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Product Name :

Sealed Radioactive Source, Cobalt

Product Code :

SLE/PHY/289



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Description :

Sealed Radioactive Source, Cobalt (Product Code: SLE/PHY/289) is a 5 µCi (185 kBq) cobalt-60 teaching source used to demonstrate gamma radiation in school and college physics laboratories. An aluminium disc over the active material absorbs the beta particles, so only gamma rays leave the source, and the mount is colour-coded green. It is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, India, for nuclear physics lab equipment set-ups in India and international markets.

Specifications

Parameter	Detail
Isotope	Cobalt-60
Activity	5 µCi (185 kBq)
Emission	Gamma only; an aluminium disc shields the beta particles
Half-life	5.26 years
Construction	Active material enclosed in metal foil, fixed in a cylindrical mount
Stem	4 mm diameter
Window protection	Wire gauze cap over the open window guards the foil against accidental damage
Identification	Nature and strength engraved on the mount; colour code green
Packing	Small lead castle in a labelled MDF storage box, 100 x 75 x 65 mm high
Documentation	Data sheet enclosed
Product code	SLE/PHY/289
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab), Ambala, India

What Is the Cobalt-60 Source Used For?

Because the beta component is filtered out, the cobalt source gives a clean gamma beam for the parts of a radioactivity course that alpha and beta sources cannot cover. With a Geiger-Muller tube and counter, students show that gamma rays pass through paper and aluminium almost unchanged and are reduced only gradually by thickening layers of lead. Moving the detector away in measured steps lets them test the inverse-square law, and a magnet placed in the beam shows that gamma rays, unlike beta particles, are not deflected.

Good practice follows the time, distance and shielding rule. Lift the source by its 4 mm stem with tongs, point the window away from people, take readings promptly, and return the source to its lead castle and labelled box straight after use. Keep a written log of each use, store the box in a locked cupboard, and remember that with a 5.26-year half-life the count rate drops noticeably over

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