

IRIDIUM 192 (Ir-192) SEALED RADIOACTIVE SOURCES



The primary use of Ir-192 sealed source is in gamma radiography. In comparison to other sealed sources used in similar applications, the film resolution produced with the use of Ir-192 provides exposure of high quality which is of critical importance in the field of non-destructive testing.

These Ir-192 capsules, made of stainless steel and containing high purity activated Iridium, are manufactured according to strict ISO classification and each source is welded and tested to comply with Special Form Certification, also fully accredited by the IAEA.

- **Short Delivery Time:** 2-3 weeks.
- **Steel Working Thicknesses:** from 12 mm to 100 mm.
- **Exposure Rate Constant at 1 m:** 0,48 R-m²/hr-Ci.
- **Gamma Spectrum:** is from 206 keV to 612 keV giving a resultant average energy of 353 keV.
- **HVL:** Fe 28 mm, Tg 4,6 mm.
- **TVL:** Fe 69 mm, Tg 14 mm.

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Description

Stainless steel capsule argon arc welded, containing Iridium pellets. The Iridium is centered in pellets of uniform size, and their thickness is selected for the best geometry. Using a combination of pellets, the source can be manufactured with an active diameter ranging from 1 mm to 3 mm and a height ranging from 1mm to 3mm which enables the versatility, to produce sources the exact dimensions and activities the customers require for their specific applications. Sources are mounted on pigtails or link type source holders.



Technical Specifications

Main Application	Gamma radiography
Ir-192 Half Life	74 days
Recommended Working Life	1 year
Ir-192 Capsule Type	HA, HB, YA, HC
Single Encapsulation	HA, HB, YA
Double Encapsulation	HC = (HA+HC)
Material	Stainless Steel
Identification	Unique Serial Number
Certificate Material Special Form	PL/0017/S-05, PL/0018/S-05, PL/0019/S-05, PL/0024/S-12, PL/0025/S-12



HA Capsule HB Capsule YA Capsule HC Capsule

Focal Spot Sizes

Maximum Activity (±10%)

Ir-192 Capsule Type	Active Diameter (mm)	Active Height (mm)	GBq	Ci
HA, HB, YA, HC	1.0	0.4	148	4
HA, HB, YA, HC	1.0	0.6	222	6
HA, HB, YA, HC	1.0	1.0	333	9
HA, HB, YA, HC	1.5	1.0	666	18
HA, HB, YA, HC	1.5	1.2	740	20
HA, HB, YA, HC	1.5	1.6	1,036	28
HA, HB, YA, HC	2.0	1.0	1,110	30
HA, HB, YA, HC	2.0	1.2	1,332	36
HA, HB, YA, HC	2.0	1.6	1,776	48
HA, HB, YA, HC	2.0	2.0	2,220	60
HA, HB, YA, HC	3.0	2.0	3,700	100
HA, HB, YA, HC	3.0	2.2	4,070	110
HB, YA, HC	3.0	2.4	4,440	120
HB, YA	3.0	3.0	5,920	160
YA	3.0	4.0	7,400	200

Capsule Dimensions and Safety Performance Testing

Ir-192 Capsule Type	External Dimensions Ø (mm) x h (mm)	External Capsule Material	ISO classification
HA	4 x 5	Stainless Steel 1H18N9T	C 64344
HB	4 x 6	Stainless Steel 1H18N9T	C 64344
YA	5 x 8	Stainless Steel 1H18N9T	C 64344
HC	5 x 8	Stainless Steel 1H18N9T	C 66545

Safety

All sealed sources conform to :

- Regulations for the Safe Transport & Radioactive Material 1996 Edition (as revised 2000) from the I.A.E.A.
- The International Standard Organisation recommendations ISO 2919:1999..



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