



Selenium-75 (Se-75)

The success of an isotope used for gamma NDT depends on the ability of the isotope to penetrate the material being imaged, and then, to produce an image of acceptable contrast on the processed radiograph. Isotopes with low gamma energies produce unacceptable images as a result of their inability to penetrate the object being imaged. Higher energy gamma sources over-penetrate, causing a noticeable lack of contrast in the process radiograph. The 66 keV to 401 keV gamma spectrum of Se-75, with two lines of high intensity at 136 keV and 265 keV dominating this spectrum, make it an ideal choice when high quality images in the 5 mm to 30 mm (0.2 in to 1.18 in) range are required.



Description

- **Double encapsulated:** inner vanadium capsule, stainless steel outer capsule
- **Half-life:** 119.8 days

Air Kerma Rate at 1 meter

- 1.95 mGy/h for 37 GBq
- 0.224 R/h for 1.0 Ci

Focal Spot Sizes

Active Diameter (mm)	Active Height (mm)	Equivalent Activity ($\pm 10\%$)	
		GBq	Ci
1.0	1.0	185	5
1.5	1.5	370	10
2.0	2.0	1,295	35
2.5	2.5	2,220	60
3.0	3.0	3,330	90
3.5	3.5	4,440	120

Delivery Time (approximate)

- 2 to 3 weeks for 3 x 3 and 2.5 x 2.5 mm
- 12 to 16 weeks for other dimensions, dependent on reactor schedule

Source Disposal

For each source purchased, Best NDT will provide free disposal for one (1) source.

© 2012 Best NDT

Best NDT USA
68 Buttonwood Street
Bristol, RI 02809-0718 USA
tel 401 253 5500

BestNDTusa.com

Best NDT Canada
413 March Road
Ottawa, ON, K2K 0E4 Canada
tel 613 591 2100

BestNDTcanada.com

BestNDT.net

AFRICA | ASIA | EUROPE | LATIN AMERICA | MIDDLE EAST | NORTH AMERICA



Gamma Spectrum

Selenium-75 (Se-75)	Gamma — Ranging from 66 to 401 keV	Major Yield (%)	Energy (keV)
		17.4	121
59.4	136		
59.5	265		
25.3	280		

Se-75 Capsules

Types	Material	Activity		ISO Code	Certificate Material Special Form
SR-17, SR-18 and GS75M	Stainless steel	5,180 GBq	140 Ci	C63545 (fire tested to 1200°C)	RUS/6223/S-96

© 2012 Best NDT

Best NDT USA
68 Buttonwood Street
Bristol, RI 02809-0718 USA
tel 401 253 5500

BestNDTusa.com

Best NDT Canada
413 March Road
Ottawa, ON, K2K 0E4 Canada
tel 613 591 2100

BestNDTcanada.com

BestNDT.net

AFRICA | ASIA | EUROPE | LATIN AMERICA | MIDDLE EAST | NORTH AMERICA

