

# + SAM and Elliptical Phantoms



The SAM and Elliptical phantoms developed by MVG are manufactured to precise specifications outlined in the 3D-CAD files set forth by industry standards\*. Each is delivered with a compliance certificate. They are designed for integration with MVG COMOSAR phantom tables.

## MAIN FEATURES

### Product

- SAM Phantom
- Elliptical Phantom
- Includes a plastic cover to prevent liquid evaporation

### Function

- Contains liquids that simulate human tissues (head and body) for SAR measurements

### User profile

- SAR bench users

### Related standards

- IEC/IEEE 62209-1528
- IEEE 1528
- IEC 62209-1/-2
- FCC KDB 447498 D03
- EN50360/50566

### Related equipment

- COMOSAR table
- Positioning system

\* Related standards

## + Compliant

As stipulated in the standards, the SAM (Specific Anthropomorphic Mannequin) and Elliptical phantoms are made of low loss and low permittivity material. The material is resistant to Glycol and offers high rigidity (composite material based on fibreglass).

In the SAM phantom the low loss ear spacer provides spacing of 6 mm from the tissue boundary at the Ear Reference Point (ERP) within a tolerance of less than  $\pm 0.2$  mm. The Elliptical phantom has elliptic shape, all as prescribed by the standards.

## + Easy and Precise Positioning

The SAM and Elliptical phantoms have been designed so that positioning of Device Under Test (DUT) and probes can be done under repeatable and stable conditions.

The SAM phantom provide 4 reference points:

- one on the top part of the phantom to position the tip of the probe correctly.
- one in the centre of each of the phantom's parts (right head/ERP, left head/LEP and flat part).

In addition, the outside shell of the SAM phantom includes a perpendicular cross-section (between the ear reference point and the mouth, as well as between the neck and the forehead). This cross-section is used as a reference to position the acoustic output of the device.

The Elliptical phantom provide one reference point on its top part to position the probe tip correctly.

SAM Phantom



Overall thickness	2±0.2mm
Internal Dimensions	870 mm (L) x 235 mm (W) x 190 mm (H)
External Dimensions	1000 mm (L) x 500 mm (W) x 210 mm (H)
Maximum volume	27L
Material	Fiberglass based
Relative permittivity	3.4
Loss tangent	0.02

Elliptical Phantom



Overall thickness	2±0.2mm
Internal Dimensions (Bottom part)	600 mm (L) x 400 mm (W) x 170 mm (H)
External Dimensions	1000 mm (L) x 500 mm (W) x 280 mm (H)
Maximum volume	35 L
Material	Fiberglass based
Relative permittivity	3.4
Loss tangent	0.02

