



GOLD  
STANDARD  
PHANTOMS

# MULTISAMPLE 120E

*One phantom*  
endless possibilities

- Quantitative T1 and T2 relaxometry
- Diffusion
- Metabolic imaging
- Spectroscopy
- Multi-nuclear imaging
- Fat fraction

The MultiSample120E (Enhanced) is a 120mm diameter cylindrical phantom, capable of holding up to 24 industry standard 100 x 16mm, 10ml polypropylene vials. The phantom can be supplied pre-filled with configurations for diffusion or relaxometry, or empty for filling by the user, making it ideal either for acquisitions/technique development, or quality assurance of advanced imaging methods.

- Standardised multi-vial phantom, using industry standard 10ml sample vials.
- Available pre-filled with configurations for diffusion and relaxometry, or empty for your own unique applications.
- Use for Quality Assurance testing and validation of advanced MRI techniques

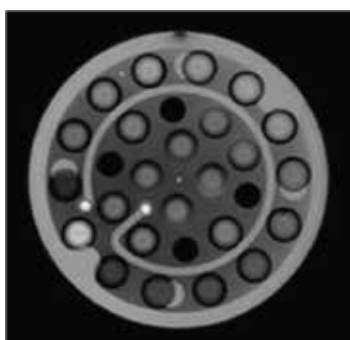
More  
Demo Data  
at GSP  
Viewer



The sample holder features an MR-visible fiducial marker that provides only a single order of rotational symmetry, making it easy to unambiguously identify every sample vial in every MR image.

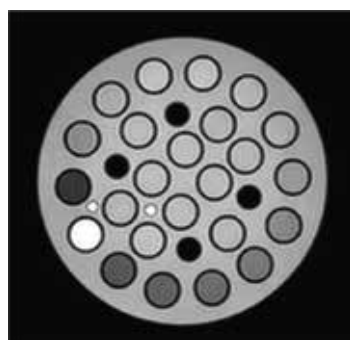
Fiducial

Acquired MR image



Samples

Acquired MR image



Front View

Clockwise Rotation



Rear View

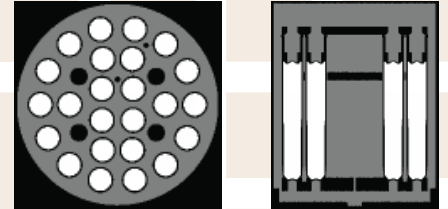
Counter-clockwise Rotation



# Temperature Monitoring

Monitor the phantom's temperature using the included liquid crystal thermometer. Two ports are included for inserting fibre optic probes. Contact us to see how your favourite temperature probes can be fitted to the phantom.

Three concentric rings of sample locations (14 outer, 6 middle, 4 central) provide ample possibilities for investigating the spatial impact of B1 and B0 inhomogeneities and gradient non-linearities.



## Specification Table

The standardised design, combined with voxel models generated directly from CAD, provides a structural reference to register acquired images to and extract regions of interest for further analysis.

<b>Diameter</b>	120mm (internal volume) 130mm (outer cylinder) 160mm (widest point)
<b>Length</b>	163mm
<b>Overall dimensions</b>	(L)160mm x (W)160 mm x (H)165mm
<b>Ports</b>	2x 1/4" BSP (filling ports) 2x M12x1.5 (probe ports)
<b>Materials</b>	Body and Lid: Polycarbonate Sample holder: Polycarbonate and Acrylic Fillable Tube Fiducials: Glass and EVA Plastic Fasteners: GF Nylon and Polycarbonate Plug: GF Nylon Seals: Nitrile
<b>Sample containers</b>	24x 10ml, 100x16 mm polypropylene vials
<b>Phantom Contents</b>	Can be: - Supplied empty. - Filled with standard diffusion and relaxometry configurations. - Filled to customer specification on request.
<b>Packaging</b>	Foam padded box for storage and transport
<b>Optional extras</b>	Insertable fibre optic thermometer probes Torque screwdriver (highly recommended for self-filling applications to prevent damage from overtightening screws.)

**Pre-filled vials**  
*Available!*  
in standard configurations  
for Diffusion  
and Relaxometry

**with NIST certification**

**Other materials**  
*Available!*  
on request.

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