

Whole body dosimeter intercomparison IC2024ph

Certificate of Participation

for the EURADOS Intercomparison 2024 for whole body dosimeters (IC2024ph)

Certificate Number: EURADOS-IC2024ph-S071 for system S071/2024
Number of pages: 4
Date of Issue: July 22nd, 2025
Participating Institute: Tecnorad s.u.r.l., Italy
Dosimetry System: Green Film
Reporting number: 44 (this anonymous number will be used in further publications)
Intercomparison procedure: The EURADOS Intercomparison 2024 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 July 2024. Participants were asked to indicate details of the dosimeter reference point on the online application form. After completing application procedures, the participants sent their dosimeters, according to the instructions, to the OG coordinator (August 2024). The coordinator checked the correct labelling of the dosimeters and transferred all dosimeters, along with the instructions, to the irradiation laboratory. The laboratory irradiated the dosimeters according to the irradiation plan and sent all the dosimeters back to the coordinator (November 2024). The coordinator then returned the dosimeters to the participants for assessment and indicated which dosimeters were not 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 (January 2025). After receipt of the participants' results, the coordinator sent the irradiation data to the participants. EURADOS IC2024ph was designed to be carried out in accordance with, and limited to, the requirements of an "interlaboratory comparison" (ISO/IEC 17043:2023 para 3.4). It is the responsibility of individual participant to demonstrate that the results comply with the appropriate national standards or regulations.

Number of participants: 89 institutes participated in IC2024ph with a total of 116 systems.
Coordinator: Christian Gärtner (Seibersdorf Labor GmbH, A-2444 Seibersdorf)
Intercomparison results: See the tables on pages 2 to 4 of this certificate.
Irradiation data: See the attached certificate of the irradiation laboratory:
Number LNK2024-530_S071
Participant results: See the attached signed dose report provided by the participant.

On behalf of the intercomparison
Organization Group:



Christian Gärtner
Coordinator

On behalf of EURADOS:



Filip Vanhavere
Chairperson

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Result of the Intercomparison (Dosimetry System S071/2024)

EURADOS Dosimeter ID	Participant's Dosimeter ID	Radiation Quality	Quantity	Participant's Value	Reference Value	Ratio
S071/2024-14	S071/2024-14	S-Co, 0°	$H_p(10)$	41.91 mSv	36.00 mSv	1.16
			$H_p(0.07)$	42.64 mSv	36.60 mSv	1.17
S071/2024-17	S071/2024-17	S-Co, 0°	$H_p(10)$	41.95 mSv	36.00 mSv	1.17
			$H_p(0.07)$	42.68 mSv	36.60 mSv	1.17
S071/2024-20	S071/2024-20	S-Co, 0°	$H_p(10)$	554.20 mSv	490.00 mSv	1.13
			$H_p(0.07)$	563.90 mSv	499.00 mSv	1.13
S071/2024-21	S071/2024-21	S-Co, 0°	$H_p(10)$	554.20 mSv	490.00 mSv	1.13
			$H_p(0.07)$	563.90 mSv	499.00 mSv	1.13
S071/2024-22	S071/2024-22	S-Co, 0°	$H_p(10)$	4.59 mSv	3.21 mSv	1.43
			$H_p(0.07)$	4.67 mSv	3.26 mSv	1.43
S071/2024-29	S071/2024-29	S-Co, 0°	$H_p(10)$	4.54 mSv	3.21 mSv	1.42
			$H_p(0.07)$	4.62 mSv	3.26 mSv	1.42
S071/2024-07	S071/2024-07	S-Cs, 0°	$H_p(10)$	0.78 mSv	0.50 mSv	1.56
			$H_p(0.07)$	0.78 mSv	0.50 mSv	1.56
S071/2024-08	S071/2024-08	S-Cs, 0°	$H_p(10)$	4.61 mSv	4.51 mSv	1.02
			$H_p(0.07)$	4.61 mSv	4.51 mSv	1.02
S071/2024-10	S071/2024-10	S-Cs, 0°	$H_p(10)$	4.60 mSv	4.51 mSv	1.02
			$H_p(0.07)$	4.60 mSv	4.51 mSv	1.02
S071/2024-11	S071/2024-11	S-Cs, 0°	$H_p(10)$	4.59 mSv	4.51 mSv	1.02
			$H_p(0.07)$	4.59 mSv	4.51 mSv	1.02

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Result of the Intercomparison (Dosimetry System S071/2024), continued

EURADOS Dosimeter ID	Participant's Dosimeter ID	Radiation Quality	Quantity	Participant's Value	Reference Value	Ratio
S071/2024-23	S071/2024-23	S-Cs, 0°	$H_p(10)$	4.53 mSv	4.51 mSv	1.00
			$H_p(0.07)$	4.53 mSv	4.51 mSv	1.00
S071/2024-25	S071/2024-25	S-Cs, 0°	$H_p(10)$	0.88 mSv	0.50 mSv	1.75
			$H_p(0.07)$	0.88 mSv	0.50 mSv	1.75
S071/2024-04	S071/2024-04	S-Cs + W-110 mixed, 0°	$H_p(10)$	9.35 mSv	9.98 mSv	0.94
			$H_p(0.07)$	8.66 mSv	9.47 mSv	0.91
S071/2024-28	S071/2024-28	S-Cs + W-110 mixed, 0°	$H_p(10)$	9.33 mSv	9.98 mSv	0.93
			$H_p(0.07)$	8.64 mSv	9.47 mSv	0.91
S071/2024-09	S071/2024-09	W-110, 0°	$H_p(10)$	10.25 mSv	10.00 mSv	1.02
			$H_p(0.07)$	9.38 mSv	9.10 mSv	1.03
S071/2024-13	S071/2024-13	W-110, 0°	$H_p(10)$	10.35 mSv	10.00 mSv	1.03
			$H_p(0.07)$	9.47 mSv	9.10 mSv	1.04
S071/2024-02	S071/2024-02	W-110, 60°	$H_p(10)$	13.68 mSv	10.00 mSv	1.37
			$H_p(0.07)$	12.67 mSv	10.40 mSv	1.22
S071/2024-06	S071/2024-06	W-110, 60°	$H_p(10)$	12.66 mSv	10.00 mSv	1.27
			$H_p(0.07)$	11.73 mSv	10.40 mSv	1.13
S071/2024-16	S071/2024-16	W-150, 60°	$H_p(10)$	5.46 mSv	5.39 mSv	1.01
			$H_p(0.07)$	5.06 mSv	5.65 mSv	0.90
S071/2024-24	S071/2024-24	W-150, 60°	$H_p(10)$	5.51 mSv	5.39 mSv	1.02
			$H_p(0.07)$	5.11 mSv	5.65 mSv	0.90

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Result of the Intercomparison (Dosimetry System S071/2024), continued

EURADOS Dosimeter ID	Participant's Dosimeter ID	Radiation Quality
S071/2024-01	S071/2024-01	not irradiated
S071/2024-03	S071/2024-03	not irradiated
S071/2024-05	S071/2024-05	not irradiated
S071/2024-12	S071/2024-12	not irradiated
S071/2024-15	S071/2024-15	not irradiated
S071/2024-19	S071/2024-19	not irradiated
S071/2024-26	S071/2024-26	not irradiated
S071/2024-27	S071/2024-27	not irradiated
S071/2024-30	S071/2024-30	not irradiated
S071/2024-18	S071/2024-18	wrongly irradiated

Radiation Qualities and average photon energy (according to ISO 4037-1:2019):

- Nuclide Radiation:
 - S-Cs: 662 keV
 - S-Co: 1250 keV
- X-Rays:
 - W-110: 79.1 keV
 - W-150: 104 keV