

Sources for Multimodal Imaging

Eckert & Ziegler Isotope Products offers a range of multimodal sources for hybrid PET/CT and SPECT/CT imaging. These sources can be used as fiducial markers to improve image coregistration in sequential scans with standalone scanners of different modalities, or for anatomical or position marking with visibility in both images of a hybrid scanner. CT targets in the clinical sources are designed to mimic cortical bone density with 120 kVp x-rays, and the MMS04 pre-clinical fiducial marker has an active element with density optimized for visibility at 50 kVp without artifacts. The new model MMS10 source even adds MRI visibility to the portfolio, as the only sealed-source fiducial marker available anywhere with visibility in three modalities. Have a specialized application? Many of these designs can be customized – contact a customer service representative to design your own fiducial marker.

Model MMS01 Specifications

Capsule: 1" x 0.25" (D x H)
white Delrin

Active dimensions: 1mm x 1mm
cylinder

Suggested usage:
High-resolution PET point source or fiducial marker.

Model MMS02 Specifications

Capsule: 1" x 0.25" (D x H)
clear cast acrylic

Active dimensions:
1.5mm x 1.5mm cylinder

CT target: 1/4" OD bone-equivalent ring (surrounds active element)

Suggested usage:
Multimodal fiducial marker for clinical image coregistration.

Model MMS03 Specifications

Capsule: 1" x 0.25" (D x H)
clear cast acrylic with etched crosshairs for laser alignment

Active dimensions: 1mm diameter sphere

CT target: 2mm OD bone-equivalent ring (surrounds active element)

Suggested usage:
Multimodal fiducial marker for clinical image coregistration.

Model MMS04 Specifications

Capsule: 3 x 3 x 8mm
clear acrylic with Delrin plug

Active dimensions: 1 x 0.5mm
(D x H) cylinder

CT target: Active element is CT-visible

Suggested usage:
Multimodal fiducial marker for image coregistration, recommended for small animal studies or other situations where a small source capsule is needed.

Model MMS06 Specifications

Capsule: 1" x 0.25" (D x H)
clear cast acrylic

Active dimensions: 0.25mm diameter sphere

Suggested usage:
High-resolution point source or spot marker for use with scanners with resolution better than 3mm.

Model MMS09 Specifications

Capsule: 1 x 1 x 1 cm cast acrylic cube

Active dimensions: 0.25mm sphere centered in capsule

Suggested usage:
NEMA NU4 resolution testing.

Model MMS10 Specifications

Capsule: 0.5" (12.7mm) dia x 0.23" (5.8mm) thick cast acrylic

Active element: .315" (8mm) dia gel with CT contrast MR/CT/radionuclide trimodal fiducial marker

Suggested usage:
For clinical imaging only. Not recommended for high-resolution preclinical scanners.



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Model MMS11 Specifications

Capsule: 0.157" (4mm) dia x 2.06" (52.3mm) long cast acrylic rod with threaded end

Active dimensions: 1mm dia x 0.5mm T

Nuclide: Na-22, 20 uCi (740 kBq)

Suggested usage:

Dedicated source for Siemens Inveon Scanner

Model MMS12 Specifications

Capsule: 1.75" OD x 2.36"L, polycarbonate hollow cylinder, with 4 imbedded point sources.

Active dimensions: 0.5mm dia x 1mm thick point, 4 places

Suggested usage:

Dedicated source for Siemens Inveon Scanner

Model MMS13 Specifications

Capsule: 1.75" OD x 2.36"L, polycarbonate hollow cylinder, with 4 imbedded point sources.

Active dimensions: 0.5mm dia x 1mm thick point, 4 places

Suggested usage:

Dedicated source for Siemens Inveon Scanner

Model MMS15 Specifications

Capsule: 0.63" OD x 1.49"L, polycarbonate hollow cylinder, with 4 imbedded point sources.

Active dimensions: 0.5mm dia x 1mm thick point 4 places

Suggested usage:

Dedicated source for Siemens Inveon Scanner

