



**EA MLA Signatory**  
**Český institut pro akreditaci, o.p.s.**  
**Olšanská 54/3, 130 00 Praha 3**

issues

according to section 16 of Act No. 22/1997 Coll., on technical requirements for products, as amended

# CERTIFICATE OF ACCREDITATION

No. 249/2024

**Státní ústav radiační ochrany, v.v.i.**  
**with registered office Bartoškova 1450/28, 140 00 Praha 4,**  
**Company Registration No. 86652052**

for the Calibration Laboratory No. 2391  
SÚRO Calibration Laboratory

Scope of accreditation:

Calibration of ionizing radiation meters in photon beams to the extent as specified in the appendix to this Certificate.

This Certificate of Accreditation is a proof of Accreditation issued on the basis of assessment of fulfillment of the accreditation criteria in accordance with

ČSN EN ISO/IEC 17025:2018

In its activities performed within the scope and for the period of validity of this Certificate, the Conformity Assessment Body is entitled to refer to this Certificate, provided that the accreditation is not suspended and the Accredited Body meets the specified accreditation requirements in accordance with the relevant regulations applicable to the activity of an accredited Conformity Assessment Body.

This Certificate of Accreditation replaces, to the full extent, Certificate No.: 448/2022 of 14. 9. 2022, or any administrative acts building upon it.

The Certificate of Accreditation is valid until: **29. 5. 2029**

Prague: 29. 5. 2024



**Jan Velíšek**  
Director of the Department  
of Testing and Calibration Laboratories  
Czech Accreditation Institute



Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Státní ústav radiální ochrany, v.v.i.  
CAB number 2391, SÚRO Calibration Laboratory  
Bartošková 1450/28, 140 00 Praha 4

CMC for the field of measured quantity: Quantities of atomic and nuclear physics

Ord. number <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded measurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Location
		min unit	max unit					
1	Air kerma rate in gamma radiation beams / Ionization chambers, dosimetry chains with digital display of measured value, compact ionizing radiation meters with digital display of measured value	5 · 10 <sup>-9</sup> Gy/s 1 · 10 <sup>-8</sup> Gy/s 2 · 10 <sup>-8</sup> Gy/s	to 1 · 10 <sup>-8</sup> Gy/s to 2 · 10 <sup>-8</sup> Gy/s to 2 · 10 <sup>-4</sup> Gy/s		3.0 % 2.4 % 2.1 %	Meter response comparison with reference meter reading; calculation	SOP 15	
2	Air kerma rate in X-ray beams / Ionization chambers, dosimetry chains with digital display of measured value, compact ionizing radiation meters with digital display of measured value	2 · 10 <sup>-8</sup> Gy/s 1 · 10 <sup>-6</sup> Gy/s	to 1 · 10 <sup>-6</sup> Gy/s to 5 · 10 <sup>-3</sup> Gy/s		4.4 % 1.8 %	Meter response comparison with reference meter reading; calculation	SOP 15	
3	Air kerma in gamma radiation beams / Ionization chambers, dosimetry chains with digital display of measured value, compact ionizing radiation meters with digital display of measured value, passive integrating dosimeters	5 · 10 <sup>-8</sup> Gy 1 · 10 <sup>-7</sup> Gy 2 · 10 <sup>-7</sup> Gy	to 1 · 10 <sup>-7</sup> Gy to 2 · 10 <sup>-7</sup> Gy to 1 · 10 <sup>0</sup> Gy		3.7 % 2.6 % 2.1 %	Meter response comparison with reference meter reading; calculation	SOP 15	
4	Air kerma in X-ray beams / Ionization chambers, dosimetry chains with digital display of measured value, compact ionizing radiation meters with digital display of measured value, passive integrating dosimeters	1 · 10 <sup>-6</sup> Gy 1 · 10 <sup>-4</sup> Gy	to 1 · 10 <sup>-4</sup> Gy to 1 · 10 <sup>0</sup> Gy		4.4 % 1.8 %	Meter response comparison with reference meter reading; calculation	SOP 15	
5	Personal dose equivalent rate, directional dose equivalent rate or ambient dose equivalent rate in gamma radiation beams / Dosimetry chains with digital display of measured value, compact ionizing radiation meters with digital display of measured value	5 · 10 <sup>-9</sup> Sv/s 1 · 10 <sup>-8</sup> Sv/s 2 · 10 <sup>-8</sup> Sv/s	to 1 · 10 <sup>-8</sup> Sv/s to 2 · 10 <sup>-8</sup> Sv/s to 2 · 10 <sup>-4</sup> Sv/s	H <sub>p</sub> (0,07), H <sub>p</sub> (3), H <sub>p</sub> (10), H <sub>i</sub> (0,07), H <sub>i</sub> (3), H <sub>i</sub> (30)	5.0 % 4.7 % 4.5 %	Meter response comparison with reference meter reading; calculation; application of conversion coefficients from ISO 4037-3:2019	SOP 15	



Accredited entity according to ČSN EN ISO/IEC 17025:2018:

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Ord. number <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range		Parameter(s) of the measurand	Lowest stated expanded measurement uncertainty <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Location
		min unit	max unit					
6	Personal dose equivalent rate, directional dose equivalent rate or ambient dose equivalent rate in X-ray beams / Dosimetry chains with digital display of measured value, compact ionizing radiation meters with digital display of measured value	2 · 10 <sup>-8</sup> Sv/s 1 · 10 <sup>-6</sup> Sv/s	to 1 · 10 <sup>-6</sup> Sv/s to 5 · 10 <sup>-3</sup> Sv/s	H <sub>p</sub> (0,07), H <sub>p</sub> (3), H <sub>p</sub> (10), H'(0,07), H'(3), H*(10)	6.0 % 4.4 %	Meter response comparison with reference meter reading; calculation; application of conversion coefficients from ISO 4037-3:2019	SOP 15	
7	Personal dose equivalent, directional dose equivalent or ambient dose equivalent in gamma radiation beams / Dosimetry chains with digital display of measured value, compact ionizing radiation meters with digital display of measured value, passive integrating dosimeters	5 · 10 <sup>-8</sup> Sv 1 · 10 <sup>-7</sup> Sv 2 · 10 <sup>-7</sup> Sv	to 1 · 10 <sup>-7</sup> Sv to 2 · 10 <sup>-7</sup> Sv to 1 · 10 <sup>0</sup> Sv	H <sub>p</sub> (0,07), H <sub>p</sub> (3), H <sub>p</sub> (10), H'(0,07), H'(3), H*(10)	5.4 % 4.8 % 4.5 %	Meter response comparison with reference meter reading; calculation; application of conversion coefficients from ISO 4037-3:2019	SOP 15	
8	Personal dose equivalent, directional dose equivalent or ambient dose equivalent in X-ray beams / Dosimetry chains with digital display of measured value, compact ionizing radiation meters with digital display of measured value, passive integrating dosimeters	1 · 10 <sup>-6</sup> Sv 1 · 10 <sup>-4</sup> Sv	to 1 · 10 <sup>-4</sup> Sv to 1 · 10 <sup>0</sup> Sv	H <sub>p</sub> (0,07), H <sub>p</sub> (3), H <sub>p</sub> (10), H'(0,07), H'(3), H*(10)	6.0 % 4.4 %	Meter response comparison with reference meter reading; calculation; application of conversion coefficients from ISO 4037-3:2019	SOP 15	

<sup>1</sup> Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

<sup>2</sup> The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02 M a part of CMC and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the measured value. The uncertainty value stated herein is based on the best conditions achievable by the laboratory; the uncertainty value of a specific calibration may be higher depending on the conditions of such a calibration. For identical extreme values of adjacent ranges, the lower uncertainty value always applies.

<sup>3</sup> If the document identifying the calibration procedure is dated only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).

"This document is an appendix to the certificate of accreditation. In case of any discrepancies between the English and Czech versions, the Czech version shall prevail, both for the certificate appendix and the certificate itself."

