Investigation of improvements and future challenges in Radiation Protection Dosimetry in the European Partnership Project GuideRadPROS

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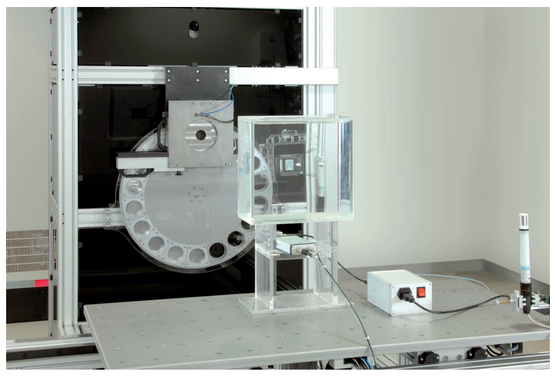
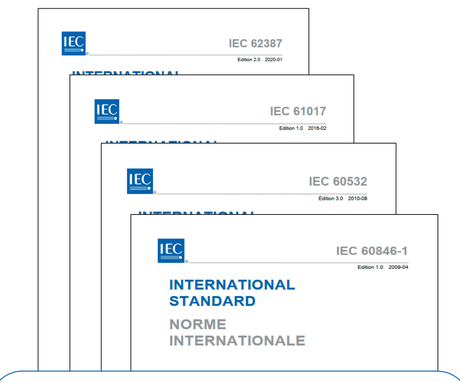
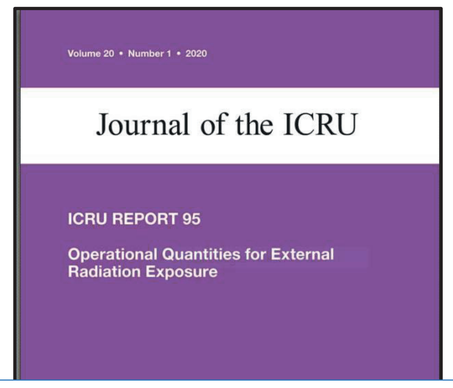
CHALLENGES



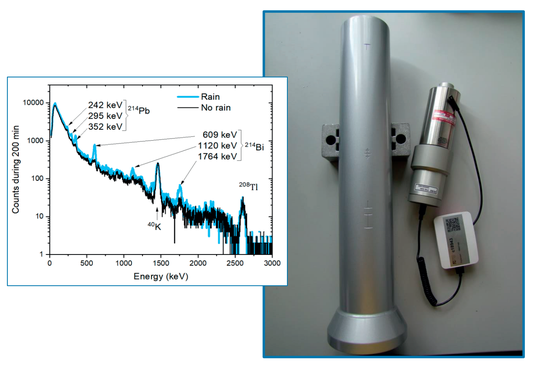
Shortcomings and difficulties in the implementation of the new ISO 4037 series



Discrepancies in radiation protection standardization



Uncertain impact of ICRU Report 95 on type testing standards



Insufficient standardization for upcoming technologies

A comprehensive overhaul of radiation protection dosimetry is needed!

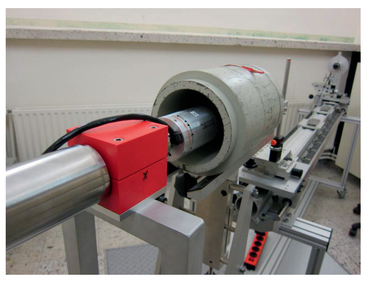
WORK PACKAGES

TEST OF REQUIREMENTS ON REFERENCE FIELDS AND X-RAY SPECTROMETRY GUIDE

Radiation quality	Radiation quality	Radiation quality	Radiation quality
L-10	N-10	W-30	H-10
L-20	N-15	W-40	H-20
L-30	N-20	W-60	H-30
L-35	N-25	W-80	H-40
L-55	N-30	W-110	H-60
L-70	N-40	W-150	H-80
L-100	N-60	W-200	H-100
L-125	N-80	W-250	H-150
L-170	N-100	W-300	H-200
L-210	N-120		H-250
L-240	N-150		H-280
	N-200		H-300
	N-250		H-350
	N-300		H-400
	N-350		
	N-400		

Requirements of ISO 4037
- Survey on gaps
- Variation of HV, filter thickness and purity in simulation and measurement for selected radiation qualities
- Investigation of Am-241 spectra

Comparison of different methods to determine conversion coefficients



Guide to spectrometry with HPGe and CdTe detectors

WP 1

WP 2 — GUIDANCE ON ISO 4037

Knowledge transfer on reference fields, calibrations and ICRU 95 via training courses and E-learning material

WP 3 — GUIDANCE ON TYPE-TESTING STANDARD HARMONIZATION

Review type testing standards and regulation (for personal dosemeters, ambient dosemeters for workplace and environment, dosemeters for emergency)
→ investigate harmonization

WP 4 — FUTURE STANDARDISATION NEEDS AND IMPLEMENTATION OF ICRU 95

- Evaluation of new and upcoming technologies → potential need for update of standards
- Identify impact of ICRU 95 on standards

WP 5 — GENERATE IMPACT

Dissemination of the results in form of publications, conference contributions, good-practice guides, presentations to standardisation bodies

GuideRadPROS

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