

Ionizing Radiation, Slovakia (Slovak Republic), SMU (Slovensky Metrologicky Ustav)

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty					Reference Standard used in calibration		NMI Internal Service Identifier	Comments
Quantity	Instrument or Artifact	Instrument Type or Method	Minimum value	Maximum value	Units	Parameter	Specifications	Value	Units	Coverage factor	Level of confidence	Is the expanded uncertainty a relative one?	Reference standard	Source of traceability		

RADIOACTIVITY

Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Tc-99m	Peniciline or P6 vial 2-5 ml	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2001	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	I-131	Peniciline or P6 vial 2-5 ml	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2002	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Tl-201	Peniciline or P6 vial 2-5 ml	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2003	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Ga-67	Peniciline or P6 vial 2-5 ml	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2004	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	I-125	Peniciline or P6 vial 2-5 ml	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2005	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	I-123	Peniciline or P6 vial 2-5 ml	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2006	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	In-111	Peniciline or P6 vial 2-5 ml	4	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2007	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+07	1.0E+12	Bq	Cr-51	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2008	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Co-57	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2009	Approved on 21 April 2008

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Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Co-60	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2010	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Zn-65	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2011	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Y-88	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2012	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Ba-133	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2013	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Cs-134	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2014	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Cs-137	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2015	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Eu-152	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2016	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Pb-210	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2017	Approved on 21 April 2008
Activity	Single nuclide solution	Well type ionization chamber	1.0E+06	1.0E+11	Bq	Am-241	injection ampoule	3	%	2	not specified	Yes	Secondary standard ionisation chamber	PTB	EUR-RAD SMU-2018	Approved on 21 April 2008
Activity	Multiple radionuclide solution	HPGe gamma spectrometer	1.0E+01	1.0E+04	Bq	Cd-109	2-5 ml solution in glass ampoule	3	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2019	Approved on 21 April 2008

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Activity	Multiple radionuclide solution	HPGe gamma spectrometer	1.0E+01	1.0E+04	Bq	Co-57	2-5 ml solution in glass ampoule	3	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2019	Approved on 21 April 2008
Activity	Multiple radionuclide solution	HPGe gamma spectrometer	1.0E+01	1.0E+04	Bq	Cs-134	2-5 ml solution in glass ampoule	3	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2019	Approved on 21 April 2008
Activity	Multiple radionuclide solution	HPGe gamma spectrometer	1.0E+01	1.0E+04	Bq	Cs-137	2-5 ml solution in glass ampoule	3	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2019	Approved on 21 April 2008
Activity	Multiple radionuclide solution	HPGe gamma spectrometer	1.0E+01	1.0E+04	Bq	Mn-54	2-5 ml solution in glass ampoule	3	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2019	Approved on 21 April 2008
Activity	Multiple radionuclide solution	HPGe gamma spectrometer	1.0E+01	1.0E+04	Bq	Co-60	2-5 ml solution in glass ampoule	3	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2019	Approved on 21 April 2008
Activity per unit area	Contamination monitor	Large area source	1.0E+01	1.0E+02	Bq cm ⁻²	C-14	appr. 11 x 15 cm	5	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2020	Approved on 21 April 2008
Activity per unit area	Contamination monitor	Large area source	5.0E+00	5.0E+01	Bq cm ⁻²	Co-60	appr. 11 x 15 cm	5	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2021	Approved on 21 April 2008
Activity per unit area	Contamination monitor	Large area source	5.0E+00	1.5E+02	Bq cm ⁻²	Sr-90	appr. 11 x 15 cm	5	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2022	Approved on 21 April 2008
Activity per unit area	Contamination monitor	Large area source	1.0E+01	1.0E+02	Bq cm ⁻²	Cs-137	appr. 11 x 15 cm	5	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2023	Approved on 21 April 2008
Activity per unit area	Contamination monitor	Large area source	1.0E+01	1.5E+02	Bq cm ⁻²	Tl-204	appr. 11 x 15 cm	5	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2024	Approved on 21 April 2008

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Activity per unit area	Contamination monitor	Large area source	1.0E+00	1.0E+02	Bq cm ⁻²	Am-241	appr. 11 x 15 cm	5	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2025	Approved on 21 April 2008
Activity per unit area	Large area source	Large area scintillation counter	1.0E+01	5.0E+03	Bq cm ⁻²	C-14	20 x 30 cm	10	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2026	Approved on 21 April 2008
Activity per unit area	Large area source	Large area scintillation counter	2.0E+00	1.0E+03	Bq cm ⁻²	Co-60	20 x 30 cm	10	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2027	Approved on 21 April 2008
Activity per unit area	Large area source	Large area scintillation counter	1.0E+00	4.0E+02	Bq cm ⁻²	Sr-90	20 x 30 cm	10	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2028	Approved on 21 April 2008
Activity per unit area	Large area source	Large area scintillation counter	1.0E+00	5.0E+02	Bq cm ⁻²	Cs-137	20 x 30 cm	10	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2029	Approved on 21 April 2008
Activity per unit area	Large area source	Large area scintillation counter	1.0E+00	5.0E+02	Bq cm ⁻²	Tl-204	20 x 30 cm	10	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2030	Approved on 21 April 2008
Activity per unit area	Large area source	Large area scintillation counter	2.0E+00	1.0E+03	Bq cm ⁻²	Am-241	20 x 30 cm	10	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2031	Approved on 21 April 2008
Activity per unit volume	Single nuclide calibration solution	HPGe gamma spectrometer	1.0E+04	5.0E+06	Bq m ⁻³	Cs-137	water solution up to 25 liter	5	%	2	not specified	Yes	Standard reference sources	CMI	EUR-RAD SMU-2032	Approved on 21 April 2008

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DOSIMETRY

Air kerma rate	Dosemeter	Irradiation in a calibrated field in air	2.0E-04	5.0	Gy h ⁻¹	Cs-137	ISO-4037	3	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1001	Approved on 21 April 2008
Air kerma rate	Dosemeter	Irradiation in a calibrated field in air	5.0E-07	2.0E-04	Gy h ⁻¹	Cs-137	ISO-4037	4	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1002	Approved on 21 April 2008
Air kerma rate	Dosemeter	Irradiation in a calibrated field in air	3.0E-08	5.0E-07	Gy h ⁻¹	Cs-137	ISO-4037	8	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1003	Approved on 21 April 2008
Reference air kerma rate	Radiation field	Calibration against a transfer standard in air	1.0E-07	1.0E+01	Gy h ⁻¹	Cs-137	ISO-4037	3	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1004	Approved on 21 April 2008
Air kerma rate	Dosemeter	Irradiation in a calibrated field in air	1.0E-05	5.0E-04	Gy h ⁻¹	Co-60	ISO-4037	3	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1005	Approved on 21 April 2008
Air kerma rate	Dosemeter	Calibration against a primary standard in air	2.0E-04	1.4E-02	Gy s ⁻¹	Co-60	ISO-4037	1.3	%	2	not specified	Yes	Graphite cavity ionisation chamber	SMU	EUR-RAD SMU-1006	Approved on 21 April 2008
Reference air kerma rate	Therapy radiation field	Calibration against a transfer standard in air	1.0E-04	1.5E-02	Gy s ⁻¹	Co-60	ISO-4037	1.5	%	2	not specified	Yes	Graphite cavity ionisation chamber	SMU	EUR-RAD SMU-1007	Approved on 21 April 2008
Ambient dose equivalent rate	Dosemeter	Irradiation in a calibrated field in air	2.0E-04	5.0	Sv h ⁻¹	Cs-137	ISO-4037	4	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1008	Approved on 21 April 2008

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Ambient dose equivalent rate	Dosemeter	Irradiation in a calibrated field in air	5.0E-07	2.0E-04	Sv h ⁻¹	Cs-137	ISO-4037	5	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1009	Approved on 21 April 2008
Ambient dose equivalent rate	Dosemeter	Irradiation in a calibrated field in air	3.0E-08	5.0E-07	Sv h ⁻¹	Cs-137	ISO-4037	8	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1010	Approved on 21 April 2008
Ambient dose equivalent rate	Dosemeter	Irradiation in a calibrated field in air	1.0E-05	5.0E-04	Sv h ⁻¹	Co-60	ISO-4037	4	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1011	Approved on 21 April 2008
Absorbed dose rate to water	Dosemeter	Calibration against a secondary standard in a water phantom	5.0E-03	1.4E-02	Gy s ⁻¹	Co-60	IAEA TRS 398, water phantom	2.4	%	2	not specified	Yes	Secondary standard ionization chamber	PTB	EUR-RAD SMU-1012	Approved on 21 April 2008
Personal dose equivalent, penetrating	Dosimeter	Irradiation on phantom in a calibrated field	1.0E-08	1.0E+01	Sv	Cs-137	ISO-4037, PMMA slab phantom	5	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1013	Approved on 21 April 2008
Personal dose equivalent, penetrating	Dosimeter	Irradiation on phantom in a calibrated field	3.0E-07	5.0E-04	Sv	Co-60	ISO-4037, PMMA slab phantom	5	%	2	not specified	Yes	Set of secondary standard ionization chambers	MKEH	EUR-RAD SMU-1014	Approved on 21 April 2008
Air kerma rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-01	5.0E+03	mGy h ⁻¹	X-ray, 40 kV to 50 kV	IEC 61267 RQA quality	3	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1015	Approved on 21 April 2008
Air kerma rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-01	5.0E+03	mGy h ⁻¹	X-ray, 50 kV to 150 kV	50 to 150 kV, IEC 61267 RQA quality	3	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1016	Approved on 21 April 2008

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Air kerma rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-01	5.0E+03	mGy h ⁻¹	X-ray, 30 kV to 50 kV	IEC 61267 RQR quality	3	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1017	Approved on 21 April 2008
Air kerma rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-01	5.0E+03	mGy h ⁻¹	X-ray, 50 kV to 150 kV	50 to 150 kV, IEC 61267 RQR quality	3	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1018	Approved on 21 April 2008
Air kerma rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-01	1.0E+03	mGy h ⁻¹	X-ray, 10 kV to 50 kV	40 to 50 kV, ISO 4037 Wide spectra	3	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1019	Approved on 21 April 2008
Air kerma rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-01	1.0E+03	mGy h ⁻¹	X-ray, 50 kV to 420 kV	50 to 300 kV, ISO 4037 Wide spectra	3	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1020	Approved on 21 April 2008
Air kerma rate	Dosemeter	Calibration against a secondary standard free in air.	1.0E-02	1.0E+02	mGy h ⁻¹	X-ray, 10 kV to 50 kV	30 to 50 kV, ISO 4037 Narrow spectra	3	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1021	Approved on 21 April 2008
Air kerma rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-02	1.0E+02	mGy h ⁻¹	X-ray, 50 kV to 420 kV	50 to 300 kV, ISO 4037 Narrow spectra	3	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1022	Approved on 21 April 2008
Ambient dose equivalent rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-01	1.0E+03	mSv h ⁻¹	X-ray, 10 kV to 50 kV	40 to 50 kV, ISO 4037 Wide spectra	5	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1023	Approved on 21 April 2008
Ambient dose equivalent rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-01	1.0E+03	mSv h ⁻¹	X-ray, 50 kV to 420 kV	50 to 300 kV, ISO 4037 Wide spectra	5	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1024	Approved on 21 April 2008

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Ambient dose equivalent rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-02	1.0E+02	mSv h ⁻¹	X-ray, 10 kV to 50 kV	30 to 50 kV, ISO 4037 Narrow spectra	5	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1025	Approved on 21 April 2008
Ambient dose equivalent rate	Dosemeter	Calibration against a secondary standard free in air	1.0E-02	1.0E+02	mSv h ⁻¹	X-ray, 50 kV to 420 kV	50 to 300 kV, ISO 4037 Narrow spectra	5	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1026	Approved on 21 April 2008
Personal dose equivalent, penetrating	Dosimeter	Calibration against a transfer standard on a phantom	1.0E-02	5.0E+02	mSv	X-ray, 10 kV to 50 kV	40 to 50 kV, ISO-4037, Wide spectra, PMMA phantom	5	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1027	Approved on 21 April 2008
Personal dose equivalent, penetrating	Dosimeter	Calibration against a transfer standard on a phantom	1.0E-02	5.0E+02	mSv	X-ray, 50 kV to 420 kV	50 to 300 kV, ISO-4037, Wide spectra, PMMA phantom	5	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1028	Approved on 21 April 2008
Personal dose equivalent, penetrating	Dosimeter	Calibration against a transfer standard on a phantom	1.0E-03	5.0E+01	mSv	X-ray, 10 kV to 50 kV	30 to 50 kV, ISO-4037, Narrow spectra, PMMA phantom	5	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1029	Approved on 21 April 2008
Personal dose equivalent, penetrating	Dosimeter	Calibration against a transfer standard on a phantom	1.0E-03	5.0E+01	mSv	X-ray, 50 kV to 420 kV	50 to 300 kV, ISO-4037, Narrow spectra, PMMA phantom	5	%	2	not specified	Yes	Free air secondary standard chamber	BEV	EUR-RAD SMU-1030	Approved on 21 April 2008

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NEUTRON MEASUREMENTS

Fluence rate	Neutron sensitive device	Calibration relative to a national standard source	2.2E+01	9.6E+01	cm ⁻² s ⁻¹	Neutron spectrum [at 1 m distance from the source]	Am-241/Be-9, ISO 8529-1	4.6	%	2	not specified	Yes	Calibrated neutron sources	Manganese bath of CMI	EUR-RAD SMU-3001	Approved on 21 April 2008
Fluence rate	Neutron sensitive device	Calibration relative to a national standard source	3.7	1.9E+02	cm ⁻² s ⁻¹	Neutron spectrum [at 1 m distance from the source]	Pu-239/Be-9, IAEA TR No.318	5.4	%	2	not specified	Yes	Calibrated neutron sources	Manganese bath of CMI	EUR-RAD SMU-3002	Approved on 21 April 2008
Fluence rate	Neutron sensitive device	Calibration relative to a national standard source	7.3	7.6	cm ⁻² s ⁻¹	Neutron spectrum [at 1 m distance from the source]	Cf-252, ISO 8529-1	6.2	%	2	not specified	Yes	Calibrated neutron sources	Manganese bath of CMI	EUR-RAD SMU-3003	Approved on 21 April 2008
Ambient dose equivalent rate	Neutron dosimeter	Calibration relative to a national standard source	2.8E-05	1.3E-04	Sv h ⁻¹	Neutron spectrum [at 1 m distance from the source]	Am-241/Be-9, ISO 8529-3	5.3	%	2	not specified	Yes	Calibrated neutron sources	Manganese bath of CMI	EUR-RAD SMU-3004	Approved on 21 April 2008
Ambient dose equivalent rate	Neutron dosimeter	Calibration relative to a national standard source	5.5E-06	2.9E-04	Sv h ⁻¹	Neutron spectrum [at 1 m distance from the source]	Pu-239/Be-9, IAEA TR No.318 ICRP 74	6.1	%	2	not specified	Yes	Calibrated neutron sources	Manganese bath of CMI	EUR-RAD SMU-3005	Approved on 21 April 2008
Ambient dose equivalent rate	Neutron dosimeter	Calibration relative to a national standard source	1.1E-05	1.1E-05	Sv h ⁻¹	Neutron spectrum [at 1 m distance from the source]	Cf-252, ISO 8529-3	7.0	%	2	not specified	Yes	Calibrated neutron sources	Manganese bath of CMI	EUR-RAD SMU-3006	Approved on 21 April 2008

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Quantity	Instrument or Artifact	Instrument Type or Method	Minimum value	Maximum value	Units	Parameter	Specifications	Value	Units	Coverage factor	Level of confidence	Is the expanded uncertainty a relative one?	Reference standard	Source of traceability		
Personal dose equivalent rate	Neutron personal dosimeter	Calibration relative to a national standard source	2.9E-05	1.4E-04	Sv h ⁻¹	Neutron spectrum [at 1 m distance from the source and for an angle of incidence of 0 deg]	Am-241/Be-9, ISO 8529-3	5.3	%	2	not specified	Yes	Calibrated neutron sources	Manganese bath of CMI	EUR-RAD SMU-3007	Approved on 21 April 2008
Personal dose equivalent rate	Neutron personal dosimeter	Calibration relative to a national standard source	5.8E-06	3.0E-04	Sv h ⁻¹	Neutron spectrum [at 1 m distance from the source and for an angle of incidence of 0 deg]	Pu-239/Be-9, IAEA TR No.318 ICRP 74	4.5	%	2	not specified	Yes	Calibrated neutron sources	Manganese bath of CMI	EUR-RAD SMU-3008	Approved on 21 April 2008
Personal dose equivalent rate	Neutron personal dosimeter	Calibration relative to a national standard source	1.1E-05	1.1E-05	Sv h ⁻¹	Neutron spectrum [at 1 m distance from the source and for an angle of incidence of 0 deg]	Cf-252, ISO 8529-3	5.5	%	2	not specified	Yes	Calibrated neutron sources	Manganese bath of CMI	EUR-RAD SMU-3009	Approved on 21 April 2008