

Cadmium-109

γ and Primary X-ray Sources

Disc Sources

Cadmium-109 is electroplated on a silver disc or as a pellet sealed in a welded monel capsule with a brazed beryllium window.

Nominal activity*		Capsule	Typical photon output in photons/sec per steradian* Ag K-Xrays	Code
MBq	mCi			
37	1	X.130/6	2.5×10^6	CUCK.7901
111	3		7.5×10^6	CUCK.7903
370	10		25×10^6	CUCK.7910
740	20		50×10^6	CUCK.7920

*Tolerance $\pm 10\%$

Recommended working life: 5 years

Quality Control

Wipe test A

Bubble test D

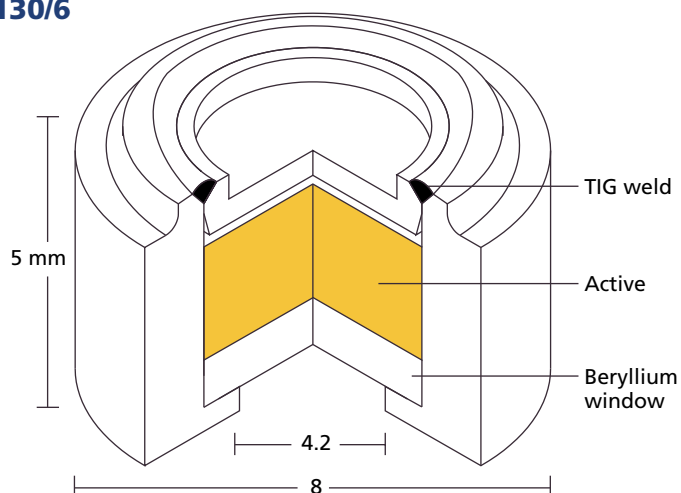
Immersion test L

These sources all emit Ag K X-rays, 88keV γ -rays and some fluorescent X-rays produced in the source backing.

Photon emission checked on a Si(Li) detector.

Total γ -impulses checked using a 75mm x 75mm NaI crystal.

X.130/6



Safety performance testing

ANSI/ISO classification	Model no.
C64344	CUC.D1

Cadmium-109

γ and Primary X-ray Sources

Annular Sources

Cadmium-109 is electroplated on a silver ring with tungsten alloy backing, sealed in a welded stainless steel capsule with beryllium window.

Nominal activity*		Capsule	Typical photon output in photons/sec per steradian* Ag K-Xrays	Code
MBq	mCi			
111	3	X.87/3	7.5×10^6	CUC.8733
185	5		12.5×10^6	CUC.8734
370	10		25×10^6	CUC.8735
740	20		50×10^6	CUC.8736

*Tolerance $\pm 10\%$

Recommended working life: 5 years

Quality Control

Wipe test A

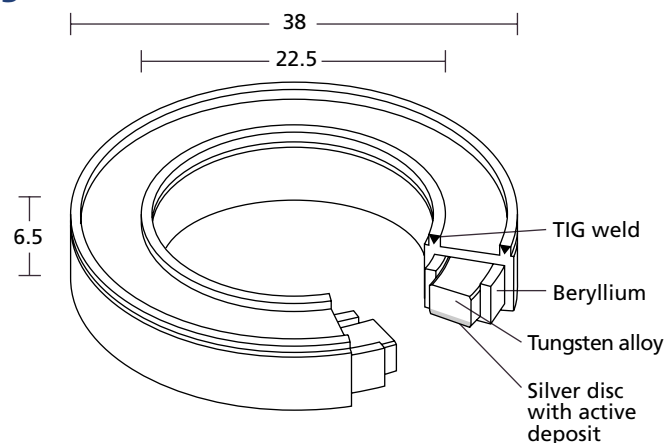
Immersion test L

These sources all emit Ag K X-rays, 88keV γ -rays and some fluorescent X-rays produced in the source backing.

Photon emission checked on a Si(Li) detector.

Total γ -impulses checked using a 75mm x 75mm NaI crystal.

X.87/3



Safety performance testing

ANSI/ISO classification	Model no.
C33344	CUC.A1