60°	2	1.44	1.44	1.47	1.40	3%
W-110/0°	2	1.02	1.02	1.03	1.01	1%
N-150/60°	2	1.10	1.10	1.13	1.07	4%
S-Cs/0°	6	0.90	0.91	0.97	0.86	5%
S-Co/0°	6	0.87	0.86	0.90	0.80	5%
N-150/Cs-137	2	0.87	0.87	0.87	0.86	1%
<b>All</b>	<b>22</b>	<b>0.91</b>	<b>1.00</b>	<b>1.47</b>	<b>0.80</b>	<b>19%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 95: (TL) for dose quantity Hp(10)

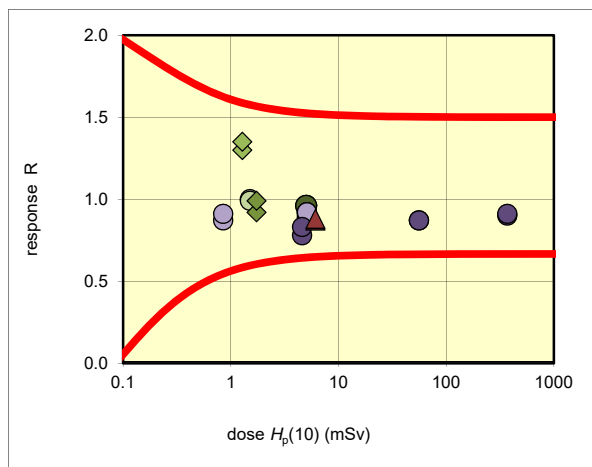
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	18	1.51	1.51	1.00	OK
		26	1.51	1.49	0.99	OK
	N-60/60°	11	1.28	1.66	1.30	OK
		5	1.28	1.73	1.35	OK
	W-110/0°	8	5.00	4.79	0.96	OK
		27	5.00	4.78	0.96	OK
N-150/60°	14	1.73	1.60	0.92	OK	
	10	1.73	1.71	0.99	OK	
gamma	S-Cs-S/0°	30	0.85	0.74	0.87	OK
		13	0.85	0.77	0.91	OK
	S-Cs-L/0°	17	5.10	4.56	0.89	OK
		16	5.10	4.64	0.91	OK
		2	5.10	4.69	0.92	OK
	S-Co-L/0°	1	5.10	4.71	0.92	OK
		6	4.60	3.60	0.78	OK
	S-Co-M/0°	3	4.60	3.82	0.83	OK
		15	56.00	48.95	0.87	OK
	S-Co-H/0°	21	56.00	48.84	0.87	OK
22		370.00	334.72	0.90	OK	
mixed	N-150/Cs-137	31	370.00	336.60	0.91	OK
		34	6.10	5.32	0.87	OK
	NIR	23	6.10	5.39	0.88	OK
		19		0.44		
		4		0.45		
		7		0.39		
		9		0.42		
		12		0.44		
		20		0.40		
		24		0.43		
		25		0.39		
		28		0.39		
		29		0.44		
32		0.41				
33		0.39				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

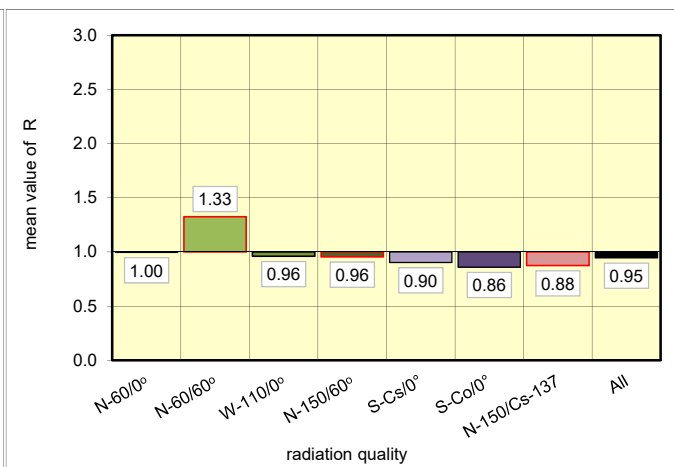
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.00	1.00	1.00	0.99	1%
N-60/60°	2	1.33	1.33	1.35	1.30	3%
W-110/0°	2	0.96	0.96	0.96	0.96	0%
N-150/60°	2	0.96	0.96	0.99	0.92	5%
S-Cs/0°	6	0.91	0.90	0.92	0.87	2%
S-Co/0°	6	0.87	0.86	0.91	0.78	6%
N-150/Cs-137	2	0.88	0.88	0.88	0.87	1%
<b>All</b>	<b>22</b>	<b>0.91</b>	<b>0.95</b>	<b>1.35</b>	<b>0.78</b>	<b>14%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 95: (TL) for dose quantity Hp(0.07)

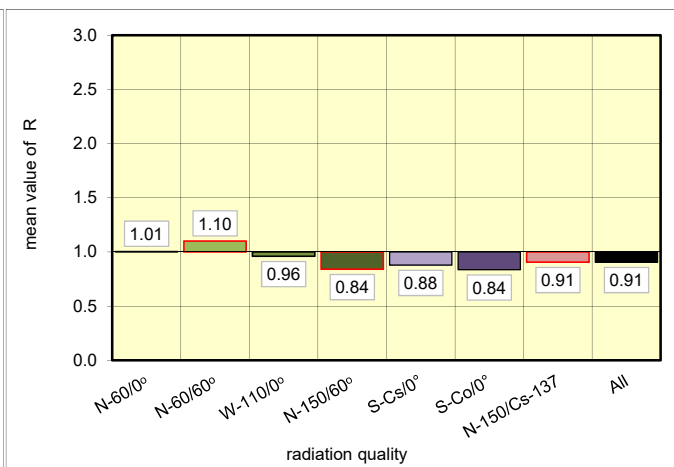
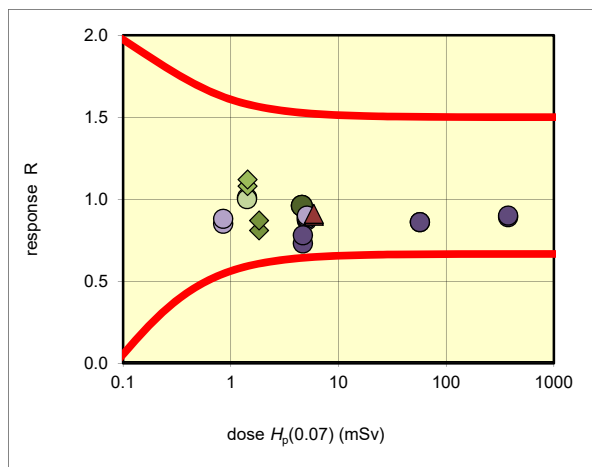
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	18	1.42	1.43	1.01	OK
		26	1.42	1.41	1.00	OK
	N-60/60°	11	1.43	1.55	1.08	OK
		5	1.43	1.61	1.12	OK
	W-110/0°	8	4.57	4.39	0.96	OK
		27	4.57	4.38	0.96	OK
	N-150/60°	14	1.83	1.49	0.81	OK
		10	1.83	1.59	0.87	OK
gamma	S-Cs-S/0°	30	0.85	0.72	0.85	OK
		13	0.85	0.75	0.88	OK
	S-Cs-L/0°	17	5.10	4.42	0.87	OK
		16	5.10	4.50	0.88	OK
		2	5.10	4.55	0.89	OK
	S-Co-L/0°	1	5.10	4.57	0.90	OK
		6	4.68	3.42	0.73	OK
	S-Co-M/0°	3	4.68	3.63	0.78	OK
		15	57.00	48.95	0.86	OK
	S-Co-H/0°	21	57.00	48.84	0.86	OK
		22	376.00	334.72	0.89	OK
	mixed	N-150/Cs-137	31	376.00	336.60	0.90
34			5.90	5.32	0.90	OK
NIR	N-150/Cs-137	23	5.90	5.39	0.91	OK
		19		0.43		
		4		0.44		
		7		0.37		
		9		0.41		
		12		0.43		
		20		0.39		
		24		0.42		
		25		0.38		
		28		0.38		
		29		0.43		
32		0.40				
33		0.38				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.01	1.01	1.01	1.00	1%
N-60/60°	2	1.10	1.10	1.12	1.08	3%
W-110/0°	2	0.96	0.96	0.96	0.96	0%
N-150/60°	2	0.84	0.84	0.87	0.81	5%
S-Cs/0°	6	0.88	0.88	0.90	0.85	2%
S-Co/0°	6	0.86	0.84	0.90	0.73	8%
N-150/Cs-137	2	0.91	0.91	0.91	0.90	1%
All	22	0.89	0.91	1.12	0.73	10%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 96: (TL) for dose quantity Hp(10)

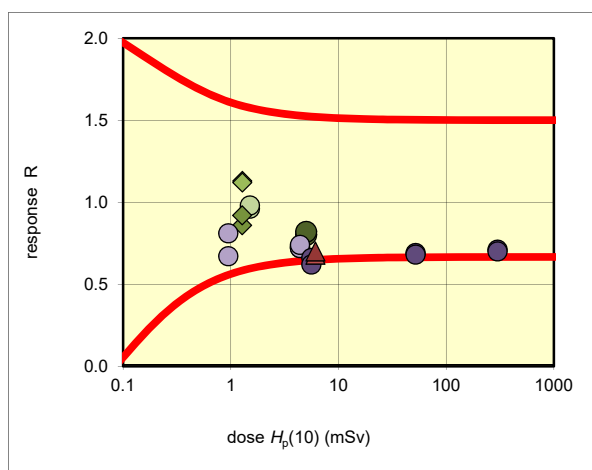
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	17	1.51	1.45	0.96	OK
		29	1.51	1.48	0.98	OK
	N-60/60°	21	1.28	1.44	1.13	OK
		7	1.28	1.43	1.12	OK
	W-110/0°	22	5.00	4.02	0.80	OK
		8	5.00	4.09	0.82	OK
N-150/60°	20	1.28	1.09	0.86	OK	
	26	1.28	1.18	0.92	OK	
gamma	S-Cs-S/0°	12	0.95	0.77	0.81	OK
		4	0.95	0.64	0.67	OK
	S-Cs-L/0°	2	4.40	3.21	0.73	OK
		32	4.40	3.18	0.72	OK
		23	4.40	3.19	0.72	OK
		28	4.40	3.24	0.74	OK
	S-Co-L/0°	19	5.60	3.69	0.66	OK
		18	5.60	3.50	0.62	outlier
	S-Co-M/0°	33	52.00	35.84	0.69	OK
		13	52.00	35.59	0.68	OK
S-Co-H/0°	1	300.00	212.63	0.71	OK	
	3	300.00	208.72	0.70	OK	
mixed	N-150/Cs-137	25	6.10	4.18	0.68	OK
		27	6.10	4.28	0.70	OK
NIR	NIR	30		0.76		
	NIR	31		0.71		
	NIR	6		0.73		
	NIR	5		0.66		
	NIR	24		0.76		
	NIR	16		0.73		
	NIR	10		0.69		
	NIR	11		0.65		
	NIR	9		0.67		
	NIR	14		0.70		
	NIR	15		0.84		
	NIR	34		0.75		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

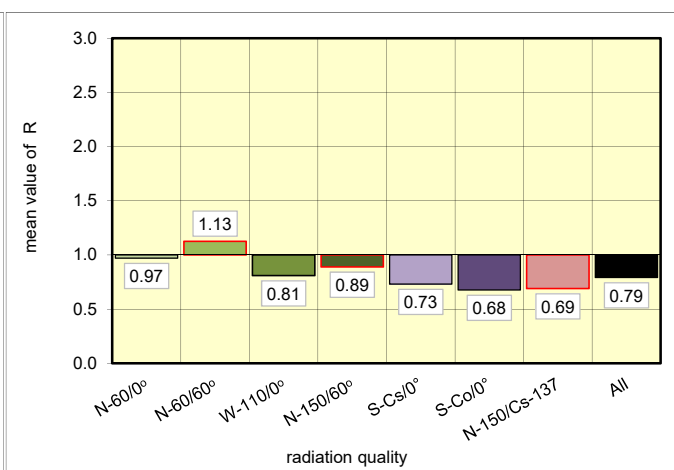
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.97</b>	0.97	0.98	0.96	1%
N-60/60°	2	<b>1.13</b>	1.13	1.13	1.12	1%
W-110/0°	2	<b>0.81</b>	0.81	0.82	0.80	2%
N-150/60°	2	<b>0.89</b>	0.89	0.92	0.86	5%
S-Cs/0°	6	<b>0.73</b>	0.73	0.81	0.67	6%
S-Co/0°	6	<b>0.69</b>	0.68	0.71	0.62	5%
N-150/Cs-137	2	<b>0.69</b>	0.69	0.70	0.68	2%
<b>All</b>	<b>22</b>	<b>0.73</b>	<b>0.79</b>	<b>1.13</b>	<b>0.62</b>	<b>18%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018



## Reporting number 96: (TL) for dose quantity $H_p(0.07)$

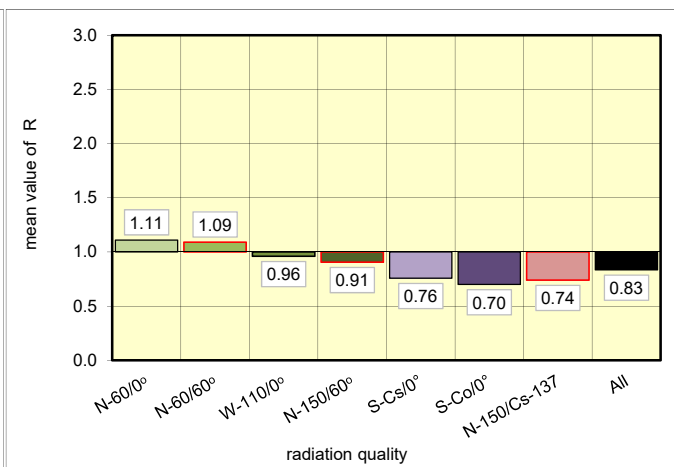
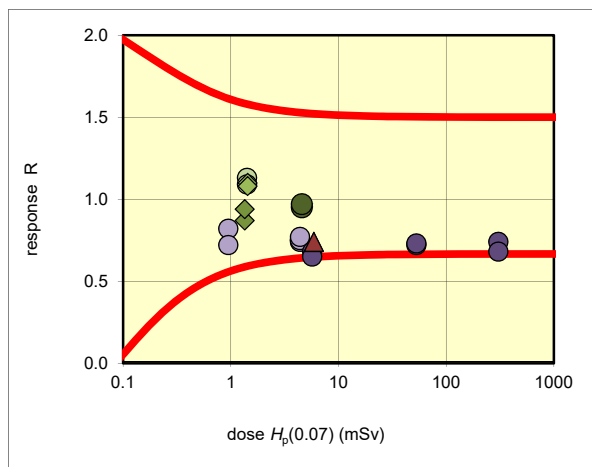
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	17	1.42	1.61	1.13	OK
		29	1.42	1.54	1.09	OK
	N-60/60°	21	1.43	1.57	1.10	OK
		7	1.43	1.55	1.08	OK
	W-110/0°	22	4.57	4.33	0.95	OK
		8	4.57	4.43	0.97	OK
	N-150/60°	20	1.35	1.17	0.87	OK
		26	1.35	1.27	0.94	OK
gamma	S-Cs-S/0°	12	0.95	0.78	0.82	OK
		4	0.95	0.68	0.72	OK
	S-Cs-L/0°	2	4.40	3.32	0.75	OK
		32	4.40	3.25	0.74	OK
		23	4.40	3.31	0.75	OK
		28	4.40	3.41	0.77	OK
	S-Co-L/0°	19	5.70	3.87	0.68	OK
		18	5.70	3.68	0.65	OK
	S-Co-M/0°	33	52.90	38.30	0.72	OK
		13	52.90	38.54	0.73	OK
	S-Co-H/0°	1	305.00	225.46	0.74	OK
		3	305.00	208.26	0.68	OK
mixed	N-150/Cs-137	25	5.91	4.35	0.74	OK
		27	5.91	4.37	0.74	OK
NIR	NIR	30		0.80		
	NIR	31		0.76		
	NIR	6		0.76		
	NIR	5		0.70		
	NIR	24		0.82		
	NIR	16		0.75		
	NIR	10		0.72		
	NIR	11		0.70		
	NIR	9		0.71		
	NIR	14		0.75		
	NIR	15		0.89		
	NIR	34		0.87		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.11	1.11	1.13	1.09	3%
N-60/60°	2	1.09	1.09	1.10	1.08	1%
W-110/0°	2	0.96	0.96	0.97	0.95	1%
N-150/60°	2	0.91	0.91	0.94	0.87	5%
S-Cs/0°	6	0.75	0.76	0.82	0.72	5%
S-Co/0°	6	0.70	0.70	0.74	0.65	5%
N-150/Cs-137	2	0.74	0.74	0.74	0.74	0%
All	22	0.75	0.83	1.13	0.65	19%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 97: (TL) for dose quantity Hp(10)

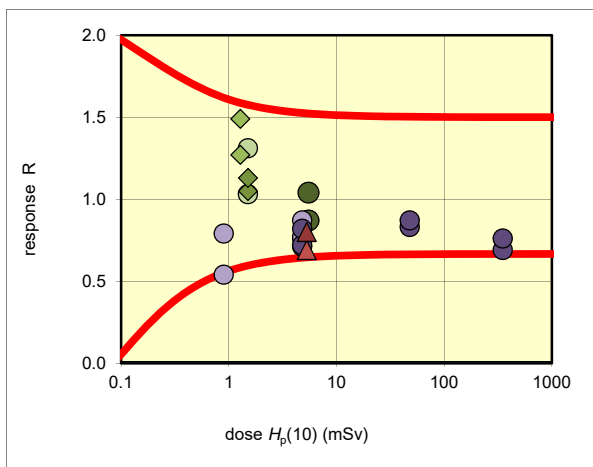
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	21	1.51	1.97	1.31	OK
		27	1.51	1.55	1.03	OK
	N-60/60°	30	1.28	1.91	1.49	OK
		22	1.28	1.62	1.27	OK
	W-110/0°	10	5.50	4.77	0.87	OK
		1	5.50	5.72	1.04	OK
N-150/60°	3	1.51	1.58	1.05	OK	
	19	1.51	1.70	1.13	OK	
gamma	S-Cs-S/0°	12	0.90	0.49	0.54	outlier
		18	0.90	0.71	0.79	OK
	S-Cs-L/0°	7	4.80	3.43	0.71	OK
		2	4.80	3.63	0.76	OK
		23	4.80	3.68	0.77	OK
	S-Co-L/0°	29	4.80	4.16	0.87	OK
		6	4.80	3.47	0.72	OK
	S-Co-M/0°	20	4.80	3.94	0.82	OK
		4	48.00	39.94	0.83	OK
	S-Co-H/0°	11	48.00	41.57	0.87	OK
		25	350.00	242.65	0.69	OK
	mixed	N-150/Cs-137	24	350.00	265.39	0.76
8			5.30	3.66	0.69	OK
NIR	N-150/Cs-137	9	5.30	4.24	0.80	OK
		5		0.96		
		13		0.98		
		14		0.97		
		15		0.91		
		16		1.05		
		17		0.92		
		26		0.93		
		28		0.83		
		31		0.88		
32		0.95				
33		0.97				
34		0.84				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

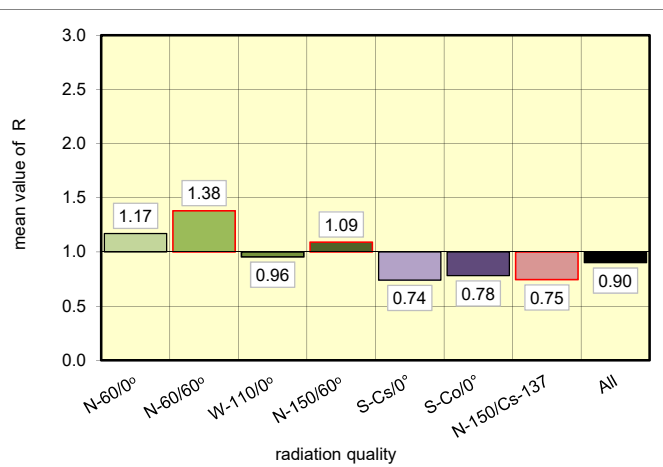
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.17	1.17	1.31	1.03	17%
N-60/60°	2	1.38	1.38	1.49	1.27	11%
W-110/0°	2	0.96	0.96	1.04	0.87	13%
N-150/60°	2	1.09	1.09	1.13	1.05	5%
S-Cs/0°	6	0.77	0.74	0.87	0.54	15%
S-Co/0°	6	0.79	0.78	0.87	0.69	9%
N-150/Cs-137	2	0.75	0.75	0.80	0.69	10%
<b>All</b>	<b>22</b>	<b>0.83</b>	<b>0.90</b>	<b>1.49</b>	<b>0.54</b>	<b>26%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 97: (TL) for dose quantity Hp(0.07)

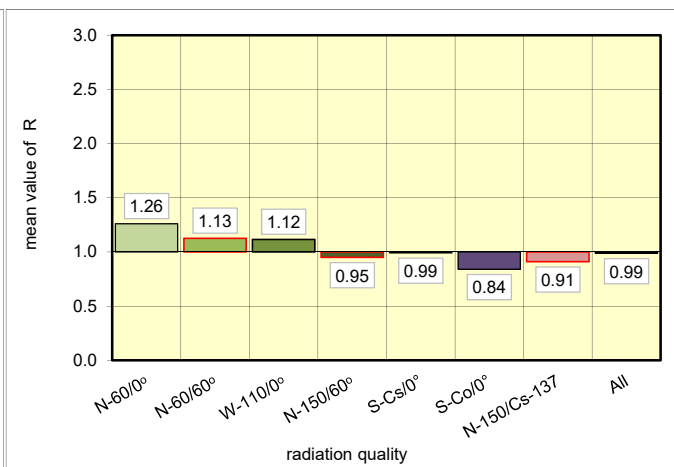
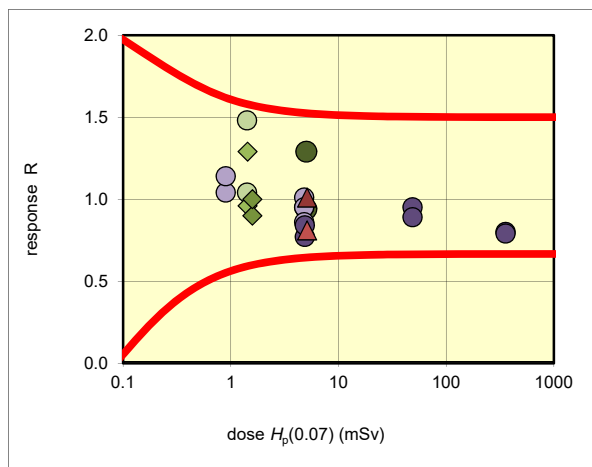
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	21	1.42	2.10	1.48	OK
		27	1.42	1.47	1.04	OK
	N-60/60°	30	1.43	1.37	0.96	OK
		22	1.43	1.84	1.29	OK
	W-110/0°	10	5.03	6.48	1.29	OK
		1	5.03	4.75	0.94	OK
N-150/60°	3	1.59	1.43	0.90	OK	
	19	1.59	1.58	1.00	OK	
gamma	S-Cs-S/0°	12	0.90	0.94	1.04	OK
		18	0.90	1.03	1.14	OK
	S-Cs-L/0°	7	4.80	4.54	0.95	OK
		2	4.80	4.87	1.01	OK
		23	4.80	4.56	0.95	OK
		29	4.80	4.12	0.86	OK
	S-Co-L/0°	6	4.88	3.75	0.77	OK
		20	4.88	4.09	0.84	OK
	S-Co-M/0°	4	48.80	46.15	0.95	OK
		11	48.80	43.66	0.89	OK
	S-Co-H/0°	25	356.00	286.38	0.80	OK
		24	356.00	281.15	0.79	OK
mixed	N-150/Cs-137	8	5.12	4.14	0.81	OK
		9	5.12	5.15	1.01	OK
NIR	NIR	5		0.85		
	NIR	13		0.89		
	NIR	14		0.95		
	NIR	15		1.16		
	NIR	16		1.31		
	NIR	17		0.95		
	NIR	26		0.95		
	NIR	28		0.93		
	NIR	31		0.99		
	NIR	32		1.23		
	NIR	33		1.14		
NIR	34		1.12			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.26	1.26	1.48	1.04	25%
N-60/60°	2	1.13	1.13	1.29	0.96	21%
W-110/0°	2	1.12	1.12	1.29	0.94	22%
N-150/60°	2	0.95	0.95	1.00	0.90	7%
S-Cs/0°	6	0.98	0.99	1.14	0.86	10%
S-Co/0°	6	0.82	0.84	0.95	0.77	8%
N-150/Cs-137	2	0.91	0.91	1.01	0.81	16%
All	22	0.95	0.99	1.48	0.77	18%

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 98: (TL) for dose quantity Hp(10)

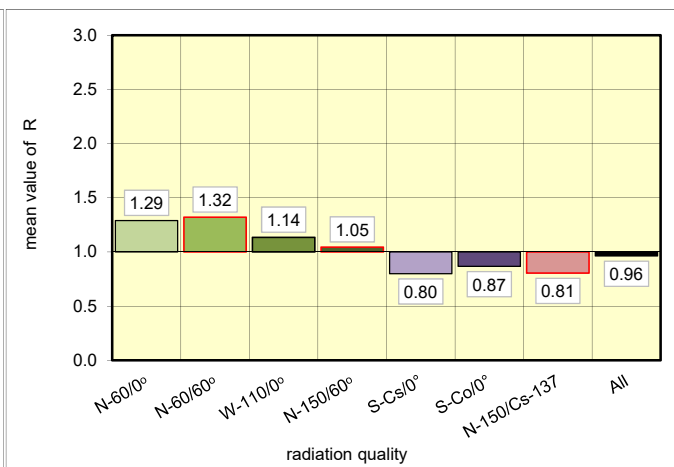
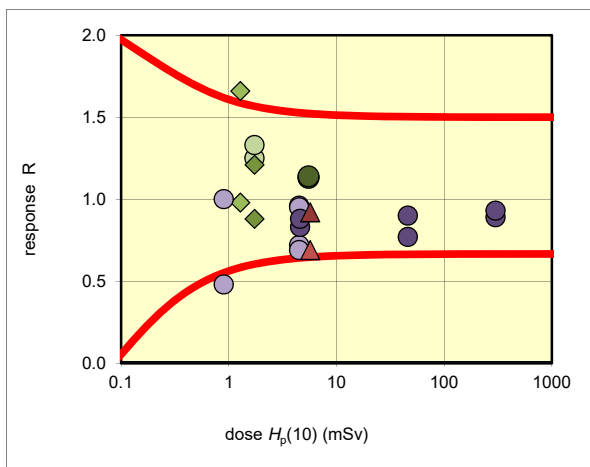
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose Hp(10) mSv	dose Hp(10) mSv	response R (reported/true)		
x-ray	N-60/0°	21	1.73	2.17	1.25	OK
		3	1.73	2.31	1.33	OK
	N-60/60°	25	1.28	1.26	0.98	OK
		11	1.28	2.12	1.66	outlier
	W-110/0°	13	5.50	6.24	1.13	OK
		4	5.50	6.27	1.14	OK
N-150/60°	34	1.73	1.53	0.88	OK	
	23	1.73	2.10	1.21	OK	
gamma	S-Cs-S/0°	27	0.90	0.43	0.48	outlier
		5	0.90	0.90	1.00	OK
	S-Cs-L/0°	32	4.50	3.22	0.72	OK
		33	4.50	3.11	0.69	OK
		17	4.50	4.31	0.96	OK
	S-Co-L/0°	19	4.50	4.28	0.95	OK
		1	4.60	3.82	0.83	OK
	S-Co-M/0°	12	4.60	4.05	0.88	OK
		26	46.00	35.32	0.77	OK
	S-Co-H/0°	22	46.00	41.34	0.90	OK
24		300.00	266.76	0.89	OK	
mixed	N-150/Cs-137	6	300.00	277.53	0.93	OK
		31	5.70	3.93	0.69	OK
NIR	N-150/Cs-137	8	5.70	5.24	0.92	OK
		28		0.90		
		29		0.86		
		30		0.84		
		2		1.01		
		7		1.09		
		9		1.05		
		10		1.02		
		14		1.04		
		15		1.15		
16		1.16				
18		1.16				
20		1.05				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.29	1.29	1.33	1.25	4%
N-60/60°	2	1.32	1.32	1.66	0.98	36%
W-110/0°	2	1.14	1.14	1.14	1.13	1%
N-150/60°	2	1.05	1.05	1.21	0.88	22%
S-Cs/0°	6	0.84	0.80	1.00	0.48	26%
S-Co/0°	6	0.89	0.87	0.93	0.77	7%
N-150/Cs-137	2	0.81	0.81	0.92	0.69	20%
<b>All</b>	<b>22</b>	<b>0.93</b>	<b>0.96</b>	<b>1.66</b>	<b>0.48</b>	<b>26%</b>

outliers: 2 of 22

Fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 98: (TL) for dose quantity $H_p(0.07)$

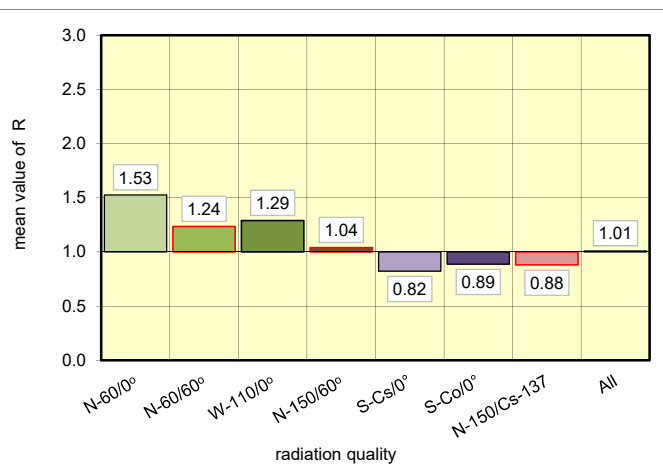
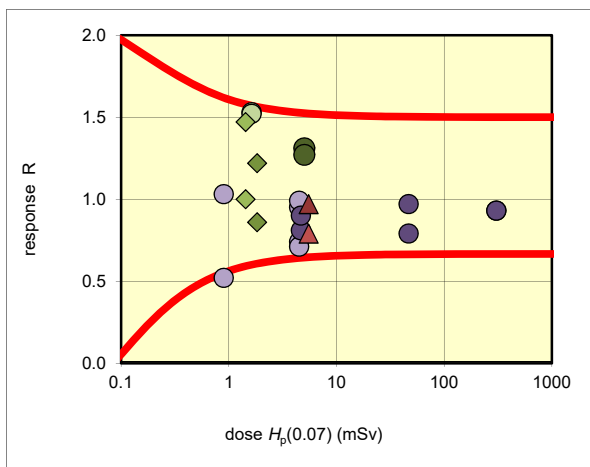
true values reported by the irradiating laboratory				values reported by participant		results	
radiation quality		dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv		response R (reported/true)	
x-ray	N-60/0°	21	1.63	2.49	1.53	OK	
		3	1.63	2.47	1.52	OK	
	N-60/60°	25	1.43	1.43	1.00	OK	
		11	1.43	2.11	1.47	OK	
	W-110/0°	13	5.03	6.58	1.31	OK	
		4	5.03	6.39	1.27	OK	
	N-150/60°	34	1.83	1.58	0.86	OK	
		23	1.83	2.23	1.22	OK	
gamma	S-Cs-S/0°	27	0.90	0.47	0.52	outlier	
		5	0.90	0.93	1.03	OK	
	S-Cs-L/0°	32	4.50	3.32	0.74	OK	
		33	4.50	3.20	0.71	OK	
		17	4.50	4.29	0.95	OK	
		19	4.50	4.44	0.99	OK	
	S-Co-L/0°	1	4.68	3.81	0.81	OK	
		12	4.68	4.19	0.90	OK	
	S-Co-M/0°	26	46.80	36.96	0.79	OK	
		22	46.80	45.31	0.97	OK	
	S-Co-H/0°	24	305.00	283.54	0.93	OK	
		6	305.00	283.06	0.93	OK	
mixed	N-150/Cs-137	31	5.52	4.37	0.79	OK	
		8	5.52	5.36	0.97	OK	
NIR	NIR	28		0.94			
	NIR	29		0.87			
	NIR	30		0.83			
	NIR	2		1.02			
	NIR	7		1.06			
	NIR	9		1.07			
	NIR	10		0.98			
	NIR	14		1.06			
	NIR	15		1.19			
	NIR	16		1.10			
	NIR	18		1.12			
	NIR	20		1.07			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.53	1.53	1.53	1.52	0%
N-60/60°	2	1.24	1.24	1.47	1.00	27%
W-110/0°	2	1.29	1.29	1.31	1.27	2%
N-150/60°	2	1.04	1.04	1.22	0.86	24%
S-Cs/0°	6	0.85	0.82	1.03	0.52	24%
S-Co/0°	6	0.92	0.89	0.97	0.79	8%
N-150/Cs-137	2	0.88	0.88	0.97	0.79	14%
All	22	0.96	1.01	1.53	0.52	27%

outliers: 1 of 22

fraction of outliers: 5%



Results: IC2018

## Reporting number 99: (TL) for dose quantity Hp(10)

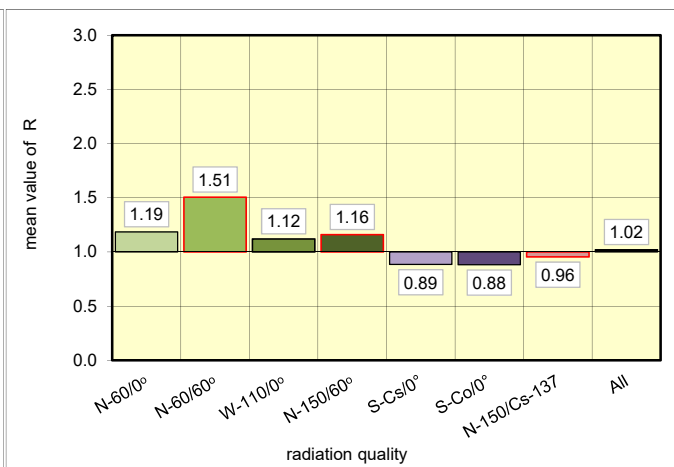
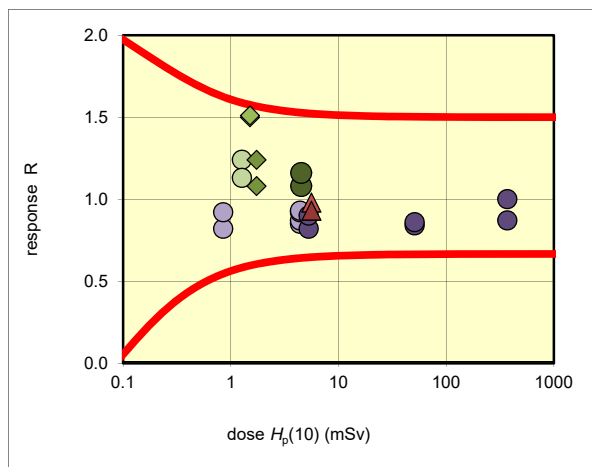
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	30	1.27	1.58	1.24	OK
		24	1.27	1.44	1.13	OK
	N-60/60°	10	1.51	2.26	1.50	OK
		4	1.51	2.28	1.51	OK
	W-110/0°	32	4.50	4.86	1.08	OK
		28	4.50	5.23	1.16	OK
	N-150/60°	31	1.73	1.87	1.08	OK
		13	1.73	2.15	1.24	OK
gamma	S-Cs-S/0°	19	0.85	0.70	0.82	OK
		29	0.85	0.79	0.92	OK
	S-Cs-L/0°	6	4.40	3.72	0.85	OK
		25	4.40	3.84	0.87	OK
		26	4.40	4.04	0.92	OK
		20	4.40	4.09	0.93	OK
	S-Co-L/0°	18	5.30	4.35	0.82	OK
		8	5.30	4.75	0.90	OK
	S-Co-M/0°	15	51.00	42.66	0.84	OK
		27	51.00	43.72	0.86	OK
	S-Co-H/0°	22	370.00	322.45	0.87	OK
		12	370.00	369.54	1.00	OK
mixed	N-150/Cs-137	33	5.60	5.48	0.98	OK
		34	5.60	5.21	0.93	OK
NIR	NIR	14		0.52		
	NIR	1		0.50		
	NIR	2		0.49		
	NIR	3		0.59		
	NIR	5		0.41		
	NIR	7		0.46		
	NIR	9		0.43		
	NIR	11		0.52		
	NIR	16		0.48		
	NIR	17		0.54		
	NIR	21		0.50		
	NIR	23		0.41		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.19	1.19	1.24	1.13	7%
N-60/60°	2	1.51	1.51	1.51	1.50	0%
W-110/0°	2	1.12	1.12	1.16	1.08	5%
N-150/60°	2	1.16	1.16	1.24	1.08	10%
S-Cs/0°	6	0.90	0.89	0.93	0.82	5%
S-Co/0°	6	0.87	0.88	1.00	0.82	7%
N-150/Cs-137	2	0.96	0.96	0.98	0.93	4%
<b>All</b>	<b>22</b>	<b>0.93</b>	<b>1.02</b>	<b>1.51</b>	<b>0.82</b>	<b>20%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 99: (TL) for dose quantity $H_p(0.07)$

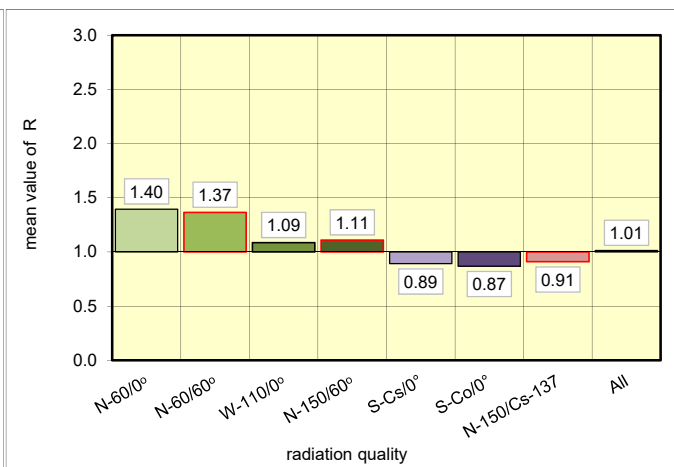
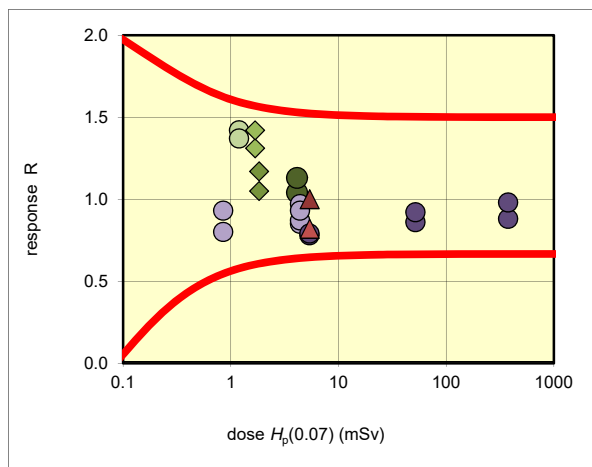
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	30	1.20	1.69	1.42	OK
		24	1.20	1.64	1.37	OK
	N-60/60°	10	1.68	2.21	1.31	OK
		4	1.68	2.39	1.42	OK
	W-110/0°	32	4.12	4.30	1.04	OK
		28	4.12	4.64	1.13	OK
	N-150/60°	31	1.83	1.93	1.05	OK
		13	1.83	2.15	1.17	OK
gamma	S-Cs-S/0°	19	0.85	0.68	0.80	OK
		29	0.85	0.79	0.93	OK
	S-Cs-L/0°	6	4.40	3.72	0.85	OK
		25	4.40	3.84	0.87	OK
		26	4.40	4.25	0.97	OK
		20	4.40	4.09	0.93	OK
	S-Co-L/0°	18	5.39	4.23	0.78	OK
		8	5.39	4.26	0.79	OK
	S-Co-M/0°	15	51.90	44.82	0.86	OK
		27	51.90	47.72	0.92	OK
	S-Co-H/0°	22	376.00	331.92	0.88	OK
		12	376.00	366.80	0.98	OK
mixed	N-150/Cs-137	33	5.40	4.41	0.82	OK
		34	5.40	5.42	1.00	OK
NIR	NIR	14		0.52		
	NIR	1		0.61		
	NIR	2		0.49		
	NIR	3		0.58		
	NIR	5		0.64		
	NIR	7		0.55		
	NIR	9		0.42		
	NIR	11		0.64		
	NIR	16		0.66		
	NIR	17		0.61		
	NIR	21		0.56		
	NIR	23		0.56		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.40	1.40	1.42	1.37	3%
N-60/60°	2	1.37	1.37	1.42	1.31	6%
W-110/0°	2	1.09	1.09	1.13	1.04	6%
N-150/60°	2	1.11	1.11	1.17	1.05	8%
S-Cs/0°	6	0.90	0.89	0.97	0.80	7%
S-Co/0°	6	0.87	0.87	0.98	0.78	9%
N-150/Cs-137	2	0.91	0.91	1.00	0.82	14%
All	22	0.95	1.01	1.42	0.78	20%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 100: (TL) for dose quantity Hp(10)

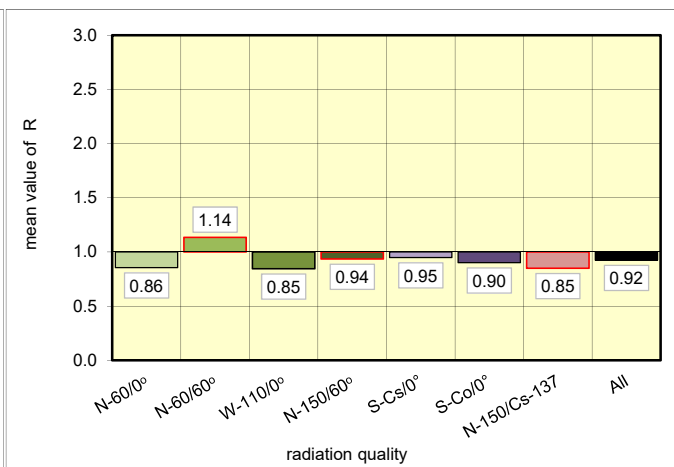
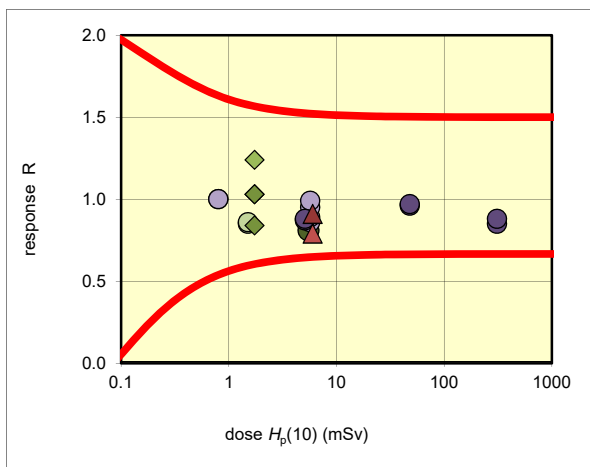
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.51	1.28	0.85	OK
		22	1.51	1.29	0.86	OK
	N-60/60°	13	1.73	1.78	1.03	OK
		1	1.73	2.14	1.24	OK
	W-110/0°	4	5.50	4.43	0.81	OK
		23	5.50	4.82	0.88	OK
	N-150/60°	33	1.73	1.45	0.84	OK
		31	1.73	1.79	1.03	OK
gamma	S-Cs-S/0°	18	0.80	0.80	1.00	OK
		21	0.80	0.80	1.00	OK
	S-Cs-L/0°	14	5.70	4.90	0.86	OK
		25	5.70	5.07	0.89	OK
		29	5.70	5.41	0.95	OK
		19	5.70	5.63	0.99	OK
	S-Co-L/0°	34	5.10	4.43	0.87	OK
		24	5.10	4.47	0.88	OK
	S-Co-M/0°	6	48.00	46.30	0.96	OK
		20	48.00	46.44	0.97	OK
	S-Co-H/0°	15	310.00	263.29	0.85	OK
		7	310.00	272.02	0.88	OK
mixed	N-150/Cs-137	5	6.00	4.74	0.79	OK
		8	6.00	5.44	0.91	OK
NIR	NIR	2		0.81		
	NIR	3		0.73		
	NIR	9		0.73		
	NIR	11		0.76		
	NIR	12		0.76		
	NIR	16		0.87		
	NIR	17		0.79		
	NIR	26		0.83		
	NIR	27		0.76		
	NIR	28		0.80		
	NIR	30		0.89		
	NIR	32		0.88		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.86</b>	0.86	0.86	0.85	1%
N-60/60°	2	<b>1.14</b>	1.14	1.24	1.03	13%
W-110/0°	2	<b>0.85</b>	0.85	0.88	0.81	6%
N-150/60°	2	<b>0.94</b>	0.94	1.03	0.84	14%
S-Cs/0°	6	<b>0.97</b>	0.95	1.00	0.86	6%
S-Co/0°	6	<b>0.88</b>	0.90	0.97	0.85	6%
N-150/Cs-137	2	<b>0.85</b>	0.85	0.91	0.79	10%
<b>All</b>	<b>22</b>	<b>0.89</b>	<b>0.92</b>	<b>1.24</b>	<b>0.79</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



No dose values for  $H_p(0.07)$  submitted.

## Reporting number 101: (TL) for dose quantity $H_p(10)$

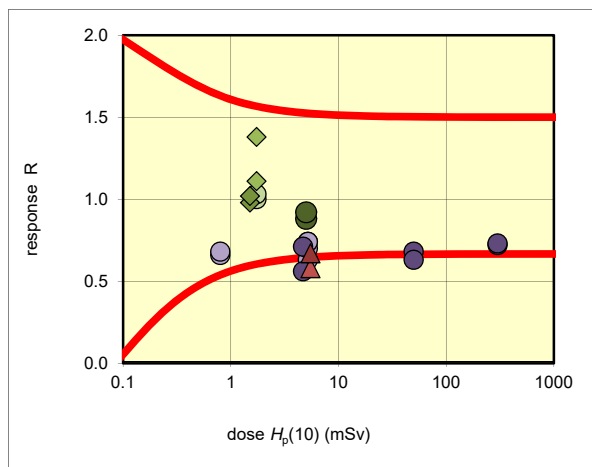
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	24	1.73	1.74	1.00	OK
		4	1.73	1.78	1.03	OK
	N-60/60°	3	1.73	2.39	1.38	OK
		19	1.73	1.93	1.11	OK
	W-110/0°	34	5.00	4.41	0.88	OK
		18	5.00	4.61	0.92	OK
	N-150/60°	25	1.51	1.47	0.98	OK
		26	1.51	1.54	1.02	OK
gamma	S-Cs-S/0°	6	0.80	0.53	0.66	OK
		22	0.80	0.54	0.68	OK
	S-Cs-L/0°	14	5.20	3.27	0.63	outlier
		20	5.20	3.64	0.70	OK
		8	5.20	3.86	0.74	OK
		16	5.20	3.87	0.74	OK
	S-Co-L/0°	9	4.70	2.64	0.56	outlier
		2	4.70	3.32	0.71	OK
	S-Co-M/0°	17	50.00	34.08	0.68	OK
		5	50.00	31.52	0.63	outlier
	S-Co-H/0°	11	300.00	215.00	0.72	OK
		29	300.00	219.00	0.73	OK
mixed	N-150/Cs-137	31	5.50	3.21	0.58	outlier
		32	5.50	3.69	0.67	OK
NIR	NIR	1		0.47		
	NIR	7		0.48		
	NIR	10		0.44		
	NIR	12		0.54		
	NIR	13		0.44		
	NIR	15		0.47		
	NIR	21		0.45		
	NIR	23		0.45		
	NIR	27		0.56		
	NIR	28		0.50		
	NIR	30		0.50		
	NIR	33		0.47		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

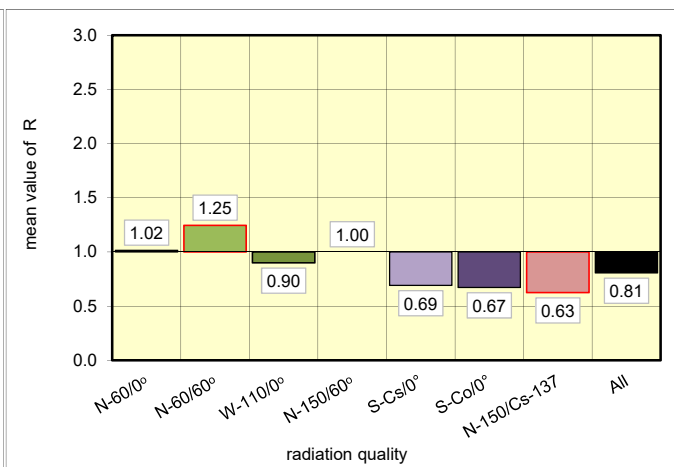
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.02	1.02	1.03	1.00	2%
N-60/60°	2	1.25	1.25	1.38	1.11	15%
W-110/0°	2	0.90	0.90	0.92	0.88	3%
N-150/60°	2	1.00	1.00	1.02	0.98	3%
S-Cs/0°	6	0.69	0.69	0.74	0.63	6%
S-Co/0°	6	0.70	0.67	0.73	0.56	10%
N-150/Cs-137	2	0.63	0.63	0.67	0.58	10%
All	22	0.73	0.81	1.38	0.56	26%

outliers: 4 of 22

Fraction of outliers: 18%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 102: (TL) for dose quantity $H_p(10)$

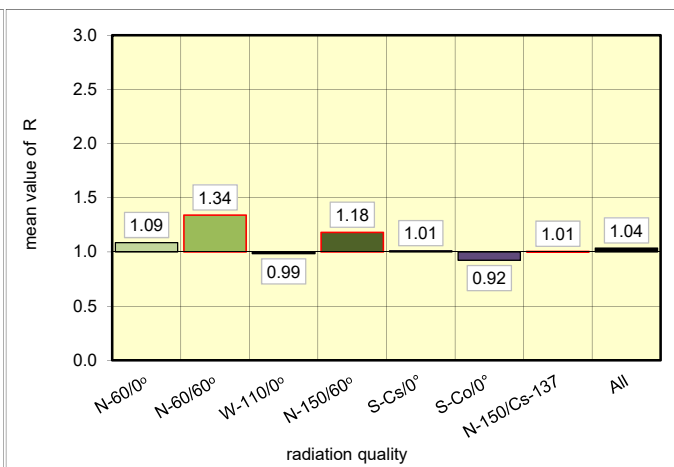
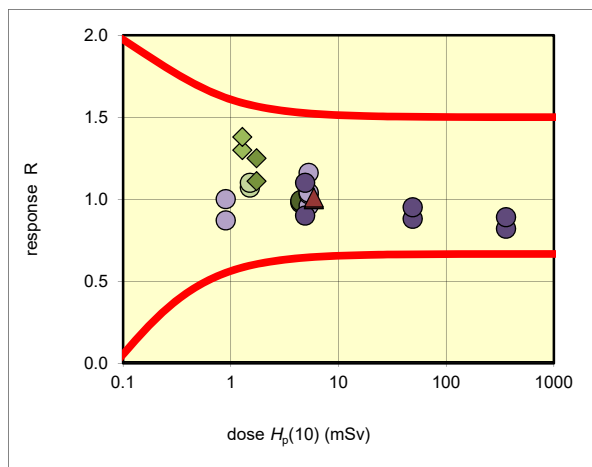
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	8	1.51	1.62	1.07	OK
		20	1.51	1.66	1.10	OK
	N-60/60°	19	1.28	1.67	1.30	OK
		30	1.28	1.76	1.38	OK
	W-110/0°	13	4.50	4.40	0.98	OK
		9	4.50	4.44	0.99	OK
	N-150/60°	10	1.73	1.93	1.11	OK
		14	1.73	2.17	1.25	OK
gamma	S-Cs-S/0°	25	0.90	0.78	0.87	OK
		32	0.90	0.90	1.00	OK
	S-Cs-L/0°	17	5.30	5.10	0.96	OK
		29	5.30	5.44	1.03	OK
		27	5.30	5.49	1.04	OK
		18	5.30	6.13	1.16	OK
	S-Co-L/0°	5	4.90	4.42	0.90	OK
		4	4.90	5.37	1.10	OK
	S-Co-M/0°	12	49.00	43.10	0.88	OK
		22	49.00	46.70	0.95	OK
	S-Co-H/0°	11	360.00	295.00	0.82	OK
		2	360.00	322.00	0.89	OK
mixed	N-150/Cs-137	24	5.90	5.89	1.00	OK
		23	5.90	5.93	1.01	OK
NIR	NIR	1		0.00		
	NIR	3		0.17		
	NIR	6		0.00		
	NIR	7		0.00		
	NIR	15		0.00		
	NIR	16		0.00		
	NIR	21		0.00		
	NIR	26		0.00		
	NIR	28		0.00		
	NIR	31		0.07		
	NIR	33		0.00		
	NIR	34		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.09	1.09	1.10	1.07	2%
N-60/60°	2	1.34	1.34	1.38	1.30	4%
W-110/0°	2	0.99	0.99	0.99	0.98	1%
N-150/60°	2	1.18	1.18	1.25	1.11	8%
S-Cs/0°	6	1.02	1.01	1.16	0.87	9%
S-Co/0°	6	0.90	0.92	1.10	0.82	10%
N-150/Cs-137	2	1.01	1.01	1.01	1.00	1%
<b>All</b>	<b>22</b>	<b>1.01</b>	<b>1.04</b>	<b>1.38</b>	<b>0.82</b>	<b>14%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 103: (TL) for dose quantity Hp(10)

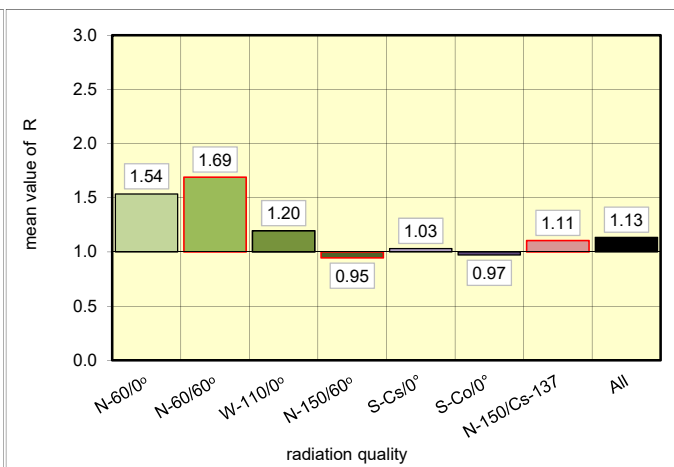
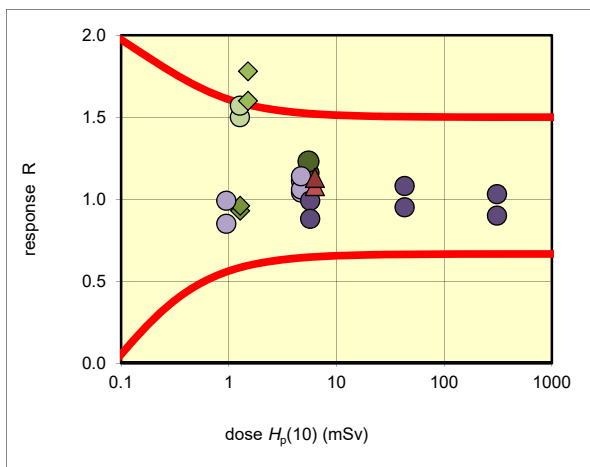
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	5	1.27	1.91	1.50	OK
		6	1.27	2.00	1.57	OK
	N-60/60°	16	1.51	2.41	1.60	outlier
		34	1.51	2.67	1.78	outlier
	W-110/0°	9	5.50	6.37	1.16	OK
		18	5.50	6.76	1.23	OK
	N-150/60°	7	1.28	1.18	0.93	OK
		21	1.28	1.22	0.96	OK
gamma	S-Cs-S/0°	11	0.95	0.94	0.99	OK
		15	0.95	0.81	0.85	OK
	S-Cs-L/0°	4	4.70	4.91	1.04	OK
		17	4.70	5.22	1.11	OK
		19	4.70	5.00	1.06	OK
		20	4.70	5.38	1.14	OK
	S-Co-L/0°	1	5.70	5.65	0.99	OK
		2	5.70	5.04	0.88	OK
	S-Co-M/0°	13	43.00	46.59	1.08	OK
		31	43.00	40.88	0.95	OK
	S-Co-H/0°	14	310.00	319.35	1.03	OK
		32	310.00	279.31	0.90	OK
mixed	N-150/Cs-137	22	6.30	6.78	1.08	OK
		23	6.30	7.14	1.13	OK
NIR	NIR	3		0.19		
	NIR	8		0.22		
	NIR	10		0.25		
	NIR	12		0.24		
	NIR	24		0.20		
	NIR	25		0.23		
	NIR	26		0.19		
	NIR	27		0.18		
	NIR	28		0.19		
	NIR	29		0.19		
	NIR	30		0.23		
NIR	33		0.20			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.54	1.54	1.57	1.50	3%
N-60/60°	2	1.69	1.69	1.78	1.60	8%
W-110/0°	2	1.20	1.20	1.23	1.16	4%
N-150/60°	2	0.95	0.95	0.96	0.93	2%
S-Cs/0°	6	1.05	1.03	1.14	0.85	10%
S-Co/0°	6	0.97	0.97	1.08	0.88	8%
N-150/Cs-137	2	1.11	1.11	1.13	1.08	3%
All	22	1.07	1.13	1.78	0.85	22%

outliers: 2 of 22

Fraction of outliers: 9%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 104: (TL) for dose quantity Hp(10)

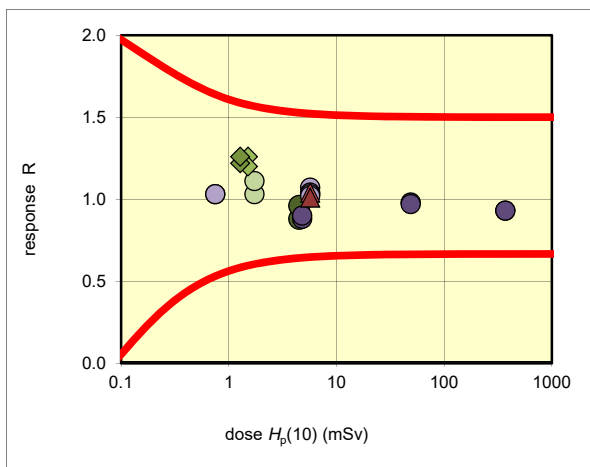
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.73	1.79	1.03	OK
		13	1.73	1.93	1.11	OK
	N-60/60°	32	1.51	1.90	1.26	OK
		33	1.51	1.81	1.20	OK
	W-110/0°	19	4.50	3.96	0.88	OK
		24	4.50	4.33	0.96	OK
N-150/60°	2	1.28	1.56	1.22	OK	
	8	1.28	1.61	1.26	OK	
gamma	S-Cs-S/0°	26	0.75	0.77	1.03	OK
		29	0.75	0.77	1.03	OK
	S-Cs-L/0°	1	5.70	6.11	1.07	OK
		9	5.70	5.94	1.04	OK
		23	5.70	5.85	1.03	OK
		25	5.70	5.81	1.02	OK
	S-Co-L/0°	21	4.80	4.24	0.88	OK
		22	4.80	4.33	0.90	OK
	S-Co-M/0°	18	49.00	47.80	0.98	OK
		31	49.00	47.50	0.97	OK
S-Co-H/0°	16	370.00	345.00	0.93	OK	
	30	370.00	343.00	0.93	OK	
mixed	N-150/Cs-137	3	5.70	5.90	1.04	OK
		4	5.70	5.78	1.01	OK
NIR	NIR	5		0.31		
	NIR	6		0.32		
	NIR	7		0.31		
	NIR	11		0.33		
	NIR	12		0.30		
	NIR	14		0.35		
	NIR	15		0.39		
	NIR	17		0.25		
	NIR	20		0.29		
	NIR	27		0.30		
	NIR	28		0.24		
	NIR	34		0.29		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

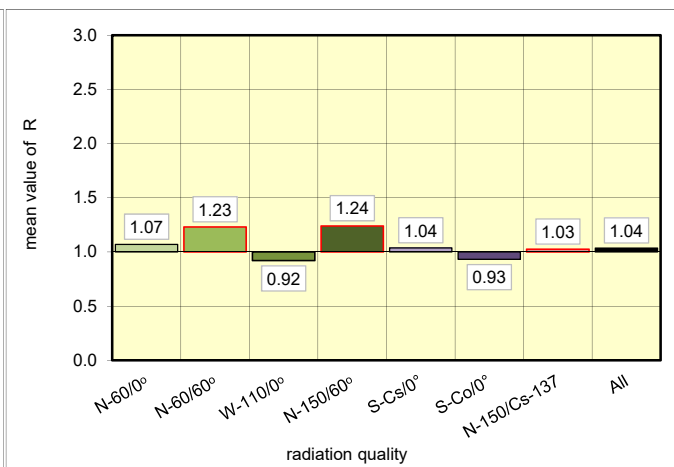
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.07	1.07	1.11	1.03	5%
N-60/60°	2	1.23	1.23	1.26	1.20	3%
W-110/0°	2	0.92	0.92	0.96	0.88	6%
N-150/60°	2	1.24	1.24	1.26	1.22	2%
S-Cs/0°	6	1.03	1.04	1.07	1.02	2%
S-Co/0°	6	0.93	0.93	0.98	0.88	4%
N-150/Cs-137	2	1.03	1.03	1.04	1.01	2%
<b>All</b>	<b>22</b>	<b>1.03</b>	<b>1.04</b>	<b>1.26</b>	<b>0.88</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018



No dose values for  $H_p(0.07)$  submitted.

## Reporting number 105: (TL) for dose quantity Hp(10)

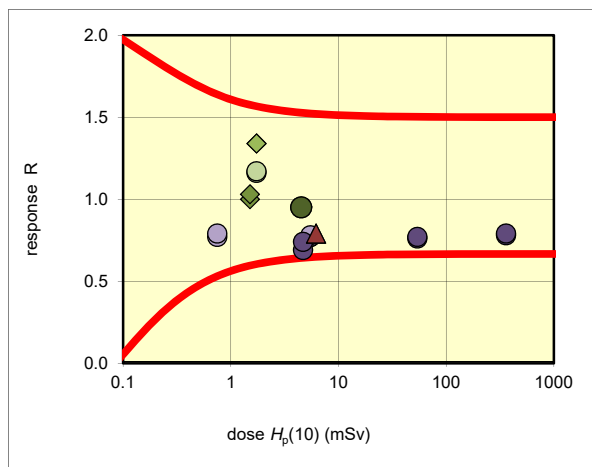
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	5	1.73	2.01	1.16	OK
		22	1.73	2.03	1.17	OK
	N-60/60°	28	1.73	2.32	1.34	OK
		34	1.73	2.33	1.34	OK
	W-110/0°	15	4.50	4.27	0.95	OK
		29	4.50	4.26	0.95	OK
N-150/60°	7	1.51	1.50	1.00	OK	
	12	1.51	1.56	1.03	OK	
gamma	S-Cs-S/0°	20	0.75	0.58	0.77	OK
		32	0.75	0.59	0.79	OK
	S-Cs-L/0°	9	5.50	4.24	0.77	OK
		18	5.50	4.23	0.77	OK
		19	5.50	4.25	0.77	OK
	S-Co-L/0°	10	5.50	4.29	0.78	OK
		24	4.70	3.24	0.69	OK
	S-Co-M/0°	25	4.70	3.46	0.74	OK
		6	54.00	40.96	0.76	OK
	S-Co-H/0°	33	54.00	41.72	0.77	OK
21		360.00	280.60	0.78	OK	
mixed	N-150/Cs-137	8	360.00	284.60	0.79	OK
		13	6.20	4.89	0.79	OK
NIR	N-150/Cs-137	14	6.20	4.89	0.79	OK
		1		0.51		
		2		0.49		
		3		0.51		
		4		0.58		
		11		0.50		
		16		0.47		
		17		0.48		
		23		0.54		
		26		0.46		
27		0.51				
30		0.53				
31		0.47				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

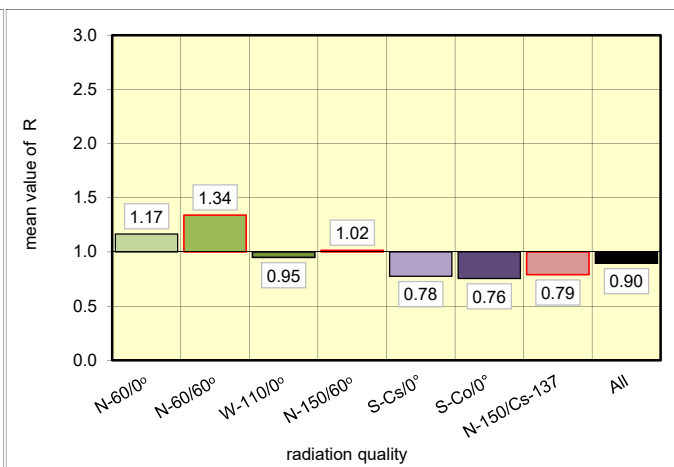
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.17	1.17	1.17	1.16	1%
N-60/60°	2	1.34	1.34	1.34	1.34	0%
W-110/0°	2	0.95	0.95	0.95	0.95	0%
N-150/60°	2	1.02	1.02	1.03	1.00	2%
S-Cs/0°	6	0.77	0.78	0.79	0.77	1%
S-Co/0°	6	0.77	0.76	0.79	0.69	5%
N-150/Cs-137	2	0.79	0.79	0.79	0.79	0%
All	22	0.79	0.90	1.34	0.69	22%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 105: (TL) for dose quantity Hp(0.07)

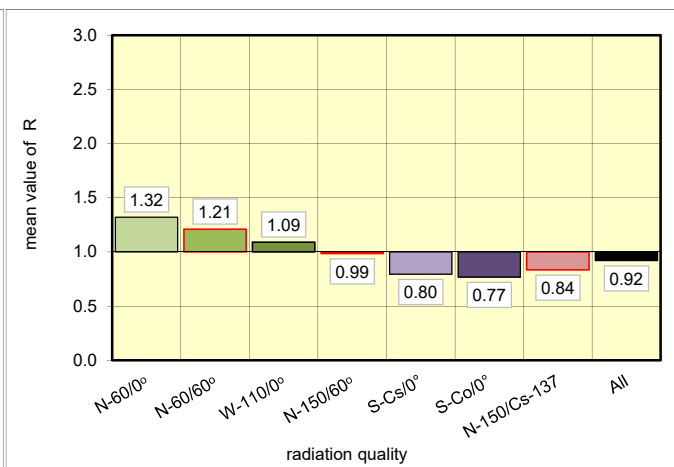
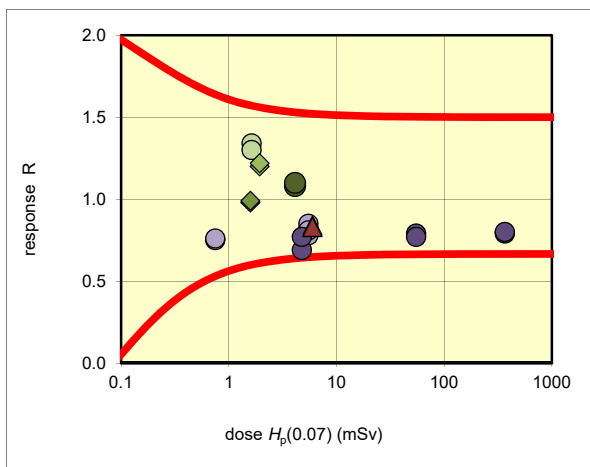
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	5	1.63	2.19	1.34	OK
		22	1.63	2.12	1.30	OK
	N-60/60°	28	1.94	2.32	1.20	OK
		34	1.94	2.37	1.22	OK
	W-110/0°	15	4.12	4.43	1.08	OK
		29	4.12	4.51	1.10	OK
N-150/60°	7	1.59	1.56	0.98	OK	
	12	1.59	1.57	0.99	OK	
gamma	S-Cs-S/0°	20	0.75	0.56	0.75	OK
		32	0.75	0.57	0.76	OK
	S-Cs-L/0°	9	5.50	4.30	0.78	OK
		18	5.50	4.50	0.82	OK
		19	5.50	4.67	0.85	OK
	S-Co-L/0°	10	5.50	4.45	0.81	OK
		24	4.78	3.29	0.69	OK
	S-Co-M/0°	25	4.78	3.67	0.77	OK
		6	54.90	43.48	0.79	OK
	S-Co-H/0°	33	54.90	42.53	0.77	OK
21		366.00	289.49	0.79	OK	
mixed	N-150/Cs-137	8	366.00	294.49	0.80	OK
		13	5.99	5.03	0.84	OK
	NIR	14	5.99	4.99	0.83	OK
		1		0.49		
		2		0.50		
		3		0.61		
		4		0.63		
		11		0.47		
		16		0.46		
		17		0.47		
		23		0.52		
		26		0.46		
		27		0.53		
30		0.50				
31		0.46				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.32	1.32	1.34	1.30	2%
N-60/60°	2	1.21	1.21	1.22	1.20	1%
W-110/0°	2	1.09	1.09	1.10	1.08	1%
N-150/60°	2	0.99	0.99	0.99	0.98	1%
S-Cs/0°	6	0.80	0.80	0.85	0.75	5%
S-Co/0°	6	0.78	0.77	0.80	0.69	5%
N-150/Cs-137	2	0.84	0.84	0.84	0.83	1%
All	22	0.83	0.92	1.34	0.69	21%

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 106: (TL) for dose quantity Hp(10)

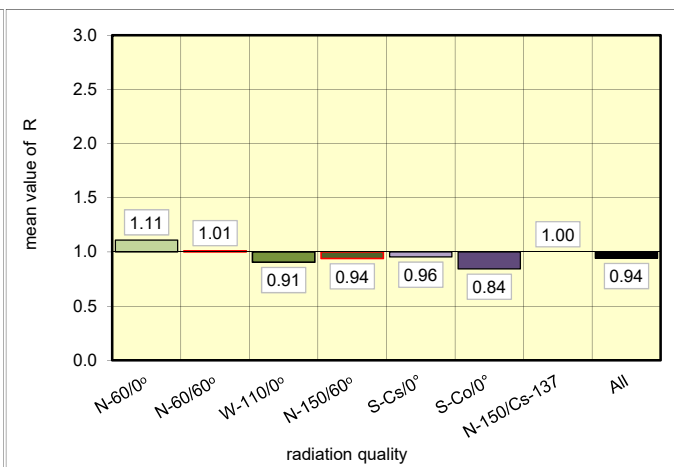
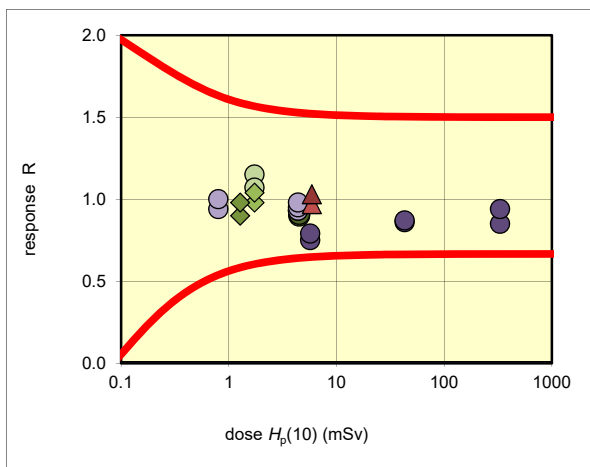
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.73	2.00	1.15	OK
		13	1.73	1.85	1.07	OK
	N-60/60°	21	1.73	1.70	0.98	OK
		4	1.73	1.80	1.04	OK
	W-110/0°	16	4.50	4.05	0.90	OK
		22	4.50	4.10	0.91	OK
	N-150/60°	23	1.28	1.15	0.90	OK
		18	1.28	1.25	0.98	OK
gamma	S-Cs-S/0°	9	0.80	0.75	0.94	OK
		33	0.80	0.80	1.00	OK
	S-Cs-L/0°	27	4.40	4.10	0.93	OK
		32	4.40	4.10	0.93	OK
		6	4.40	4.20	0.95	OK
		8	4.40	4.30	0.98	OK
	S-Co-L/0°	5	5.70	4.25	0.75	OK
		1	5.70	4.50	0.79	OK
	S-Co-M/0°	10	43.00	37.00	0.86	OK
		26	43.00	37.30	0.87	OK
	S-Co-H/0°	15	330.00	280.60	0.85	OK
		7	330.00	311.25	0.94	OK
mixed	N-150/Cs-137	17	5.90	5.75	0.97	OK
		19	5.90	6.10	1.03	OK
NIR	NIR	2		0.30		
	NIR	3		0.35		
	NIR	12		0.30		
	NIR	14		0.30		
	NIR	20		0.30		
	NIR	24		0.30		
	NIR	25		0.30		
	NIR	28		0.30		
	NIR	29		0.30		
	NIR	30		0.30		
	NIR	31		0.35		
	NIR	34		0.30		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.11	1.11	1.15	1.07	5%
N-60/60°	2	1.01	1.01	1.04	0.98	4%
W-110/0°	2	0.91	0.91	0.91	0.90	1%
N-150/60°	2	0.94	0.94	0.98	0.90	6%
S-Cs/0°	6	0.95	0.96	1.00	0.93	3%
S-Co/0°	6	0.86	0.84	0.94	0.75	8%
N-150/Cs-137	2	1.00	1.00	1.03	0.97	4%
<b>All</b>	<b>22</b>	<b>0.94</b>	<b>0.94</b>	<b>1.15</b>	<b>0.75</b>	<b>10%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 106: (TL) for dose quantity Hp(0.07)

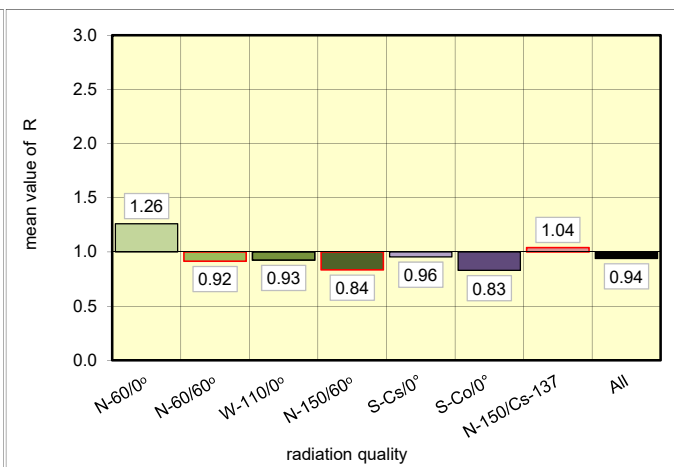
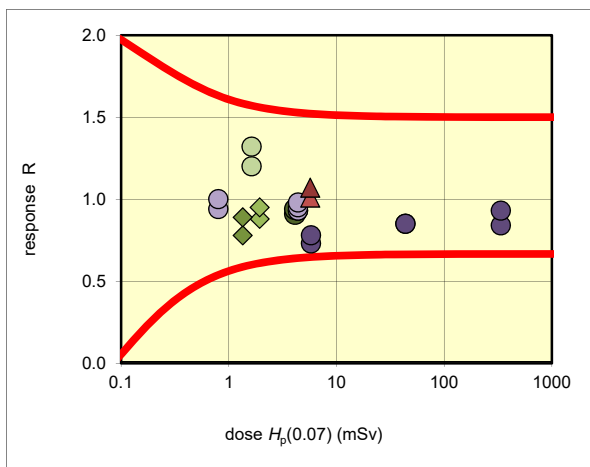
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.63	2.15	1.32	OK
		13	1.63	1.95	1.20	OK
	N-60/60°	21	1.94	1.70	0.88	OK
		4	1.94	1.85	0.95	OK
	W-110/0°	16	4.12	3.75	0.91	OK
		22	4.12	3.85	0.94	OK
N-150/60°	23	1.35	1.05	0.78	OK	
	18	1.35	1.20	0.89	OK	
gamma	S-Cs-S/0°	9	0.80	0.75	0.94	OK
		33	0.80	0.80	1.00	OK
	S-Cs-L/0°	27	4.40	4.10	0.93	OK
		32	4.40	4.10	0.93	OK
		6	4.40	4.20	0.95	OK
		8	4.40	4.30	0.98	OK
	S-Co-L/0°	5	5.80	4.25	0.73	OK
		1	5.80	4.50	0.78	OK
	S-Co-M/0°	10	43.70	37.00	0.85	OK
		26	43.70	37.30	0.85	OK
S-Co-H/0°	15	336.00	280.60	0.84	OK	
	7	336.00	311.25	0.93	OK	
mixed	N-150/Cs-137	17	5.70	5.75	1.01	OK
		19	5.70	6.10	1.07	OK
NIR	NIR	2		0.30		
	NIR	3		0.35		
	NIR	12		0.30		
	NIR	14		0.30		
	NIR	20		0.30		
	NIR	24		0.30		
	NIR	25		0.30		
	NIR	28		0.30		
	NIR	29		0.30		
	NIR	30		0.30		
	NIR	31		0.35		
	NIR	34		0.30		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.26	1.26	1.32	1.20	7%
N-60/60°	2	0.92	0.92	0.95	0.88	5%
W-110/0°	2	0.93	0.93	0.94	0.91	2%
N-150/60°	2	0.84	0.84	0.89	0.78	9%
S-Cs/0°	6	0.95	0.96	1.00	0.93	3%
S-Co/0°	6	0.85	0.83	0.93	0.73	8%
N-150/Cs-137	2	1.04	1.04	1.07	1.01	4%
All	22	0.93	0.94	1.32	0.73	14%

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 107: (TL) for dose quantity Hp(10)

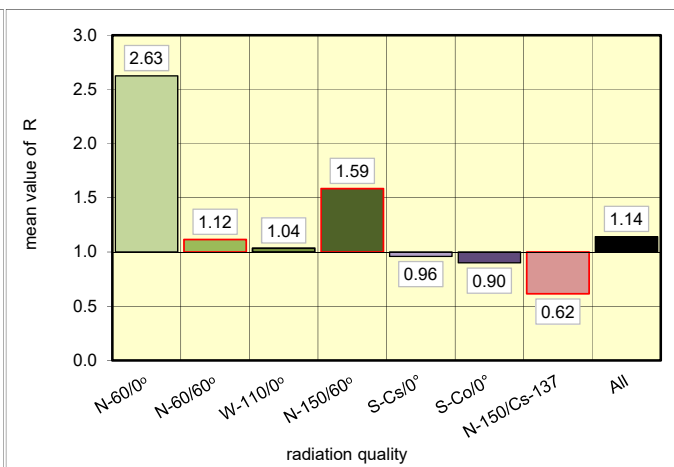
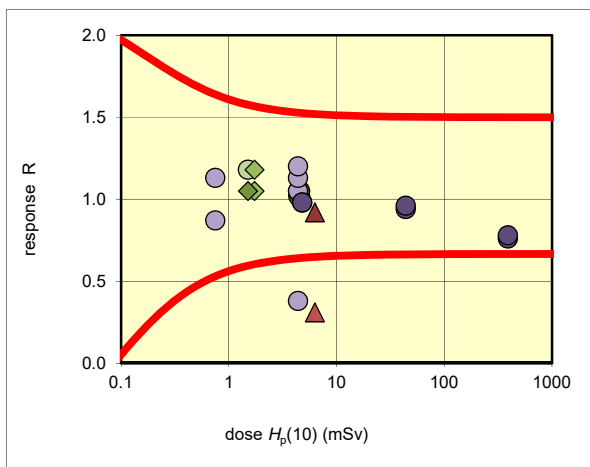
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	5	1.51	6.14	4.07	outlier
		22	1.51	1.78	1.18	OK
	N-60/60°	33	1.73	1.82	1.05	OK
		29	1.73	2.04	1.18	OK
	W-110/0°	16	4.50	4.59	1.02	OK
		12	4.50	4.72	1.05	OK
	N-150/60°	32	1.51	1.58	1.05	OK
		26	1.51	3.19	2.12	outlier
gamma	S-Cs-S/0°	44	0.75	0.65	0.87	OK
		48	0.75	0.85	1.13	OK
	S-Cs-L/0°	31	4.40	1.66	0.38	outlier
		23	4.40	4.64	1.05	OK
		43	4.40	4.95	1.13	OK
	S-Co-L/0°	49	4.40	5.26	1.20	OK
		1	4.80	4.70	0.98	OK
	S-Co-M/0°	7	4.80	4.68	0.98	OK
		25	44.00	41.40	0.94	OK
	S-Co-H/0°	21	44.00	42.16	0.96	OK
		10	390.00	295.72	0.76	OK
	S-Co-H/0°	2	390.00	304.17	0.78	OK
mixed		N-150/Cs-137	13	6.30	1.93	0.31
	9		6.30	5.82	0.92	OK
NIR	NIR	3		0.54		
	NIR	4		0.77		
	NIR	6		0.77		
	NIR	14		0.76		
	NIR	18		0.81		
	NIR	24		0.82		
	NIR	27		0.77		
	NIR	34		0.71		
	NIR	45		0.62		
	NIR	46		0.76		
	NIR	47		0.76		
	NIR	50		0.76		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>2.63</b>	2.63	4.07	1.18	78%
N-60/60°	2	<b>1.12</b>	1.12	1.18	1.05	8%
W-110/0°	2	<b>1.04</b>	1.04	1.05	1.02	2%
N-150/60°	2	<b>1.59</b>	1.59	2.12	1.05	48%
S-Cs/0°	6	<b>1.09</b>	0.96	1.20	0.38	32%
S-Co/0°	6	<b>0.95</b>	0.90	0.98	0.76	11%
N-150/Cs-137	2	<b>0.62</b>	0.62	0.92	0.31	70%
<b>All</b>	<b>22</b>	<b>1.04</b>	<b>1.14</b>	<b>4.07</b>	<b>0.31</b>	<b>65%</b>

outliers: 4 of 22

fraction of outliers: 18%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

2 points outside diagramme (> 2)

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 108: (TL) for dose quantity Hp(10)

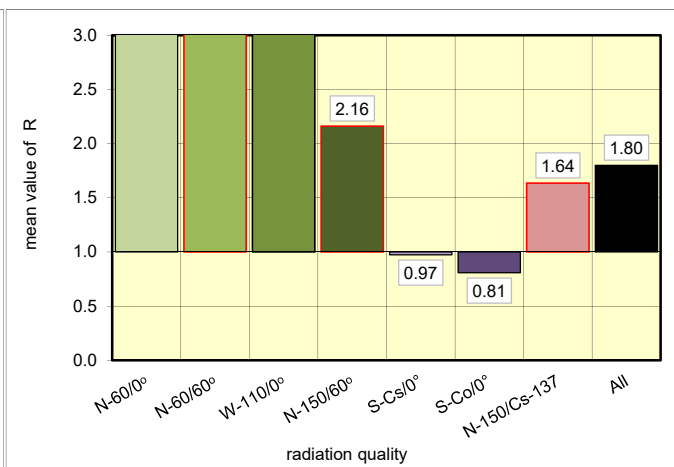
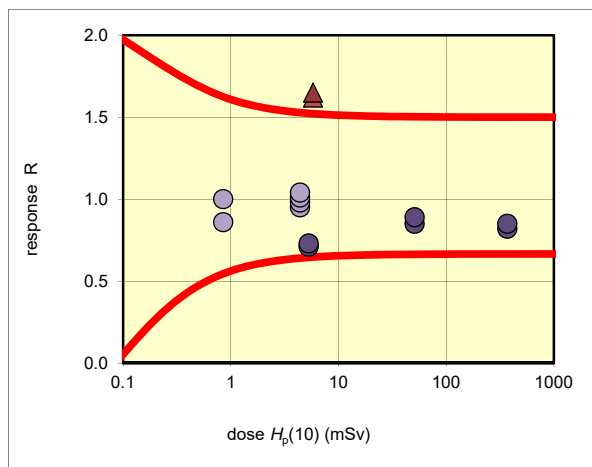
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.73	6.09	3.51	outlier
		18	1.73	5.96	3.44	outlier
	N-60/60°	2	1.28	5.46	4.27	outlier
		30	1.28	4.53	3.54	outlier
	W-110/0°	33	4.50	14.10	3.13	outlier
		22	4.50	15.38	3.41	outlier
N-150/60°	23	1.51	3.23	2.14	outlier	
	31	1.51	3.28	2.18	outlier	
gamma	S-Cs-S/0°	1	0.85	0.73	0.86	OK
		3	0.85	0.85	1.00	OK
	S-Cs-L/0°	32	4.40	4.18	0.95	OK
		29	4.40	4.30	0.98	OK
		20	4.40	4.44	1.01	OK
	S-Co-L/0°	19	4.40	4.57	1.04	OK
		21	5.30	3.78	0.71	OK
	S-Co-M/0°	26	5.30	3.86	0.73	OK
		10	51.00	43.57	0.85	OK
	S-Co-H/0°	7	51.00	45.58	0.89	OK
12		370.00	304.25	0.82	OK	
mixed	N-150/Cs-137	6	370.00	315.99	0.85	OK
		5	5.80	9.40	1.62	outlier
NIR	N-150/Cs-137	4	5.80	9.57	1.65	outlier
		8			0.29	
		25			0.30	
		9			0.31	
		13			0.31	
		14			0.30	
		15			0.30	
		16			0.31	
		17			0.30	
		24			0.29	
27			0.26			
28			0.27			
34			0.29			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>3.48</b>	3.48	3.51	3.44	1%
N-60/60°	2	<b>3.91</b>	3.91	4.27	3.54	13%
W-110/0°	2	<b>3.27</b>	3.27	3.41	3.13	6%
N-150/60°	2	<b>2.16</b>	2.16	2.18	2.14	1%
S-Cs/0°	6	<b>0.99</b>	0.97	1.04	0.86	6%
S-Co/0°	6	<b>0.84</b>	0.81	0.89	0.71	9%
N-150/Cs-137	2	<b>1.64</b>	1.64	1.65	1.62	1%
<b>All</b>	<b>22</b>	<b>1.03</b>	<b>1.80</b>	<b>4.27</b>	<b>0.71</b>	<b>66%</b>

outliers: 10 of 22

fraction of outliers: 45%



8 points outside diagramme (> 2)

Results: IC2018



No dose values for  $H_p(0.07)$  submitted.

## Reporting number 109: (TL) for dose quantity $H_p(10)$

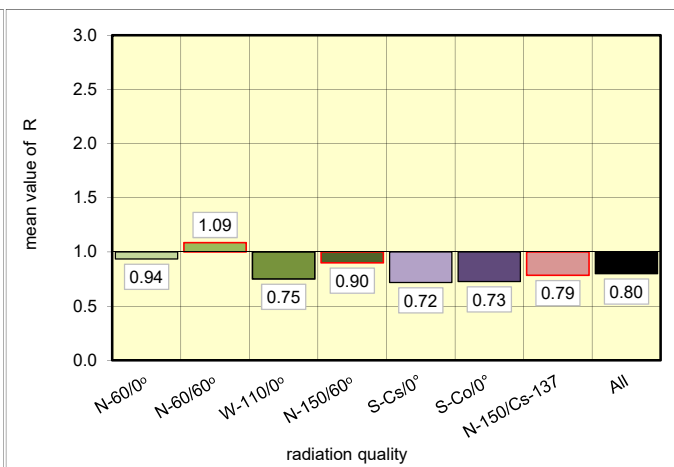
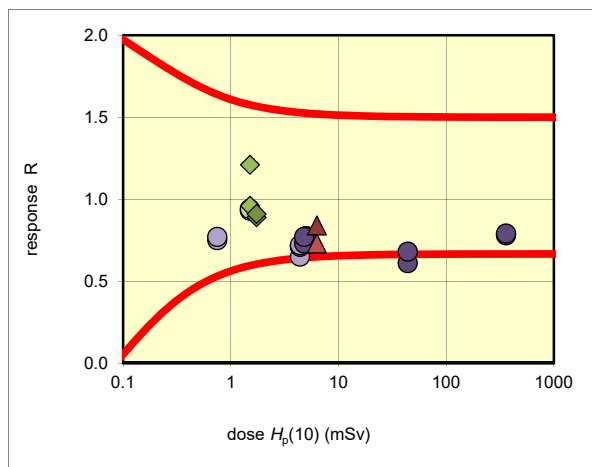
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	12	1.51	1.40	0.93	OK
		24	1.51	1.42	0.94	OK
	N-60/60°	22	1.51	1.44	0.96	OK
		8	1.51	1.82	1.21	OK
	W-110/0°	4	5.00	3.64	0.73	OK
		14	5.00	3.86	0.77	OK
	N-150/60°	16	1.73	1.54	0.89	OK
		2	1.73	1.57	0.91	OK
gamma	S-Cs-S/0°	26	0.75	0.56	0.75	OK
		27	0.75	0.58	0.77	OK
	S-Cs-L/0°	20	4.40	2.87	0.65	OK
		9	4.40	3.14	0.71	OK
		21	4.40	3.14	0.71	OK
		7	4.40	3.17	0.72	OK
	S-Co-L/0°	11	4.80	3.49	0.73	OK
		28	4.80	3.71	0.77	OK
	S-Co-M/0°	17	44.00	27.00	0.61	outlier
		13	44.00	30.05	0.68	OK
	S-Co-H/0°	30	360.00	281.67	0.78	OK
		31	360.00	282.96	0.79	OK
mixed	N-150/Cs-137	32	6.30	4.61	0.73	OK
		33	6.30	5.30	0.84	OK
NIR	NIR	1		0.19		
	NIR	3		0.14		
	NIR	5		0.15		
	NIR	6		0.19		
	NIR	10		0.17		
	NIR	15		0.21		
	NIR	18		0.15		
	NIR	19		0.18		
	NIR	23		0.15		
	NIR	25		0.23		
	NIR	29		0.16		
	NIR	34		0.16		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.94</b>	0.94	0.94	0.93	1%
N-60/60°	2	<b>1.09</b>	1.09	1.21	0.96	16%
W-110/0°	2	<b>0.75</b>	0.75	0.77	0.73	4%
N-150/60°	2	<b>0.90</b>	0.90	0.91	0.89	2%
S-Cs/0°	6	<b>0.72</b>	0.72	0.77	0.65	6%
S-Co/0°	6	<b>0.75</b>	0.73	0.79	0.61	10%
N-150/Cs-137	2	<b>0.79</b>	0.79	0.84	0.73	10%
<b>All</b>	<b>22</b>	<b>0.77</b>	<b>0.80</b>	<b>1.21</b>	<b>0.61</b>	<b>17%</b>

outliers: 1 of 22

fraction of outliers: 5%



Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 110: (other) for dose quantity Hp(10)

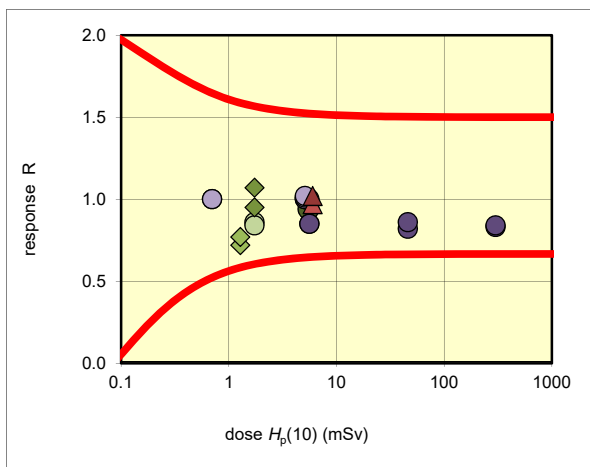
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	20	1.73	1.49	0.86	OK
		11	1.73	1.46	0.84	OK
	N-60/60°	19	1.28	0.92	0.72	OK
		24	1.28	0.99	0.77	OK
	W-110/0°	13	5.50	5.16	0.94	OK
		17	5.50	5.49	1.00	OK
	N-150/60°	1	1.73	1.65	0.95	OK
		10	1.73	1.86	1.07	OK
gamma	S-Cs-S/0°	26	0.70	0.70	1.00	OK
		27	0.70	0.70	1.00	OK
	S-Cs-L/0°	29	5.10	5.09	1.00	OK
		7	5.10	5.12	1.00	OK
		16	5.10	5.16	1.01	OK
	S-Co-L/0°	9	5.10	5.19	1.02	OK
		3	5.60	4.76	0.85	OK
	S-Co-M/0°	23	5.60	4.77	0.85	OK
		5	46.00	37.80	0.82	OK
	S-Co-H/0°	32	46.00	39.34	0.86	OK
4		300.00	247.91	0.83	OK	
mixed	N-150/Cs-137	25	300.00	250.89	0.84	OK
		12	6.00	5.84	0.97	OK
		28	6.00	6.13	1.02	OK
NIR	NIR	2		0.20		
		6		0.18		
		8		0.21		
		14		0.22		
		15		0.19		
		18		0.19		
		21		0.23		
		22		0.19		
		30		0.18		
		31		0.25		
		33		0.18		
		34		0.20		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

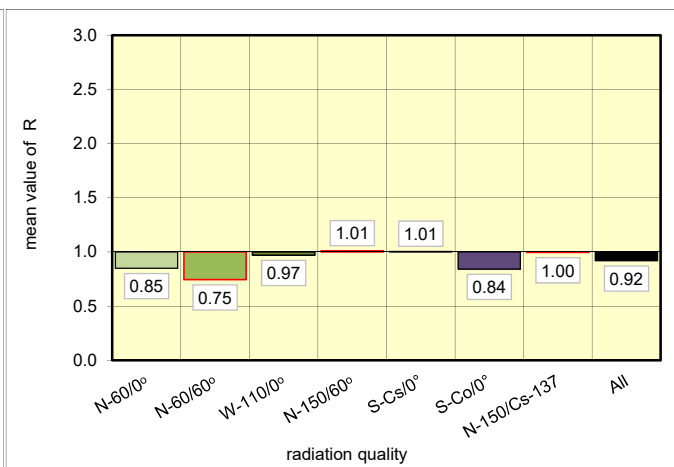
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.85</b>	0.85	0.86	0.84	2%
N-60/60°	2	<b>0.75</b>	0.75	0.77	0.72	5%
W-110/0°	2	<b>0.97</b>	0.97	1.00	0.94	4%
N-150/60°	2	<b>1.01</b>	1.01	1.07	0.95	8%
S-Cs/0°	6	<b>1.00</b>	1.01	1.02	1.00	1%
S-Co/0°	6	<b>0.85</b>	0.84	0.86	0.82	2%
N-150/Cs-137	2	<b>1.00</b>	1.00	1.02	0.97	4%
<b>All</b>	<b>22</b>	<b>0.95</b>	<b>0.92</b>	<b>1.07</b>	<b>0.72</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 110: (other) for dose quantity Hp(0.07)

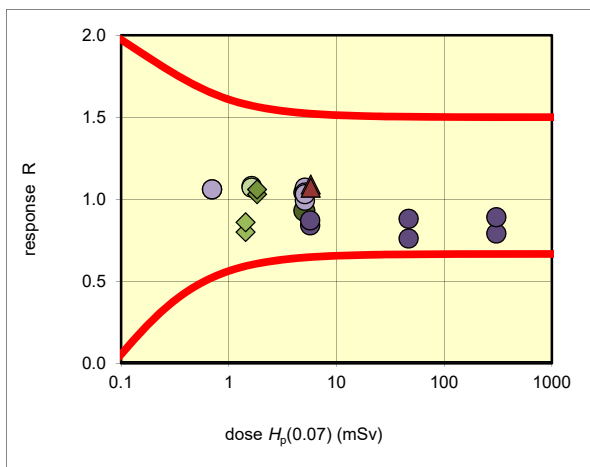
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	20	1.63	1.76	1.08	OK
		11	1.63	1.74	1.07	OK
	N-60/60°	19	1.43	1.14	0.80	OK
		24	1.43	1.23	0.86	OK
	W-110/0°	13	5.03	4.68	0.93	OK
		17	5.03	5.24	1.04	OK
	N-150/60°	1	1.83	1.89	1.03	OK
		10	1.83	1.93	1.06	OK
gamma	S-Cs-S/0°	26	0.70	0.74	1.06	OK
		27	0.70	0.74	1.06	OK
	S-Cs-L/0°	29	5.10	5.07	0.99	OK
		7	5.10	5.46	1.07	OK
		16	5.10	5.28	1.04	OK
		9	5.10	5.23	1.03	OK
	S-Co-L/0°	3	5.70	4.78	0.84	OK
		23	5.70	4.95	0.87	OK
	S-Co-M/0°	5	46.80	35.46	0.76	OK
		32	46.80	40.98	0.88	OK
	S-Co-H/0°	4	305.00	242.28	0.79	OK
		25	305.00	270.77	0.89	OK
mixed	N-150/Cs-137	12	5.76	6.25	1.09	OK
		28	5.76	6.14	1.07	OK
NIR	NIR	2		0.17		
	NIR	6		0.16		
	NIR	8		0.18		
	NIR	14		0.19		
	NIR	15		0.18		
	NIR	18		0.20		
	NIR	21		0.21		
	NIR	22		0.16		
	NIR	30		0.17		
	NIR	31		0.21		
	NIR	33		0.15		
	NIR	34		0.17		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

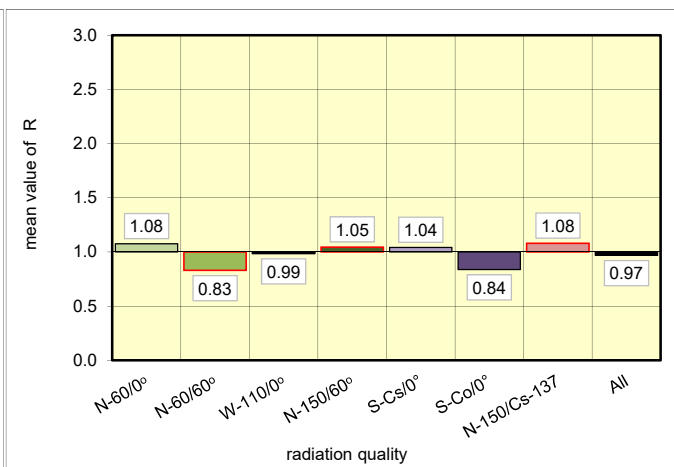
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.08	1.08	1.08	1.07	1%
N-60/60°	2	0.83	0.83	0.86	0.80	5%
W-110/0°	2	0.99	0.99	1.04	0.93	8%
N-150/60°	2	1.05	1.05	1.06	1.03	2%
S-Cs/0°	6	1.05	1.04	1.07	0.99	3%
S-Co/0°	6	0.86	0.84	0.89	0.76	6%
N-150/Cs-137	2	1.08	1.08	1.09	1.07	1%
All	22	1.03	0.97	1.09	0.76	11%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 111: (other) for dose quantity Hp(10)

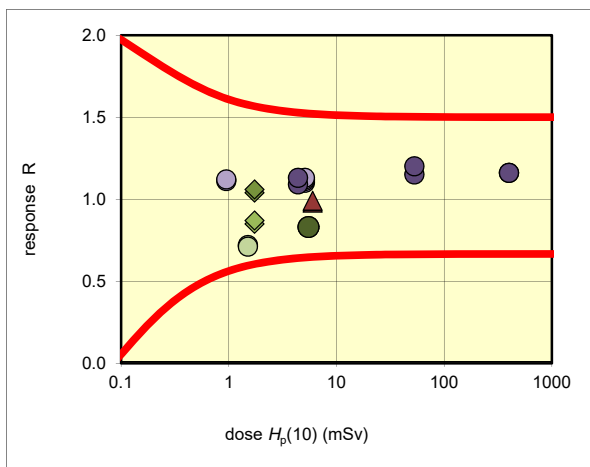
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	16	1.51	1.08	0.72	OK
		28	1.51	1.07	0.71	OK
	N-60/60°	24	1.73	1.47	0.85	OK
		19	1.73	1.50	0.87	OK
	W-110/0°	9	5.50	4.54	0.83	OK
		29	5.50	4.54	0.83	OK
	N-150/60°	12	1.73	1.80	1.04	OK
		32	1.73	1.84	1.06	OK
gamma	S-Cs-S/0°	8	0.95	1.05	1.11	OK
		26	0.95	1.06	1.12	OK
	S-Cs-L/0°	15	5.10	5.59	1.10	OK
		22	5.10	5.67	1.11	OK
		20	5.10	5.70	1.12	OK
	S-Co-L/0°	5	5.10	5.75	1.13	OK
		18	4.40	4.80	1.09	OK
	S-Co-M/0°	17	4.40	4.98	1.13	OK
		11	53.00	61.07	1.15	OK
	S-Co-H/0°	23	53.00	63.43	1.20	OK
		14	400.00	463.76	1.16	OK
	mixed	N-150/Cs-137	34	400.00	462.18	1.16
13			6.00	5.90	0.98	OK
NIR	N-150/Cs-137	10	6.00	5.92	0.99	OK
		1		0.65		
		2		0.63		
		3		0.64		
		4		0.68		
		6		0.64		
		7		0.64		
		21		0.62		
		25		0.61		
		27		0.63		
30		0.62				
31		0.62				
33		0.63				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

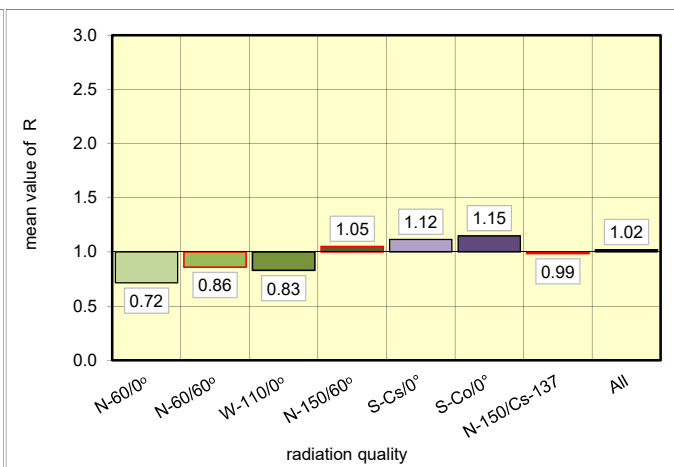
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.72</b>	0.72	0.72	0.71	1%
N-60/60°	2	<b>0.86</b>	0.86	0.87	0.85	2%
W-110/0°	2	<b>0.83</b>	0.83	0.83	0.83	0%
N-150/60°	2	<b>1.05</b>	1.05	1.06	1.04	1%
S-Cs/0°	6	<b>1.12</b>	1.12	1.13	1.10	1%
S-Co/0°	6	<b>1.16</b>	1.15	1.20	1.09	3%
N-150/Cs-137	2	<b>0.99</b>	0.99	0.99	0.98	1%
<b>All</b>	<b>22</b>	<b>1.10</b>	<b>1.02</b>	<b>1.20</b>	<b>0.71</b>	<b>15%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 112: (other) for dose quantity Hp(10)

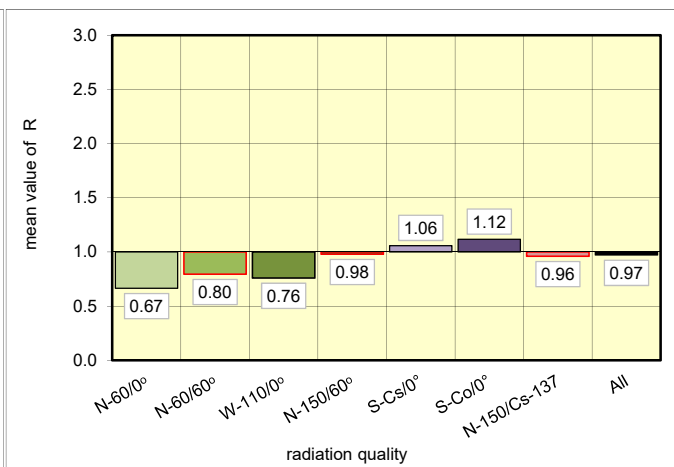
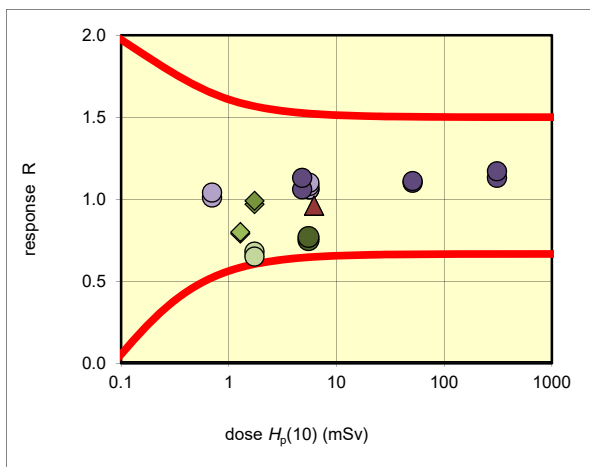
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	16	1.73	1.17	0.68	OK
		14	1.73	1.13	0.65	OK
	N-60/60°	20	1.28	1.01	0.79	OK
		15	1.28	1.02	0.80	OK
	W-110/0°	30	5.50	4.10	0.75	OK
		21	5.50	4.24	0.77	OK
	N-150/60°	12	1.73	1.69	0.97	OK
		2	1.73	1.72	0.99	OK
gamma	S-Cs-S/0°	26	0.70	0.71	1.01	OK
		24	0.70	0.73	1.04	OK
	S-Cs-L/0°	1	5.60	5.95	1.06	OK
		3	5.60	5.93	1.06	OK
		6	5.60	6.04	1.08	OK
		5	5.60	6.14	1.10	OK
	S-Co-L/0°	27	4.80	5.07	1.06	OK
		28	4.80	5.40	1.13	OK
	S-Co-M/0°	11	51.00	56.28	1.10	OK
		13	51.00	56.69	1.11	OK
	S-Co-H/0°	23	310.00	350.05	1.13	OK
		25	310.00	361.83	1.17	OK
mixed	N-150/Cs-137	8	6.20	5.95	0.96	OK
		9	6.20	5.94	0.96	OK
NIR	NIR	4		0.00		
	NIR	7		0.00		
	NIR	17		0.00		
	NIR	18		0.00		
	NIR	19		0.00		
	NIR	22		0.00		
	NIR	29		0.00		
	NIR	31		0.00		
	NIR	32		0.00		
	NIR	33		0.00		
	NIR	34		0.00		
	NIR	35		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.67</b>	0.67	0.68	0.65	3%
N-60/60°	2	<b>0.80</b>	0.80	0.80	0.79	1%
W-110/0°	2	<b>0.76</b>	0.76	0.77	0.75	2%
N-150/60°	2	<b>0.98</b>	0.98	0.99	0.97	1%
S-Cs/0°	6	<b>1.06</b>	1.06	1.10	1.01	3%
S-Co/0°	6	<b>1.12</b>	1.12	1.17	1.06	3%
N-150/Cs-137	2	<b>0.96</b>	0.96	0.96	0.96	0%
<b>All</b>	<b>22</b>	<b>1.03</b>	<b>0.97</b>	<b>1.17</b>	<b>0.65</b>	<b>16%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 112: (other) for dose quantity Hp(0.07)

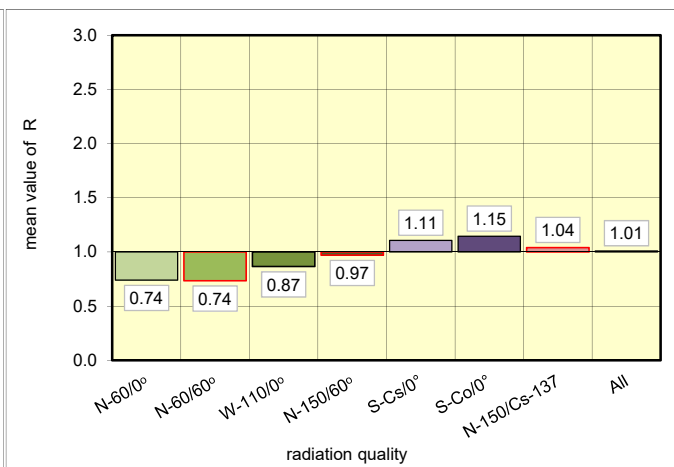
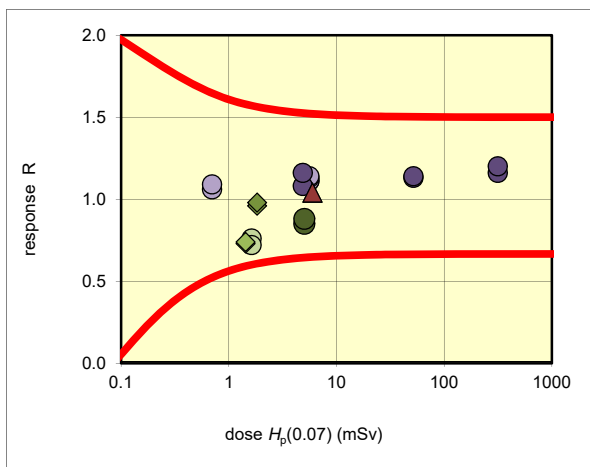
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	16	1.63	1.23	0.76	OK
		14	1.63	1.18	0.72	OK
	N-60/60°	20	1.43	1.05	0.73	OK
		15	1.43	1.06	0.74	OK
	W-110/0°	30	5.03	4.28	0.85	OK
		21	5.03	4.42	0.88	OK
	N-150/60°	12	1.83	1.76	0.96	OK
		2	1.83	1.80	0.98	OK
gamma	S-Cs-S/0°	26	0.70	0.74	1.06	OK
		24	0.70	0.76	1.09	OK
	S-Cs-L/0°	1	5.60	6.21	1.11	OK
		3	5.60	6.19	1.11	OK
		6	5.60	6.30	1.13	OK
		5	5.60	6.40	1.14	OK
	S-Co-L/0°	27	4.88	5.29	1.08	OK
		28	4.88	5.64	1.16	OK
	S-Co-M/0°	11	51.90	58.73	1.13	OK
		13	51.90	59.15	1.14	OK
	S-Co-H/0°	23	315.00	365.27	1.16	OK
		25	315.00	377.56	1.20	OK
mixed	N-150/Cs-137	8	5.98	6.21	1.04	OK
		9	5.98	6.20	1.04	OK
NIR	NIR	4		0.00		
	NIR	7		0.00		
	NIR	17		0.00		
	NIR	18		0.00		
	NIR	19		0.00		
	NIR	22		0.00		
	NIR	29		0.00		
	NIR	31		0.00		
	NIR	32		0.00		
	NIR	33		0.00		
	NIR	34		0.00		
NIR	35		0.00			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.74</b>	0.74	0.76	0.72	4%
N-60/60°	2	<b>0.74</b>	0.74	0.74	0.73	1%
W-110/0°	2	<b>0.87</b>	0.87	0.88	0.85	2%
N-150/60°	2	<b>0.97</b>	0.97	0.98	0.96	1%
S-Cs/0°	6	<b>1.11</b>	1.11	1.14	1.06	3%
S-Co/0°	6	<b>1.15</b>	1.15	1.20	1.08	3%
N-150/Cs-137	2	<b>1.04</b>	1.04	1.04	1.04	0%
<b>All</b>	<b>22</b>	<b>1.07</b>	<b>1.01</b>	<b>1.20</b>	<b>0.72</b>	<b>16%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 113: (other) for dose quantity Hp(10)

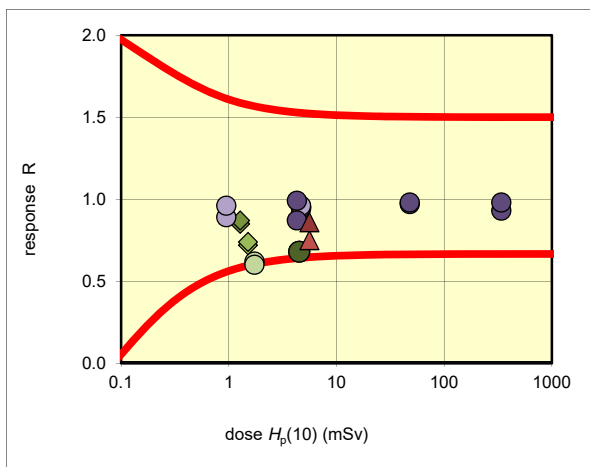
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.73	1.08	0.62	OK
		6	1.73	1.04	0.60	outlier
	N-60/60°	14	1.51	1.09	0.72	OK
		16	1.51	1.12	0.74	OK
	W-110/0°	5	4.50	3.08	0.68	OK
		29	4.50	3.08	0.68	OK
gamma	S-Cs-S/0°	19	0.95	0.85	0.89	OK
		18	0.95	0.91	0.96	OK
	S-Cs-L/0°	17	4.70	4.45	0.95	OK
		21	4.70	4.40	0.94	OK
		15	4.70	4.45	0.95	OK
		20	4.70	4.49	0.96	OK
	S-Co-L/0°	2	4.30	3.76	0.87	OK
		10	4.30	4.27	0.99	OK
	S-Co-M/0°	12	48.00	46.45	0.97	OK
		13	48.00	47.07	0.98	OK
	S-Co-H/0°	30	340.00	314.77	0.93	OK
		33	340.00	334.28	0.98	OK
mixed	N-150/Cs-137	8	5.60	4.19	0.75	OK
		26	5.60	4.79	0.86	OK
NIR	NIR	1		0.00		
		3		0.00		
		7		0.00		
		9		0.00		
		22		0.04		
		23		0.04		
		24		0.00		
		25		0.00		
		27		0.00		
		28		0.00		
		31		0.00		
		32		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

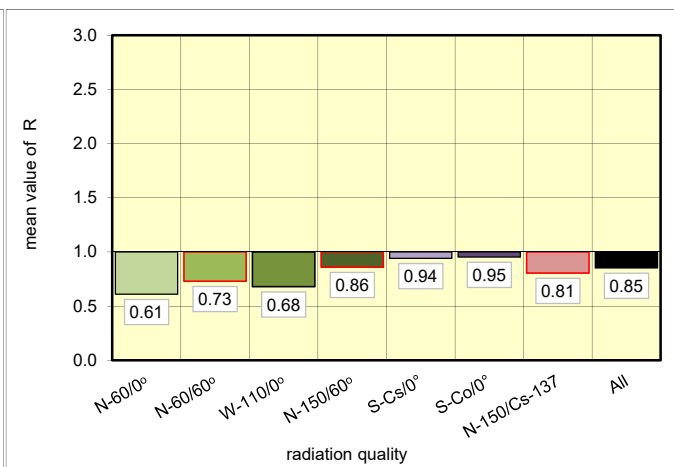
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.61</b>	0.61	0.62	0.60	2%
N-60/60°	2	<b>0.73</b>	0.73	0.74	0.72	2%
W-110/0°	2	<b>0.68</b>	0.68	0.68	0.68	0%
N-150/60°	2	<b>0.86</b>	0.86	0.87	0.85	2%
S-Cs/0°	6	<b>0.95</b>	0.94	0.96	0.89	3%
S-Co/0°	6	<b>0.98</b>	0.95	0.99	0.87	5%
N-150/Cs-137	2	<b>0.81</b>	0.81	0.86	0.75	10%
<b>All</b>	<b>22</b>	<b>0.88</b>	<b>0.85</b>	<b>0.99</b>	<b>0.60</b>	<b>15%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 113: (other) for dose quantity Hp(0.07)

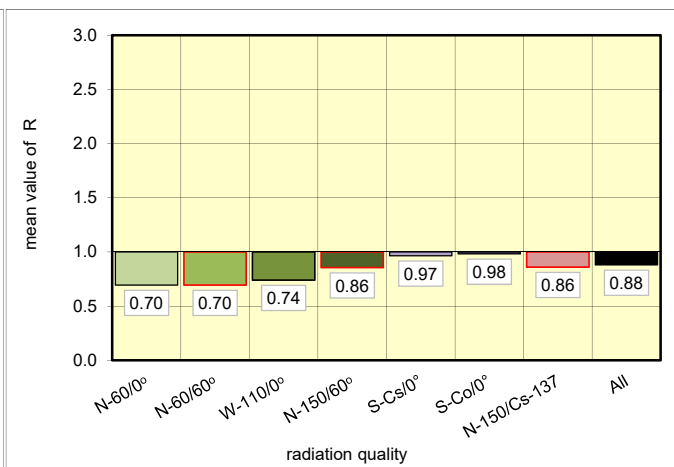
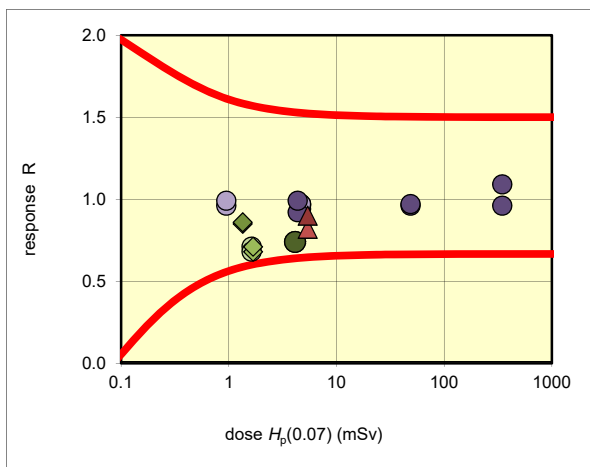
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	11	1.63	1.15	0.71	OK
		6	1.63	1.11	0.68	OK
	N-60/60°	14	1.68	1.14	0.68	OK
		16	1.68	1.19	0.71	OK
	W-110/0°	5	4.12	3.06	0.74	OK
		29	4.12	3.04	0.74	OK
	N-150/60°	4	1.35	1.14	0.85	OK
		34	1.35	1.16	0.86	OK
gamma	S-Cs-S/0°	19	0.95	0.91	0.96	OK
		18	0.95	0.94	0.99	OK
	S-Cs-L/0°	17	4.70	4.40	0.94	OK
		21	4.70	4.52	0.96	OK
		15	4.70	4.58	0.97	OK
		20	4.70	4.54	0.97	OK
	S-Co-L/0°	2	4.37	4.02	0.92	OK
		10	4.37	4.33	0.99	OK
	S-Co-M/0°	12	48.80	46.84	0.96	OK
		13	48.80	47.25	0.97	OK
	S-Co-H/0°	30	346.00	331.37	0.96	OK
		33	346.00	377.49	1.09	OK
mixed	N-150/Cs-137	8	5.41	4.44	0.82	OK
		26	5.41	4.87	0.90	OK
NIR	NIR	1		0.00		
	NIR	3		0.00		
	NIR	7		0.00		
	NIR	9		0.00		
	NIR	22		0.05		
	NIR	23		0.07		
	NIR	24		0.00		
	NIR	25		0.00		
	NIR	27		0.00		
	NIR	28		0.00		
	NIR	31		0.00		
	NIR	32		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.70</b>	0.70	0.71	0.68	3%
N-60/60°	2	<b>0.70</b>	0.70	0.71	0.68	3%
W-110/0°	2	<b>0.74</b>	0.74	0.74	0.74	0%
N-150/60°	2	<b>0.86</b>	0.86	0.86	0.85	1%
S-Cs/0°	6	<b>0.97</b>	0.97	0.99	0.94	2%
S-Co/0°	6	<b>0.97</b>	0.98	1.09	0.92	6%
N-150/Cs-137	2	<b>0.86</b>	0.86	0.90	0.82	7%
<b>All</b>	<b>22</b>	<b>0.93</b>	<b>0.88</b>	<b>1.09</b>	<b>0.68</b>	<b>14%</b>

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 114: (other) for dose quantity Hp(10)

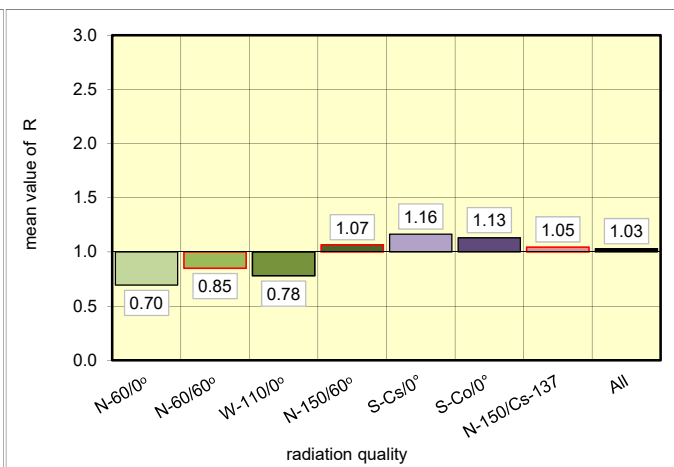
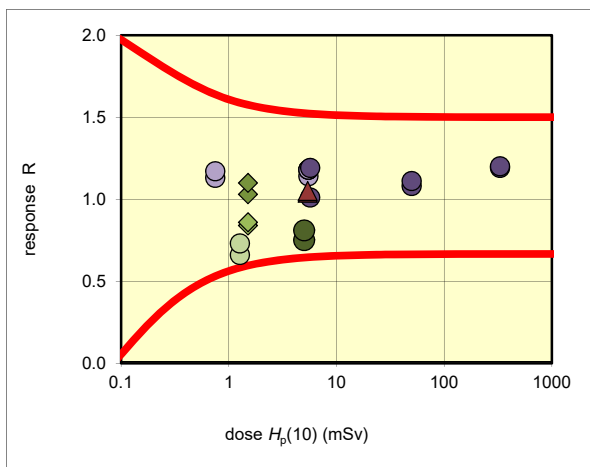
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	13	1.27	0.84	0.66	OK
		28	1.27	0.93	0.73	OK
	N-60/60°	4	1.51	1.26	0.84	OK
		26	1.51	1.29	0.86	OK
	W-110/0°	15	5.00	3.76	0.75	OK
		32	5.00	4.07	0.81	OK
	N-150/60°	2	1.51	1.55	1.03	OK
		25	1.51	1.65	1.10	OK
gamma	S-Cs-S/0°	29	0.75	0.85	1.13	OK
		18	0.75	0.88	1.17	OK
	S-Cs-L/0°	9	5.50	6.26	1.14	OK
		8	5.50	6.51	1.18	OK
		10	5.50	6.48	1.18	OK
		12	5.50	6.50	1.18	OK
	S-Co-L/0°	20	5.70	5.77	1.01	OK
		19	5.70	6.78	1.19	OK
	S-Co-M/0°	14	50.00	54.19	1.08	OK
		17	50.00	55.73	1.11	OK
	S-Co-H/0°	31	330.00	393.61	1.19	OK
		16	330.00	394.35	1.20	OK
mixed	N-150/Cs-137	34	5.40	5.59	1.04	OK
		33	5.40	5.69	1.05	OK
NIR	NIR	1		0.00		
	NIR	3		0.00		
	NIR	5		0.00		
	NIR	6		0.00		
	NIR	7		0.00		
	NIR	11		0.00		
	NIR	21		0.00		
	NIR	22		0.00		
	NIR	23		0.00		
	NIR	24		0.00		
	NIR	27		0.00		
NIR	30		0.00			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.70</b>	0.70	0.73	0.66	7%
N-60/60°	2	<b>0.85</b>	0.85	0.86	0.84	2%
W-110/0°	2	<b>0.78</b>	0.78	0.81	0.75	5%
N-150/60°	2	<b>1.07</b>	1.07	1.10	1.03	5%
S-Cs/0°	6	<b>1.18</b>	1.16	1.18	1.13	2%
S-Co/0°	6	<b>1.15</b>	1.13	1.20	1.01	7%
N-150/Cs-137	2	<b>1.05</b>	1.05	1.05	1.04	1%
<b>All</b>	<b>22</b>	<b>1.09</b>	<b>1.03</b>	<b>1.20</b>	<b>0.66</b>	<b>17%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 115: (other) for dose quantity Hp(10)

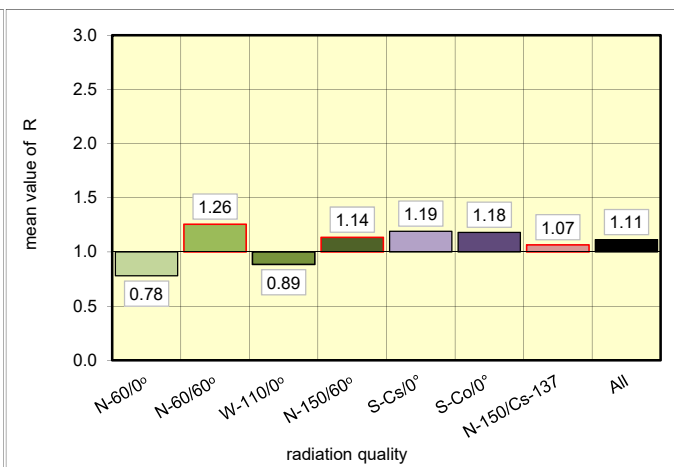
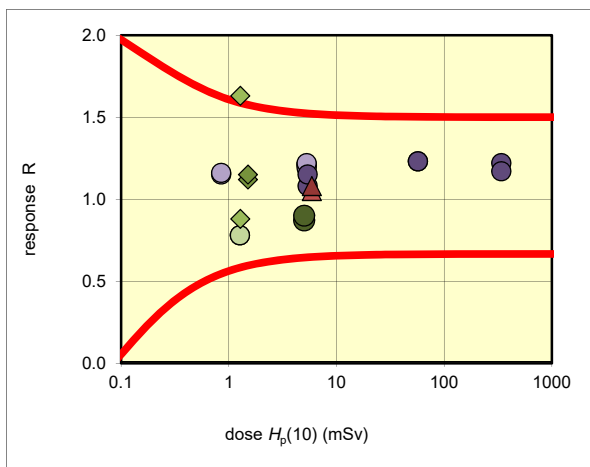
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	32	1.27	0.99	0.78	OK
		20	1.27	0.99	0.78	OK
	N-60/60°	23	1.28	1.12	0.88	OK
		10	1.28	2.08	1.63	outlier
	W-110/0°	8	5.00	4.34	0.87	OK
		5	5.00	4.52	0.90	OK
N-150/60°	3	1.51	1.68	1.12	OK	
	6	1.51	1.73	1.15	OK	
gamma	S-Cs-S/0°	16	0.85	0.98	1.15	OK
		17	0.85	0.99	1.16	OK
	S-Cs-L/0°	21	5.30	6.40	1.21	OK
		30	5.30	6.41	1.21	OK
		31	5.30	6.32	1.19	OK
		22	5.30	6.45	1.22	OK
	S-Co-L/0°	13	5.40	5.84	1.08	OK
		15	5.40	6.22	1.15	OK
	S-Co-M/0°	28	57.00	69.89	1.23	OK
		29	57.00	70.20	1.23	OK
S-Co-H/0°	1	340.00	416.22	1.22	OK	
	2	340.00	396.65	1.17	OK	
mixed	N-150/Cs-137	19	5.90	6.18	1.05	OK
		18	5.90	6.37	1.08	OK
NIR	NIR	4		0.00		
	NIR	7		0.00		
	NIR	9		0.00		
	NIR	11		0.00		
	NIR	12		0.00		
	NIR	14		0.00		
	NIR	24		0.00		
	NIR	25		0.00		
	NIR	26		0.00		
	NIR	27		0.00		
	NIR	33		0.00		
	NIR	34		0.00		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.78</b>	0.78	0.78	0.78	0%
N-60/60°	2	<b>1.26</b>	1.26	1.63	0.88	42%
W-110/0°	2	<b>0.89</b>	0.89	0.90	0.87	2%
N-150/60°	2	<b>1.14</b>	1.14	1.15	1.12	2%
S-Cs/0°	6	<b>1.20</b>	1.19	1.22	1.15	2%
S-Co/0°	6	<b>1.20</b>	1.18	1.23	1.08	5%
N-150/Cs-137	2	<b>1.07</b>	1.07	1.08	1.05	2%
<b>All</b>	<b>22</b>	<b>1.15</b>	<b>1.11</b>	<b>1.63</b>	<b>0.78</b>	<b>17%</b>

outliers: 1 of 22

fraction of outliers: 5%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 115: (other) for dose quantity Hp(0.07)

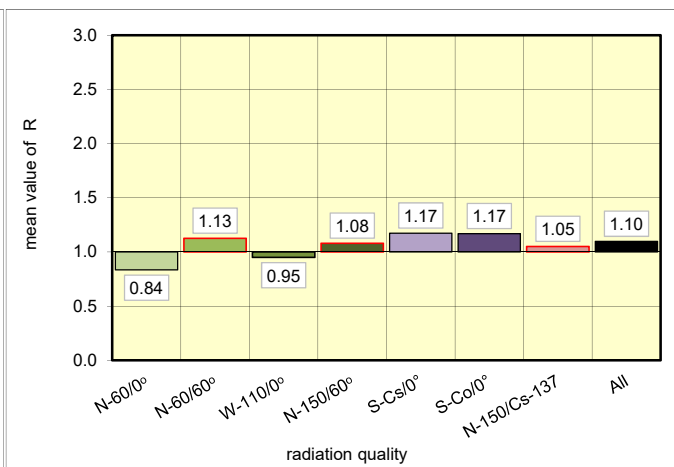
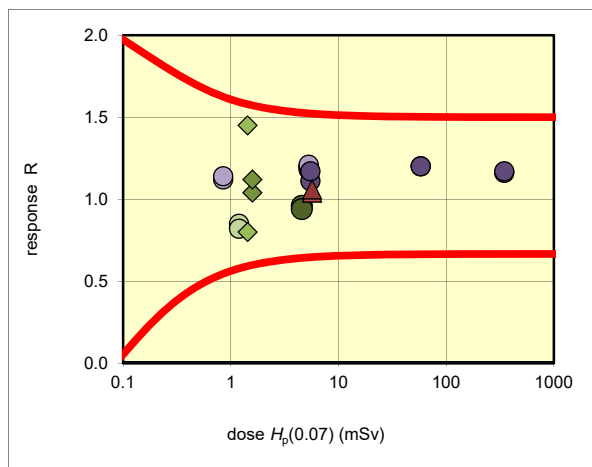
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	32	1.20	1.01	0.85	OK
		20	1.20	0.98	0.82	OK
	N-60/60°	23	1.43	1.15	0.80	OK
		10	1.43	2.08	1.45	OK
	W-110/0°	8	4.57	4.41	0.96	OK
		5	4.57	4.32	0.94	OK
N-150/60°	3	1.59	1.65	1.04	OK	
	6	1.59	1.78	1.12	OK	
gamma	S-Cs-S/0°	16	0.85	0.95	1.12	OK
		17	0.85	0.97	1.14	OK
	S-Cs-L/0°	21	5.30	6.24	1.18	OK
		30	5.30	6.29	1.19	OK
		31	5.30	6.36	1.20	OK
		22	5.30	6.41	1.21	OK
	S-Co-L/0°	13	5.49	6.10	1.11	OK
		15	5.49	6.41	1.17	OK
	S-Co-M/0°	28	58.00	69.87	1.20	OK
		29	58.00	69.80	1.20	OK
S-Co-H/0°	1	346.00	401.79	1.16	OK	
	2	346.00	405.25	1.17	OK	
mixed	N-150/Cs-137	19	5.68	5.91	1.04	OK
		18	5.68	6.00	1.06	OK
NIR	NIR	4		0.00		
	NIR	7		0.00		
	NIR	9		0.00		
	NIR	11		0.00		
	NIR	12		0.00		
	NIR	14		0.00		
	NIR	24		0.00		
	NIR	25		0.00		
	NIR	26		0.00		
	NIR	27		0.00		
	NIR	33		0.00		
NIR	34		0.00			

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.84</b>	0.84	0.85	0.82	3%
N-60/60°	2	<b>1.13</b>	1.13	1.45	0.80	41%
W-110/0°	2	<b>0.95</b>	0.95	0.96	0.94	1%
N-150/60°	2	<b>1.08</b>	1.08	1.12	1.04	5%
S-Cs/0°	6	<b>1.19</b>	1.17	1.21	1.12	3%
S-Co/0°	6	<b>1.17</b>	1.17	1.20	1.11	3%
N-150/Cs-137	2	<b>1.05</b>	1.05	1.06	1.04	1%
<b>All</b>	<b>22</b>	<b>1.13</b>	<b>1.10</b>	<b>1.45</b>	<b>0.80</b>	<b>14%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 116: (other) for dose quantity Hp(10)

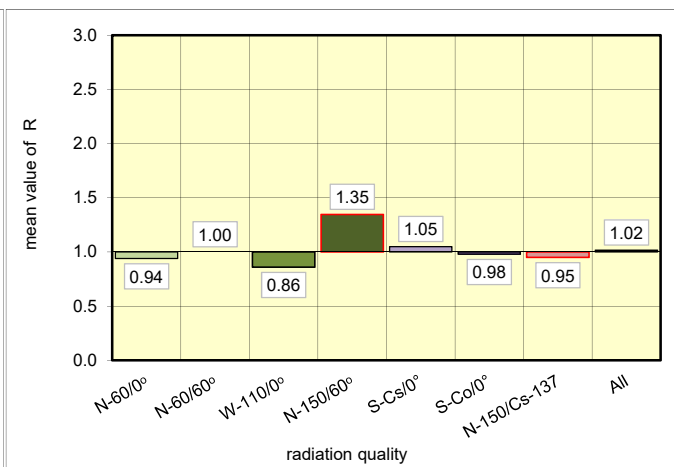
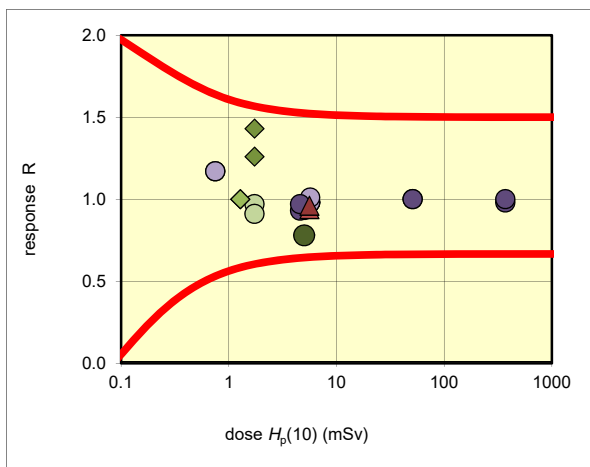
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	32	1.73	1.68	0.97	OK
		6	1.73	1.58	0.91	OK
	N-60/60°	15	1.28	1.28	1.00	OK
		19	1.28	1.28	1.00	OK
	W-110/0°	2	5.00	3.88	0.78	OK
		14	5.00	4.68	0.94	OK
	N-150/60°	4	1.73	2.18	1.26	OK
		1	1.73	2.48	1.43	OK
gamma	S-Cs-S/0°	18	0.75	0.88	1.17	OK
		25	0.75	0.88	1.17	OK
	S-Cs-L/0°	9	5.70	5.58	0.98	OK
		5	5.70	5.58	0.98	OK
		10	5.70	5.58	0.98	OK
	S-Co-L/0°	11	5.70	5.78	1.01	OK
		12	4.60	4.28	0.93	OK
	S-Co-M/0°	23	4.60	4.48	0.97	OK
		24	51.00	50.78	1.00	OK
	S-Co-H/0°	28	51.00	51.08	1.00	OK
		21	370.00	362.98	0.98	OK
	mixed	N-150/Cs-137	29	370.00	370.18	1.00
31			5.60	5.28	0.94	OK
NIR	N-150/Cs-137	30	5.60	5.38	0.96	OK
		3		0.20		
		7		0.30		
		8		0.30		
		13		0.30		
		16		0.40		
		17		0.30		
		20		0.40		
		22		0.30		
		26		0.30		
27		0.30				
33		0.30				
34		0.30				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.94</b>	0.94	0.97	0.91	5%
N-60/60°	2	<b>1.00</b>	1.00	1.00	1.00	0%
W-110/0°	2	<b>0.86</b>	0.86	0.94	0.78	13%
N-150/60°	2	<b>1.35</b>	1.35	1.43	1.26	9%
S-Cs/0°	6	<b>1.00</b>	1.05	1.17	0.98	9%
S-Co/0°	6	<b>0.99</b>	0.98	1.00	0.93	3%
N-150/Cs-137	2	<b>0.95</b>	0.95	0.96	0.94	1%
<b>All</b>	<b>22</b>	<b>0.98</b>	<b>1.02</b>	<b>1.43</b>	<b>0.78</b>	<b>13%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018



## Reporting number 116: (other) for dose quantity Hp(0.07)

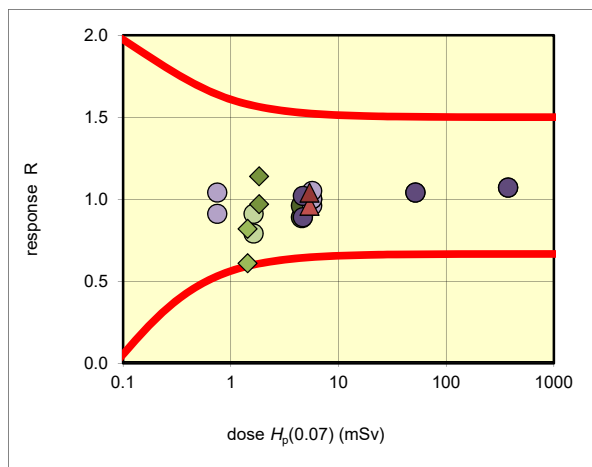
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	32	1.63	1.48	0.91	OK
		6	1.63	1.28	0.79	OK
	N-60/60°	15	1.43	0.88	0.61	OK
		19	1.43	1.18	0.82	OK
	W-110/0°	2	4.57	4.08	0.89	OK
		14	4.57	4.38	0.96	OK
N-150/60°	4	1.83	1.78	0.97	OK	
	1	1.83	2.08	1.14	OK	
gamma	S-Cs-S/0°	18	0.75	0.68	0.91	OK
		25	0.75	0.78	1.04	OK
	S-Cs-L/0°	9	5.70	5.48	0.96	OK
		5	5.70	5.68	1.00	OK
		10	5.70	5.68	1.00	OK
	11	5.70	5.98	1.05	OK	
	S-Co-L/0°	12	4.68	4.18	0.89	OK
		23	4.68	4.78	1.02	OK
	S-Co-M/0°	24	51.90	53.78	1.04	OK
		28	51.90	54.08	1.04	OK
S-Co-H/0°	21	376.00	402.08	1.07	OK	
	29	376.00	402.78	1.07	OK	
mixed	N-150/Cs-137	31	5.39	5.18	0.96	OK
		30	5.39	5.58	1.04	OK
NIR	NIR	3		0.00		
		7		0.20		
		8		0.20		
		13		0.10		
		16		0.00		
		17		0.20		
		20		0.20		
		22		0.20		
		26		0.10		
		27		0.10		
		33		0.10		
		34		0.10		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

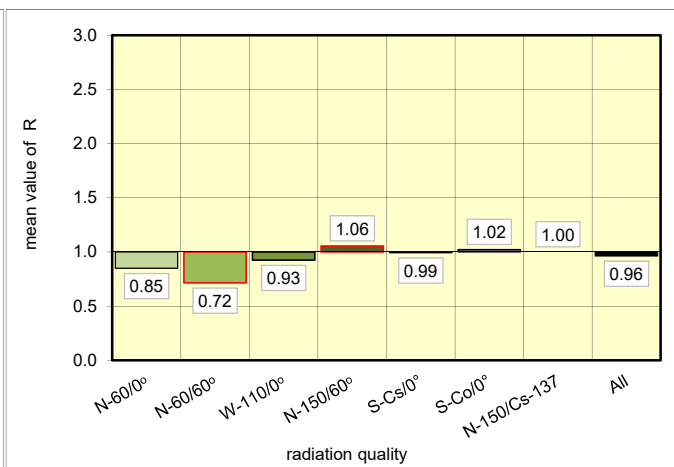
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.85</b>	0.85	0.91	0.79	10%
N-60/60°	2	<b>0.72</b>	0.72	0.82	0.61	21%
W-110/0°	2	<b>0.93</b>	0.93	0.96	0.89	5%
N-150/60°	2	<b>1.06</b>	1.06	1.14	0.97	11%
S-Cs/0°	6	<b>1.00</b>	0.99	1.05	0.91	5%
S-Co/0°	6	<b>1.04</b>	1.02	1.07	0.89	7%
N-150/Cs-137	2	<b>1.00</b>	1.00	1.04	0.96	6%
<b>All</b>	<b>22</b>	<b>0.99</b>	<b>0.96</b>	<b>1.14</b>	<b>0.61</b>	<b>12%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 117: (other) for dose quantity Hp(10)

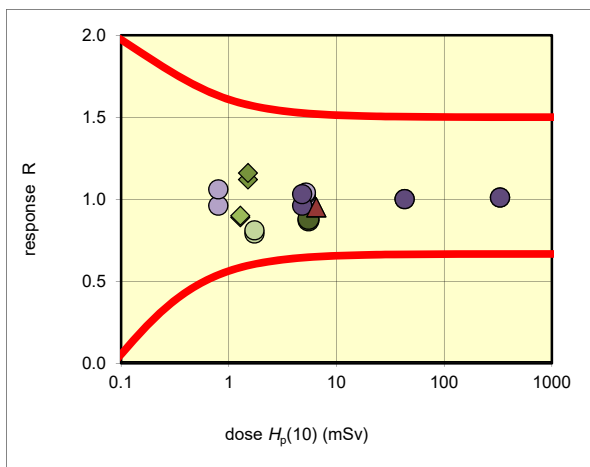
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	12	1.73	1.37	0.79	OK
		19	1.73	1.40	0.81	OK
	N-60/60°	10	1.28	1.14	0.89	OK
		6	1.28	1.15	0.90	OK
	W-110/0°	1	5.50	4.78	0.87	OK
		3	5.50	4.86	0.88	OK
N-150/60°	11	1.51	1.69	1.12	OK	
	24	1.51	1.75	1.16	OK	
gamma	S-Cs-S/0°	15	0.80	0.76	0.96	OK
		22	0.80	0.85	1.06	OK
	S-Cs-L/0°	16	5.20	5.16	0.99	OK
		23	5.20	5.25	1.01	OK
		5	5.20	5.34	1.03	OK
	S-Co-L/0°	9	5.20	5.42	1.04	OK
		20	4.80	4.60	0.96	OK
	S-Co-M/0°	29	4.80	4.95	1.03	OK
		4	43.00	43.12	1.00	OK
	S-Co-H/0°	26	43.00	43.05	1.00	OK
27		330.00	333.37	1.01	OK	
mixed	N-150/Cs-137	33	330.00	332.76	1.01	OK
		28	6.50	6.15	0.95	OK
		30	6.50	6.17	0.95	OK
NIR		2		0.52		
		7		0.54		
		8		0.52		
		13		0.61		
		14		0.51		
		17		0.54		
		18		0.49		
		21		0.60		
		25		0.56		
		31		0.63		
		32		0.58		
		34		0.54		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

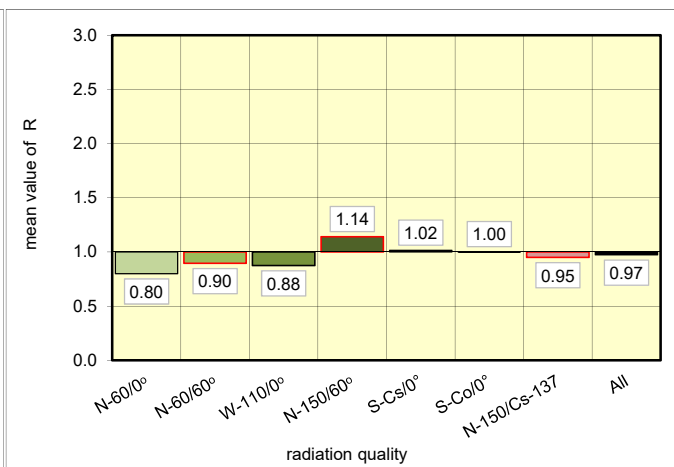
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>0.80</b>	0.80	0.81	0.79	2%
N-60/60°	2	<b>0.90</b>	0.90	0.90	0.89	1%
W-110/0°	2	<b>0.88</b>	0.88	0.88	0.87	1%
N-150/60°	2	<b>1.14</b>	1.14	1.16	1.12	2%
S-Cs/0°	6	<b>1.02</b>	1.02	1.06	0.96	4%
S-Co/0°	6	<b>1.01</b>	1.00	1.03	0.96	2%
N-150/Cs-137	2	<b>0.95</b>	0.95	0.95	0.95	0%
<b>All</b>	<b>22</b>	<b>1.00</b>	<b>0.97</b>	<b>1.16</b>	<b>0.79</b>	<b>9%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

No dose values for  $H_p(0.07)$  submitted.

## Reporting number 118: (other) for dose quantity Hp(10)

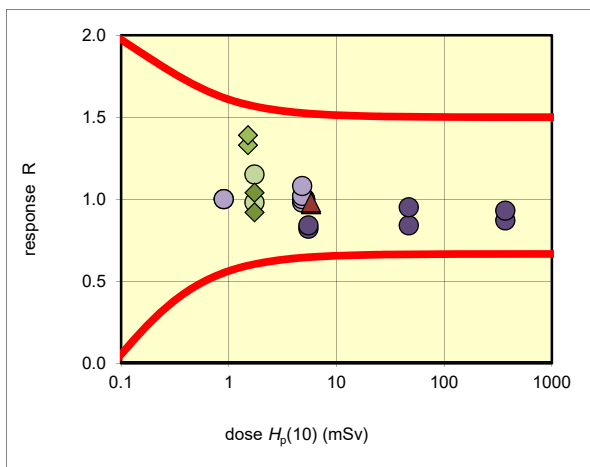
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.73	2.00	1.15	OK
		23	1.73	1.70	0.98	OK
	N-60/60°	30	1.51	2.00	1.33	OK
		11	1.51	2.10	1.39	OK
	W-110/0°	19	5.00	5.00	1.00	OK
		28	5.00	5.00	1.00	OK
	N-150/60°	17	1.73	1.60	0.92	OK
		26	1.73	1.80	1.04	OK
gamma	S-Cs-S/0°	2	0.90	0.90	1.00	OK
		29	0.90	0.90	1.00	OK
	S-Cs-L/0°	18	4.80	4.70	0.98	OK
		12	4.80	4.80	1.00	OK
		25	4.80	4.90	1.02	OK
		24	4.80	5.20	1.08	OK
	S-Co-L/0°	3	5.50	4.50	0.82	OK
		16	5.50	4.60	0.84	OK
	S-Co-M/0°	33	47.00	39.50	0.84	OK
		8	47.00	44.50	0.95	OK
	S-Co-H/0°	4	370.00	323.00	0.87	OK
		9	370.00	344.00	0.93	OK
mixed	N-150/Cs-137	14	5.80	5.60	0.97	OK
		31	5.80	5.70	0.98	OK
NIR	NIR	1		0.30		
	NIR	5		0.30		
	NIR	6		0.30		
	NIR	7		0.25		
	NIR	13		0.35		
	NIR	15		0.25		
	NIR	20		0.20		
	NIR	21		0.25		
	NIR	22		0.20		
	NIR	27		0.25		
	NIR	32		0.20		
	NIR	34		0.30		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

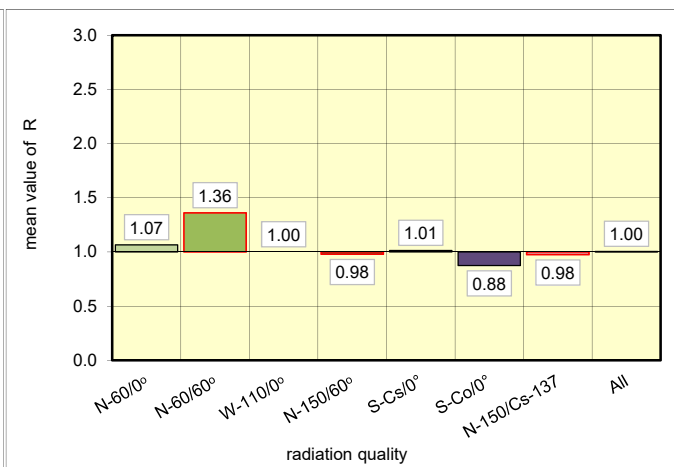
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.07	1.07	1.15	0.98	11%
N-60/60°	2	1.36	1.36	1.39	1.33	3%
W-110/0°	2	1.00	1.00	1.00	1.00	0%
N-150/60°	2	0.98	0.98	1.04	0.92	9%
S-Cs/0°	6	1.00	1.01	1.08	0.98	3%
S-Co/0°	6	0.86	0.88	0.95	0.82	6%
N-150/Cs-137	2	0.98	0.98	0.98	0.97	1%
All	22	0.99	1.00	1.39	0.82	14%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 118: (other) for dose quantity Hp(0.07)

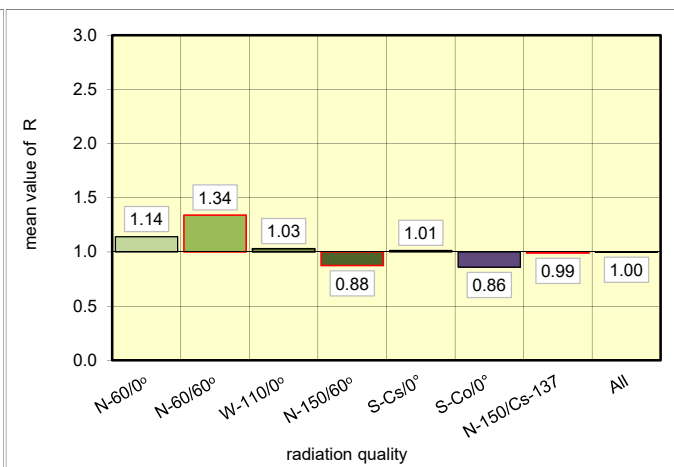
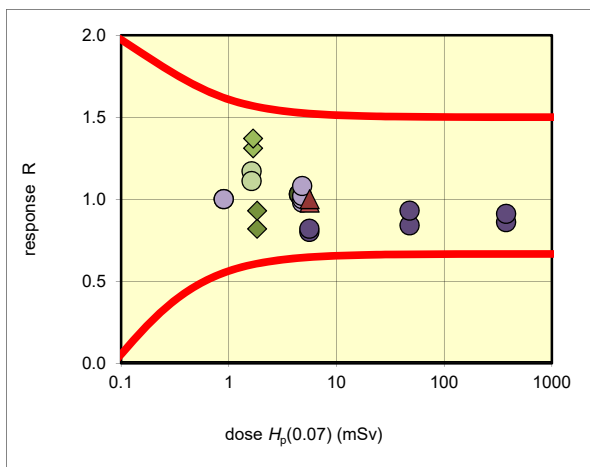
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	10	1.63	1.90	1.17	OK
		23	1.63	1.80	1.11	OK
	N-60/60°	30	1.68	2.20	1.31	OK
		11	1.68	2.30	1.37	OK
	W-110/0°	19	4.57	4.70	1.03	OK
		28	4.57	4.70	1.03	OK
	N-150/60°	17	1.83	1.50	0.82	OK
		26	1.83	1.70	0.93	OK
gamma	S-Cs-S/0°	2	0.90	0.90	1.00	OK
		29	0.90	0.90	1.00	OK
	S-Cs-L/0°	18	4.80	4.70	0.98	OK
		12	4.80	4.80	1.00	OK
		25	4.80	4.90	1.02	OK
		24	4.80	5.20	1.08	OK
	S-Co-L/0°	3	5.60	4.50	0.80	OK
		16	5.60	4.60	0.82	OK
	S-Co-M/0°	33	47.80	40.00	0.84	OK
		8	47.80	44.50	0.93	OK
	S-Co-H/0°	4	376.00	323.00	0.86	OK
		9	376.00	344.00	0.91	OK
mixed	N-150/Cs-137	14	5.62	5.50	0.98	OK
		31	5.62	5.60	1.00	OK
NIR	NIR	1		0.30		
	NIR	5		0.30		
	NIR	6		0.30		
	NIR	7		0.25		
	NIR	13		0.35		
	NIR	15		0.25		
	NIR	20		0.20		
	NIR	21		0.25		
	NIR	22		0.20		
	NIR	27		0.25		
	NIR	32		0.20		
	NIR	34		0.30		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.14	1.14	1.17	1.11	4%
N-60/60°	2	1.34	1.34	1.37	1.31	3%
W-110/0°	2	1.03	1.03	1.03	1.03	0%
N-150/60°	2	0.88	0.88	0.93	0.82	9%
S-Cs/0°	6	1.00	1.01	1.08	0.98	3%
S-Co/0°	6	0.85	0.86	0.93	0.80	6%
N-150/Cs-137	2	0.99	0.99	1.00	0.98	1%
All	22	1.00	1.00	1.37	0.80	15%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 119: (other) for dose quantity Hp(10)

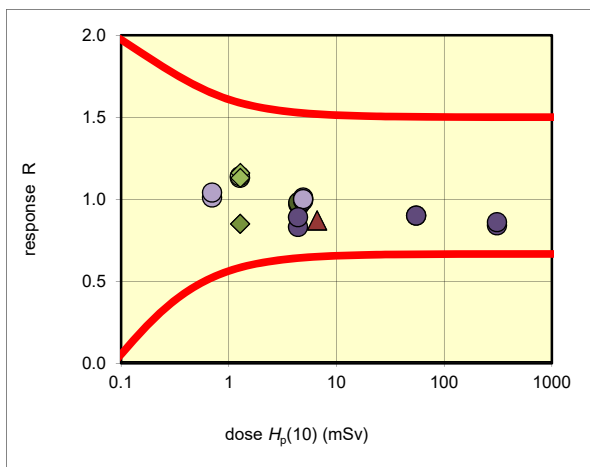
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	12	1.27	1.44	1.13	OK
		24	1.27	1.45	1.14	OK
	N-60/60°	14	1.28	1.49	1.16	OK
		22	1.28	1.45	1.13	OK
	W-110/0°	23	4.50	4.36	0.97	OK
		9	4.50	4.43	0.98	OK
	N-150/60°	16	1.28	1.08	0.85	OK
		11	1.28	1.09	0.85	OK
gamma	S-Cs-S/0°	19	0.70	0.71	1.01	OK
		18	0.70	0.73	1.04	OK
	S-Cs-L/0°	20	4.90	4.87	0.99	OK
		26	4.90	4.95	1.01	OK
		27	4.90	4.89	1.00	OK
		28	4.90	4.91	1.00	OK
	S-Co-L/0°	6	4.40	3.63	0.83	OK
		5	4.40	3.91	0.89	OK
	S-Co-M/0°	33	55.00	49.46	0.90	OK
		34	55.00	49.36	0.90	OK
	S-Co-H/0°	4	310.00	260.81	0.84	OK
		1	310.00	267.04	0.86	OK
mixed	N-150/Cs-137	2	6.60	5.77	0.87	OK
		3	6.60	5.77	0.87	OK
NIR	NIR	7		0.23		
	NIR	8		0.22		
	NIR	10		0.27		
	NIR	13		0.25		
	NIR	15		0.27		
	NIR	17		0.20		
	NIR	21		0.26		
	NIR	25		0.26		
	NIR	29		0.22		
	NIR	30		0.22		
	NIR	31		0.22		
	NIR	32		0.22		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

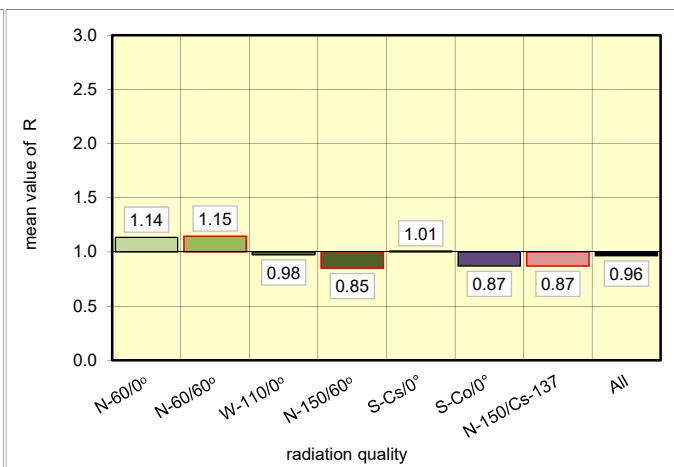
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.14</b>	1.14	1.14	1.13	1%
N-60/60°	2	<b>1.15</b>	1.15	1.16	1.13	2%
W-110/0°	2	<b>0.98</b>	0.98	0.98	0.97	1%
N-150/60°	2	<b>0.85</b>	0.85	0.85	0.85	0%
S-Cs/0°	6	<b>1.01</b>	1.01	1.04	0.99	2%
S-Co/0°	6	<b>0.88</b>	0.87	0.90	0.83	4%
N-150/Cs-137	2	<b>0.87</b>	0.87	0.87	0.87	0%
<b>All</b>	<b>22</b>	<b>0.98</b>	<b>0.96</b>	<b>1.16</b>	<b>0.83</b>	<b>11%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 119: (other) for dose quantity Hp(0.07)

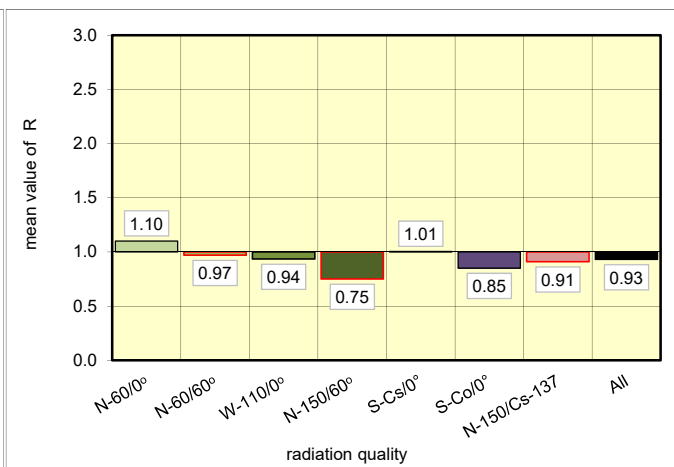
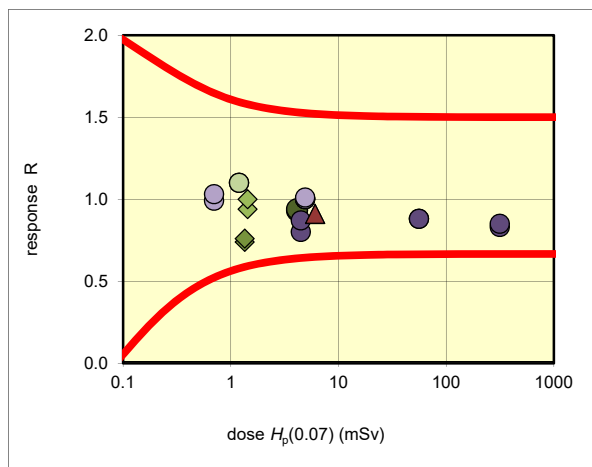
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	12	1.20	1.32	1.10	OK
		24	1.20	1.32	1.10	OK
	N-60/60°	14	1.43	1.35	0.94	OK
		22	1.43	1.43	1.00	OK
	W-110/0°	23	4.12	3.82	0.93	OK
		9	4.12	3.89	0.94	OK
	N-150/60°	16	1.35	0.99	0.74	OK
		11	1.35	1.02	0.76	OK
gamma	S-Cs-S/0°	19	0.70	0.69	0.99	OK
		18	0.70	0.72	1.03	OK
	S-Cs-L/0°	20	4.90	4.88	1.00	OK
		26	4.90	4.91	1.00	OK
		27	4.90	4.91	1.00	OK
		28	4.90	4.94	1.01	OK
	S-Co-L/0°	6	4.48	3.60	0.80	OK
		5	4.48	3.90	0.87	OK
	S-Co-M/0°	33	56.00	49.30	0.88	OK
		34	56.00	49.29	0.88	OK
	S-Co-H/0°	4	315.00	260.25	0.83	OK
		1	315.00	266.34	0.85	OK
mixed	N-150/Cs-137	2	6.07	5.54	0.91	OK
		3	6.07	5.54	0.91	OK
		7	0.22	0.22		
NIR	NIR	8		0.22		
	NIR	10		0.26		
	NIR	13		0.25		
	NIR	15		0.26		
	NIR	17		0.20		
	NIR	21		0.26		
	NIR	25		0.25		
	NIR	29		0.22		
	NIR	30		0.21		
	NIR	31		0.22		
	NIR	32		0.22		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.10	1.10	1.10	1.10	0%
N-60/60°	2	0.97	0.97	1.00	0.94	4%
W-110/0°	2	0.94	0.94	0.94	0.93	1%
N-150/60°	2	0.75	0.75	0.76	0.74	2%
S-Cs/0°	6	1.00	1.01	1.03	0.99	1%
S-Co/0°	6	0.86	0.85	0.88	0.80	4%
N-150/Cs-137	2	0.91	0.91	0.91	0.91	0%
All	22	0.94	0.93	1.10	0.74	11%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018

## Reporting number 120: (other) for dose quantity Hp(10)

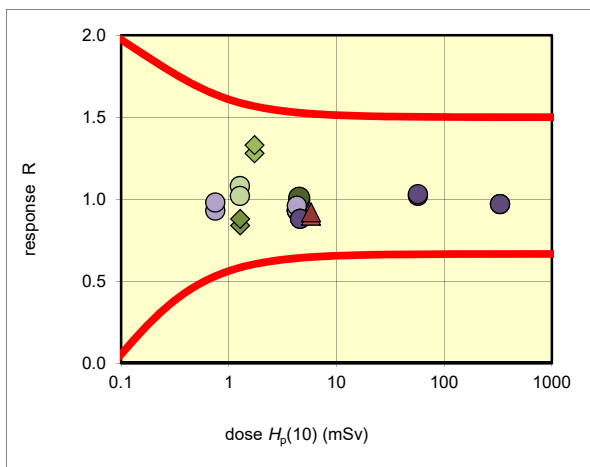
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	5	1.27	1.37	1.08	OK
		16	1.27	1.30	1.02	OK
	N-60/60°	34	1.73	2.21	1.28	OK
		29	1.73	2.31	1.33	OK
	W-110/0°	26	4.50	4.44	0.99	OK
		27	4.50	4.54	1.01	OK
	N-150/60°	12	1.28	1.07	0.84	OK
		22	1.28	1.12	0.88	OK
gamma	S-Cs-S/0°	15	0.75	0.70	0.93	OK
		13	0.75	0.74	0.98	OK
	S-Cs-L/0°	4	4.30	4.01	0.93	OK
		19	4.30	4.01	0.93	OK
		21	4.30	3.99	0.93	OK
	S-Co-L/0°	9	4.30	4.12	0.96	OK
		2	4.60	4.06	0.88	OK
	S-Co-M/0°	24	4.60	4.06	0.88	OK
		33	57.00	57.92	1.02	OK
	S-Co-H/0°	31	57.00	58.74	1.03	OK
		7	330.00	319.58	0.97	OK
	S-Co-H/0°	8	330.00	320.17	0.97	OK
mixed		N-150/Cs-137	32	5.80	5.21	0.90
	18		5.80	5.32	0.92	OK
NIR	NIR	1		0.47		
	NIR	3		0.56		
	NIR	6		0.48		
	NIR	10		0.49		
	NIR	11		0.48		
	NIR	14		0.46		
	NIR	17		0.44		
	NIR	20		0.50		
	NIR	23		0.45		
	NIR	25		0.48		
	NIR	28		0.53		
	NIR	30		0.54		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

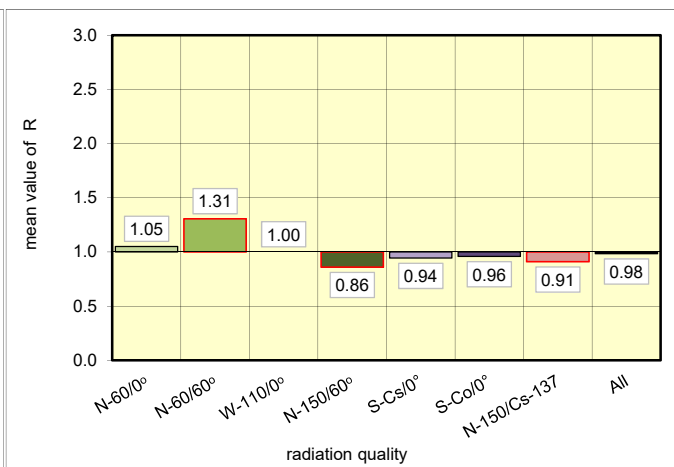
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.05	1.05	1.08	1.02	4%
N-60/60°	2	1.31	1.31	1.33	1.28	3%
W-110/0°	2	1.00	1.00	1.01	0.99	1%
N-150/60°	2	0.86	0.86	0.88	0.84	3%
S-Cs/0°	6	0.93	0.94	0.98	0.93	2%
S-Co/0°	6	0.97	0.96	1.03	0.88	7%
N-150/Cs-137	2	0.91	0.91	0.92	0.90	2%
All	22	0.97	0.98	1.33	0.84	12%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018



## Reporting number 120: (other) for dose quantity $H_p(0.07)$

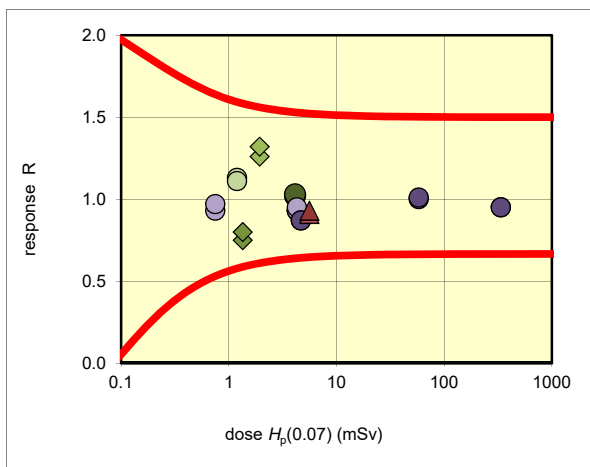
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	5	1.20	1.35	1.13	OK
		16	1.20	1.33	1.11	OK
	N-60/60°	34	1.94	2.44	1.26	OK
		29	1.94	2.55	1.32	OK
	W-110/0°	26	4.12	4.19	1.02	OK
		27	4.12	4.22	1.03	OK
N-150/60°	12	1.35	1.01	0.75	OK	
	22	1.35	1.07	0.80	OK	
gamma	S-Cs-S/0°	15	0.75	0.70	0.93	OK
		13	0.75	0.73	0.97	OK
	S-Cs-L/0°	4	4.30	3.98	0.93	OK
		19	4.30	4.01	0.93	OK
		21	4.30	3.98	0.93	OK
	S-Co-L/0°	9	4.30	4.09	0.95	OK
		2	4.68	4.06	0.87	OK
	S-Co-M/0°	24	4.68	4.06	0.87	OK
		33	58.00	58.04	1.00	OK
	S-Co-H/0°	31	58.00	58.85	1.01	OK
7		336.00	319.99	0.95	OK	
mixed	N-150/Cs-137	8	336.00	320.80	0.95	OK
		32	5.60	5.09	0.91	OK
NIR	N-150/Cs-137	18	5.60	5.21	0.93	OK
		1		0.49		
		3		0.58		
		6		0.51		
		10		0.52		
		11		0.51		
		14		0.50		
		17		0.48		
		20		0.53		
		23		0.48		
25		0.50				
28		0.54				
30		0.53				

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

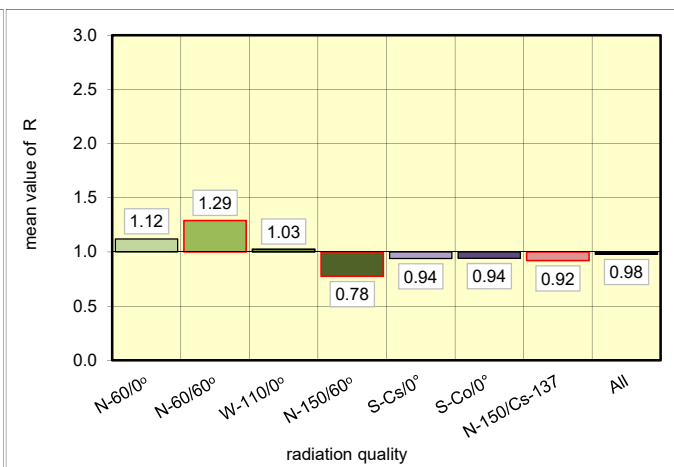
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.12	1.12	1.13	1.11	1%
N-60/60°	2	1.29	1.29	1.32	1.26	3%
W-110/0°	2	1.03	1.03	1.03	1.02	1%
N-150/60°	2	0.78	0.78	0.80	0.75	5%
S-Cs/0°	6	0.93	0.94	0.97	0.93	2%
S-Co/0°	6	0.95	0.94	1.01	0.87	6%
N-150/Cs-137	2	0.92	0.92	0.93	0.91	2%
<b>All</b>	<b>22</b>	<b>0.95</b>	<b>0.98</b>	<b>1.32</b>	<b>0.75</b>	<b>14%</b>

outliers: 0 of 22

Fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 121: (other) for dose quantity Hp(10)

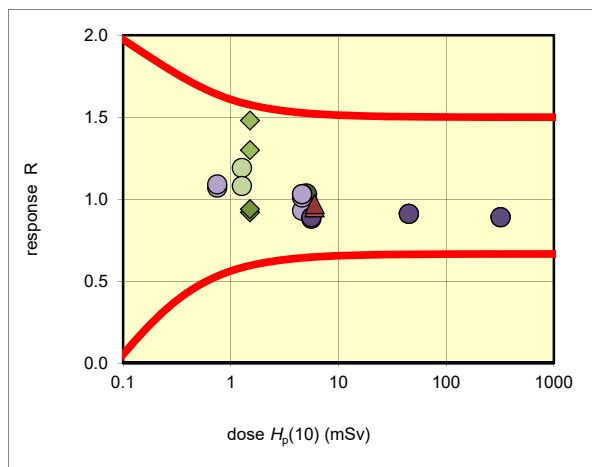
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(10)$ mSv	dose $H_p(10)$ mSv	response R (reported/true)		
x-ray	N-60/0°	33	1.27	1.51	1.19	OK
		31	1.27	1.37	1.08	OK
	N-60/60°	23	1.51	1.96	1.30	OK
		3	1.51	2.23	1.48	OK
	W-110/0°	24	5.00	4.99	1.00	OK
		25	5.00	5.16	1.03	OK
N-150/60°	4	1.51	1.39	0.92	OK	
	22	1.51	1.42	0.94	OK	
gamma	S-Cs-S/0°	15	0.75	0.80	1.07	OK
		32	0.75	0.82	1.09	OK
	S-Cs-L/0°	8	4.60	4.27	0.93	OK
		20	4.60	4.66	1.01	OK
		17	4.60	4.73	1.03	OK
		11	4.60	4.76	1.03	OK
	S-Co-L/0°	27	5.60	4.93	0.88	OK
		26	5.60	4.98	0.89	OK
	S-Co-M/0°	6	45.00	40.85	0.91	OK
		14	45.00	40.95	0.91	OK
	S-Co-H/0°	2	320.00	284.38	0.89	OK
		30	320.00	284.03	0.89	OK
mixed	N-150/Cs-137	18	6.00	5.70	0.95	OK
		19	6.00	5.81	0.97	OK
NIR	NIR	1		0.51		
	NIR	5		0.32		
	NIR	7		0.56		
	NIR	9		0.63		
	NIR	10		0.54		
	NIR	12		0.66		
	NIR	13		0.57		
	NIR	16		0.56		
	NIR	21		0.55		
	NIR	28		0.47		
	NIR	29		0.64		
	NIR	34		0.62		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

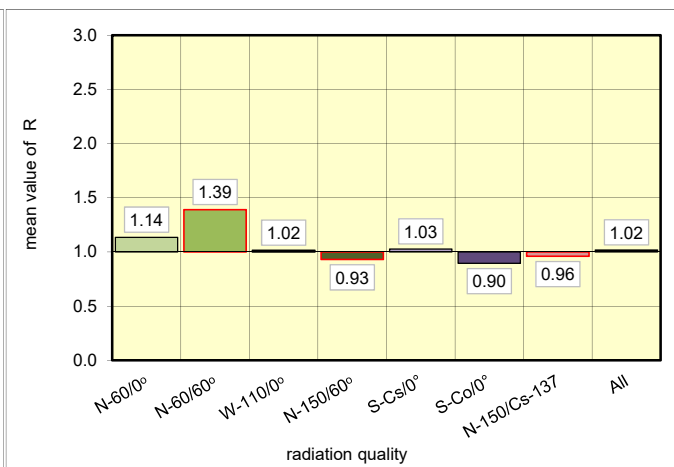
radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	<b>1.14</b>	1.14	1.19	1.08	7%
N-60/60°	2	<b>1.39</b>	1.39	1.48	1.30	9%
W-110/0°	2	<b>1.02</b>	1.02	1.03	1.00	2%
N-150/60°	2	<b>0.93</b>	0.93	0.94	0.92	2%
S-Cs/0°	6	<b>1.03</b>	1.03	1.09	0.93	5%
S-Co/0°	6	<b>0.89</b>	0.90	0.91	0.88	1%
N-150/Cs-137	2	<b>0.96</b>	0.96	0.97	0.95	1%
<b>All</b>	<b>22</b>	<b>0.99</b>	<b>1.02</b>	<b>1.48</b>	<b>0.88</b>	<b>14%</b>

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv



Results: IC2018

## Reporting number 121: (other) for dose quantity Hp(0.07)

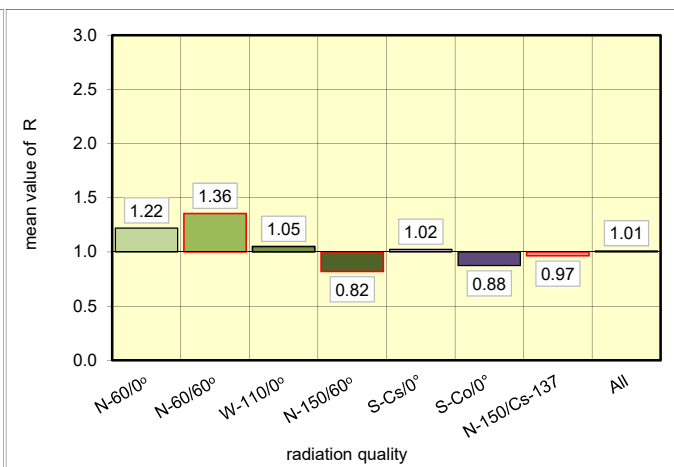
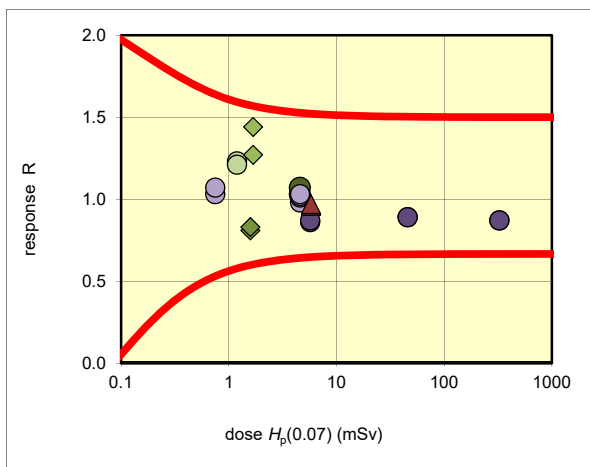
true values reported by the irradiating laboratory			values reported by participant		results	
radiation quality	dosemeter number	dose $H_p(0.07)$ mSv	dose $H_p(0.07)$ mSv	response R (reported/true)		
x-ray	N-60/0°	33	1.20	1.47	1.23	OK
		31	1.20	1.45	1.21	OK
	N-60/60°	23	1.68	2.14	1.27	OK
		3	1.68	2.42	1.44	OK
	W-110/0°	24	4.57	4.72	1.03	OK
		25	4.57	4.89	1.07	OK
	N-150/60°	4	1.59	1.29	0.81	OK
		22	1.59	1.32	0.83	OK
gamma	S-Cs-S/0°	15	0.75	0.77	1.03	OK
		32	0.75	0.80	1.07	OK
	S-Cs-L/0°	8	4.60	4.50	0.98	OK
		20	4.60	4.65	1.01	OK
		17	4.60	4.71	1.02	OK
		11	4.60	4.74	1.03	OK
	S-Co-L/0°	27	5.70	4.91	0.86	OK
		26	5.70	4.97	0.87	OK
	S-Co-M/0°	6	45.80	40.90	0.89	OK
		14	45.80	40.99	0.89	OK
	S-Co-H/0°	2	326.00	284.64	0.87	OK
		30	326.00	284.47	0.87	OK
mixed	N-150/Cs-137	18	5.80	5.57	0.96	OK
		19	5.80	5.65	0.97	OK
NIR	NIR	1		0.51		
	NIR	5		0.36		
	NIR	7		0.55		
	NIR	9		0.60		
	NIR	10		0.52		
	NIR	12		0.63		
	NIR	13		0.55		
	NIR	16		0.55		
	NIR	21		0.53		
	NIR	28		0.47		
	NIR	29		0.61		
	NIR	34		0.60		

Legend: NIR...not irradiated, WIR...wrongly irradiated, S...small, L...low, M...medium, H...high dose

radiation quality	number of values	median (R)	mean (R)	maximum (R)	minimum (R)	coefficient of variation (R)
N-60/0°	2	1.22	1.22	1.23	1.21	1%
N-60/60°	2	1.36	1.36	1.44	1.27	9%
W-110/0°	2	1.05	1.05	1.07	1.03	3%
N-150/60°	2	0.82	0.82	0.83	0.81	2%
S-Cs/0°	6	1.03	1.02	1.07	0.98	3%
S-Co/0°	6	0.87	0.88	0.89	0.86	1%
N-150/Cs-137	2	0.97	0.97	0.97	0.96	1%
All	22	1.00	1.01	1.44	0.81	16%

outliers: 0 of 22

fraction of outliers: 0%



ISO14146:2000 trumpet curve parameter: 1.5 / 0.085 mSv

Results: IC2018