

Iron-55

Primary X-ray Sources

Annular Sources

Iron-55 electrodeposited as iron metal on a copper ring with tungsten alloy backing, sealed in a welded stainless steel capsule with 0.3mm beryllium window.

Nominal activity		Photon output in photons/s per steradian Mn KX-rays	Product code
MBq	Ci		
37	1	0.75×10^6	IEC8753
185	5	3.8×10^6	IEC8755
740	20	15×10^6	IEC8758

Recommended working life: 5 years

Quality control

Wipe Test I

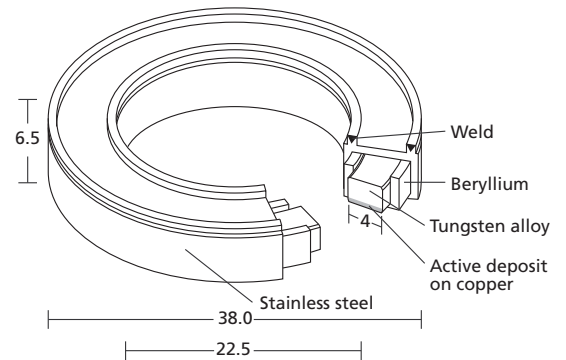
Immersion Test II

Photon emission checked by proportional counter. Spectral purity checked by radionuclide assay of raw material.

Total γ -impurities >100keV (Mn-54 + Fe-59) < 0.02%

Principal emission: Mn KX-rays, 5.9keV

X.87/5 *
VZ-2879



Safety performance testing

ANSI/ISO classification	US-Model number
C33344	IEC.A2

* X.87/5 manufactured according to drawing VZ-2879

Iron-55

Primary X-ray Sources

Disc Sources

Iron-55 electrodeposited as iron metal on the face of a copper disc, sealed in a welded monel capsule with brazed 0.25mm beryllium window.

Nominal activity		Capsule	Typical photon output in photons/s per steradian Mn KX-rays	Product code
MBq	mCi			
37	1	X.133	0.7×10^6	IEC1331
185	5	X.133	3.5×10^6	IEC1332
370	10	X.133	7×10^6	IEC1333
740	20	X.133	14×10^6	IEC1335
1850	50	X.133	35×10^6	IEC1336
3700	100	X.133	70×10^6	IEC1337
37	1	X.330	0.6×10^6	IEC3301
185	5	X.330	3×10^6	IEC3302
370	10	X.330	6×10^6	IEC3303
740	20	X.330	12×10^6	IEC3305

Recommended working life: 10 years

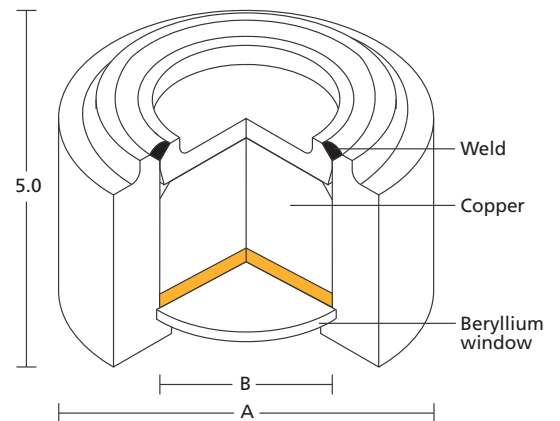
Quality control

Wipe Test I
Immersion Test II
Bubble Test III

Photon emission checked by proportional counter. Spectral purity checked by radionuclide assay of raw material.

Total γ -impurities >100keV (Mn-54 + Fe-59) <0.02%
Principal emission: Mn KX-rays, 5.9keV

X.133/0* **X.330****
VZ-2877 **VZ-2878**



Capsule dimensions and safety performance testing

Capsule Model number	Overall dimensions			Safety performance testing	
	diam. 'A' mm	diam. 'B' mm	diam. 'C' mm	ANSI/ISO classification	US-
X.133	15.0	10.0	12.0	C54344	IEC.D2
X.330	8.0	3.5	4.5	C54243	IEC.D1

* X.133/0 manufactured according to drawing VZ-2877

** X.330 manufactured according to drawing VZ-2878

Iron-55

Primary X-ray Sources

Nickel Coated Sealed Sources

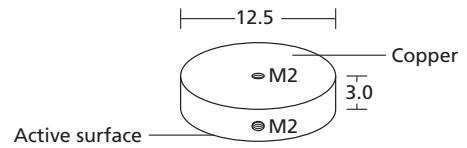
Iron-55 electrodeposited as iron metal on the face of a copper substrate, 12.5mm diameter 3mm thick covered with a protective nickel layer.

The sources are corrosion resistant.

Photon emission checked by proportional counter. Spectral purity checked by radionuclide assay of raw material.

Disc and line sources to other dimensions can be supplied.

X.0709*
VZ-2937



Nominal activity		Photon output in photons/s per steradian Mn KX-rays	Product code
MBq	mCi		
37	1	0.65×10^6	IEC121
185	5	3.25×10^6	IEC122
370	10	7.25×10^6	IEC123
740	20	14.50×10^6	IEC125
1850	50	36.25×10^6	IEC126

Safety performance testing

ANSI/ISO classification	US-Model number
C44342*	IEC.A1

*C33232 in USA

* X.0709 manufactured according to drawing VZ-2937

Recommended working life: 5 years

Quality control

Wipe Test I

Immersion Test II