


# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 <p><b>0477</b></p> <p>Accredited to ISO/IEC 17025:2017</p>	<p><b>AWE PLC – Defence Radiation Protection Services (DRPS)</b></p> <p>Issue No: 029    Issue date: 24 December 2025</p>	
	<p>Defence Radiation Protection Services At the Institute of Naval Medicine Crescent Road Alverstoke Gosport Hampshire PO12 2DL</p>	<p>Contact: Mr Andy Knight E-Mail: Andrew.knight@awe.co.uk</p>
<p><b>Calibration performed at the above address only</b></p>		

### CALIBRATION AND MEASUREMENT CAPABILITY (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ( $k = 2$ )	Remarks
AIR KERMA RATE	<sup>137</sup> Cs: 2.0 $\mu\text{Gyh}^{-1}$ to 8.0 $\mu\text{Gyh}^{-1}$	12.8 %	Air Kerma and Ambient dose Equivalent rate fields generated in accordance with ISO 4037-1 Dosimetry and conversion coefficients conform to ISO 4037-2 and ISO 4037-3
	<sup>137</sup> Cs: 8.0 $\mu\text{Gyh}^{-1}$ to 723 $\text{mGyh}^{-1}$	2.8 %	
	<sup>60</sup> Co: 8.4 $\mu\text{Gyh}^{-1}$ to 19.7 $\text{mGyh}^{-1}$	4.1 %	
	<sup>241</sup> Am: 4 $\mu\text{Gyh}^{-1}$ to 733 $\mu\text{Gyh}^{-1}$	4.6 %	
AMBIENT DOSE EQUIVALENT RATE	<sup>137</sup> Cs: 2.4 $\mu\text{Svh}^{-1}$ to 10.0 $\mu\text{Svh}^{-1}$	12.8 %	
Calibration process is completed as per the guidance of GPG 14	<sup>137</sup> Cs: 10.0 $\mu\text{Svh}^{-1}$ to 874 $\text{mSvh}^{-1}$	2.8 %	Ambient Dose Equivalent and Personal Dose Equivalent rates do not include the uncertainty associated with the Sv/Gy conversion coefficients.
	<sup>60</sup> Co: 9.7 $\mu\text{Svh}^{-1}$ to 22.8 $\text{mSvh}^{-1}$	4.1 %	
	<sup>241</sup> Am: 6.9 $\mu\text{Svh}^{-1}$ to 1.25 $\text{mSvh}^{-1}$	4.6 %	
PERSONAL DOSE EQUIVALENT:			
PERFORMANCE OF DOSIMETRY SERVICES FOR EXTERNAL, WHOLE BODY GAMMA RADIATION;	<sup>137</sup> Cs:to HSE Protocols	Uncertainties for <sup>137</sup> Cs Air Kerma: 2.8 %	
PERFORMANCE OF DOSIMETRY SERVICES FOR EXTREMITY/SKIN GAMMA RADIATION;	<sup>137</sup> Cs:to HSE Protocols	Uncertainties for <sup>137</sup> Cs Air Kerma: 2.8 %	
PERFORMANCE OF ACCIDENT DOSIMETRY SERVICES - WHOLE BODY GAMMA RADIATION;	<sup>137</sup> Cs:to HSE Protocols	Uncertainties for <sup>137</sup> Cs Air Kerma: 2.8 %	
ROUTINE IRRADIATION OF PERSONAL DOSEMETERS	<sup>137</sup> Cs:to HSE Protocols	Uncertainties for <sup>137</sup> Cs Air Kerma: 2.8 %	
Calibration process is completed as per the guidance of GPG 113			



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ( $k = 2$ )	Remarks
<p>SURFACE CONTAMINATION MONITOR RESPONSE:</p> <p>ALPHA (<math>\alpha</math>) CONTAMINATION BETA (<math>\beta</math>) CONTAMINATION GAMMA (<math>\gamma</math>) AND X-RAY CONTAMINATION</p> <p>Calibration process is completed as per the guidance of GPG 14</p>	<p>Alpha-emitting nuclides: <math>^{241}\text{Am}</math>, <math>^{238}\text{Pu}</math>, <math>^{238}\text{U}</math>, <math>^{239}\text{Pu}</math></p> <p>Beta-emitting nuclides: <math>^{90}\text{Sr}</math>, <math>^{90}\text{Y}</math>, <math>^{147}\text{Pm}</math>, <math>^{36}\text{Cl}</math>, <math>^{14}\text{C}</math>, <math>^{60}\text{Co}</math>, <math>^{137}\text{Cs}</math>, <math>^{63}\text{Ni}</math></p> <p>Photon-emitting nuclides: <math>^{55}\text{Fe}</math>, <math>^{238}\text{Pu}</math>, <math>^{129}\text{I}</math>, <math>^{241}\text{Am}</math>, <math>^{57}\text{Co}</math>, <math>^{137}\text{Cs}</math>, <math>^{60}\text{Co}</math></p>	5.0 % to 15 % depending upon monitor type	Using wide area reference sources and point sources, the construction of which conforms to ISO 8769
END			



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## Appendix - Calibration and Measurement Capabilities

### Introduction

The definitive statement of the accreditation status of a calibration laboratory is the Accreditation Certificate and the associated Schedule of Accreditation. This Schedule of Accreditation is a critical document, as it defines the measurement capabilities, ranges and boundaries of the calibration activities for which the organisation holds accreditation.

### Calibration and Measurement Capabilities (CMCs)

The capabilities provided by accredited calibration laboratories are described by the Calibration and Measurement Capability (CMC), which expresses the lowest measurement uncertainty that can be achieved during a calibration. If a particular device under calibration itself contributes significantly to the uncertainty (for example, if it has limited resolution or exhibits significant non-repeatability) then the uncertainty quoted on a calibration certificate will be increased to account for such factors.

The CMC is normally used to describe the uncertainty that appears in an accredited calibration laboratory's schedule of accreditation and is the uncertainty for which the laboratory has been accredited using the procedure that was the subject of assessment. The measurement uncertainty is calculated according to the procedures given in the GUM and is normally stated as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of  $k = 2$ . An accredited laboratory is not permitted to quote an uncertainty that is smaller than the published measurement uncertainty in certificates issued under its accreditation.

### Expression of CMCs - symbols and units

It should be noted that the percentage symbol (%) represents the number 0.01. In cases where the measurement uncertainty is stated as a percentage, this is to be interpreted as meaning percentage of the measurand. Thus, for example, a measurement uncertainty of 1.5 % means  $1.5 \times 0.01 \times q$ , where  $q$  is the quantity value.

The notation  $Q[a, b]$  stands for the root-sum-square of the terms between brackets:  $Q[a, b] = [a^2 + b^2]^{1/2}$