


# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

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

 <p><b>UKAS</b> CALIBRATION</p> <p><b>4382</b></p> <p>Accredited to <b>ISO/IEC 17025:2005</b></p>	<p><b>James Fisher Nuclear Limited</b></p> <p>Issue No: 008    Issue date: 23 February 2016</p>	
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<p><b>Calibration performed at the above address only</b></p>		

### DETAIL OF ACCREDITATION

Measured Quantity Instrument or Gauge	Range	Calibration and Measurement Capability (CMC) Expressed as an Expanded Uncertainty ( $k=2$ )	Remarks
Surface contamination response. Complying with statutory tests given in GPG14 including Tests before First Use	Alpha emitting nuclides Americium -241 Thorium -230 Uranium -234/238 Plutonium -239	7.8 %	Calibration of portable surface contamination instruments using large area sources with surface emission rates traceable to national standards.
Air kerma rate	Beta emitting nuclides Chlorine -36 Carbon -14 Strontium -90 Cobalt -60 Caesium -137	6.8 %	
	Americium 241 38 $\mu\text{Gy.h}^{-1}$ to 630 $\mu\text{Gy.h}^{-1}$	6.6 %	Calibration and testing of air kerma/air kerma rate monitors using air kerma rates traceable to national standards through a secondary standard dosimeter.
	Caesium-137 0.2 $\mu\text{Gy.h}^{-1}$ to 5.3 $\mu\text{Gy.h}^{-1}$ 5.3 $\mu\text{Gy.h}^{-1}$ to 2.0 $\text{Gy.h}^{-1}$	7.6% 3.5%	
Ambient dose equivalent $H^*(10)$	Cobalt-60 97 $\mu\text{Gy.h}^{-1}$ to 4.9 $\text{mGy.h}^{-1}$	3.2%	
	Americium 241 66 $\mu\text{Sv.h}^{-1}$ to 1.1 $\text{mSv.h}^{-1}$	6.6 %	Calibration and testing of dose/dose rate monitors using air kerma rates traceable to national standards through a secondary standard dosimeter and using appropriate coefficients given in ISO Standards for $H^*(10)$ .
	Caesium-137 0.3 $\mu\text{Sv.h}^{-1}$ to 6.4 $\mu\text{Sv.h}^{-1}$ 6.4 $\mu\text{Sv.h}^{-1}$ to 2.4 $\text{Sv.h}^{-1}$	7.6% 3.5%	
	Cobalt-60 113 $\mu\text{Sv.h}^{-1}$ to 5.6 $\text{mSv.h}^{-1}$	3.2 %	
Performance testing of personal dosimetry services for external radiations against HSE protocols $H_p(10)$	Americium 241 72 $\mu\text{Sv.h}^{-1}$ to 1.2 $\text{mSv.h}^{-1}$	6.6 %	Calibration and testing of approved dosimetry services using air kerma rates traceable to national standards through a secondary standard dosimeter, and using appropriate coefficients given in ISO Standards for $H_p(10)$
	Caesium-137 0.3 $\mu\text{Sv.h}^{-1}$ to 6.4 $\mu\text{Sv.h}^{-1}$ 6.4 $\mu\text{Sv.h}^{-1}$ to 2.4 $\text{Sv.h}^{-1}$	7.6% 3.5%	
	Cobalt-60 55 $\mu\text{Sv.h}^{-1}$ to 5.6 $\text{mSv.h}^{-1}$	3.2%	



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Measured Quantity Instrument or Gauge	Range	Calibration and Measurement Capability (CMC) Expressed as an Expanded Uncertainty ( $k=2$ )	Remarks		
Personal dose equivalent Hp(10)	Americium 241 72 $\mu\text{Sv.h}^{-1}$ to 1.2 $\text{mSv.h}^{-1}$	6.6%	Calibration and testing of electronic personal dosimeters using air kerma rates traceable to national standards through a secondary standard dosimeter, and using appropriate coefficients given in ISO Standards for Hp(10)		
	Caesium-137 0.3 $\mu\text{Sv.h}^{-1}$ to 6.4 $\mu\text{Sv.h}^{-1}$ 6.4 $\mu\text{Sv.h}^{-1}$ to 270 $\text{mSv.h}^{-1}$	7.6% 3.5%			
	Colbalt-60 55 $\mu\text{Sv.h}^{-1}$ to 620 $\mu\text{Sv.h}^{-1}$	3.2%			
Measurement of surface emission rates $\text{p.s}^{-1}$	Alpha emitting nuclides Americium 241 Thorium 230 Plutonium-239 Uranium 234/238	5.8% 5.8% 5.8% 5.8%	Measurement of surface emission rates from planar sources using a transfer standard counter calibrated with extended DkD sources of the same nuclide, or a nuclide with similar energy emissions.		
	Beta emitting nuclides Chlorine 36 Carbon 14 Strontium-90 Colbalt 60 Caesium 137	5.2% 5.2% 5.2% 5.2% 5.2%			
	Electron Capture nuclides Iron 55	5.2%			
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