



GOLD  
STANDARD  
PHANTOMS

# SPECTRE

## Spectroscopy Reference

Setting the  
*Standard!*  
for Magnetic Resonance  
Spectroscopy

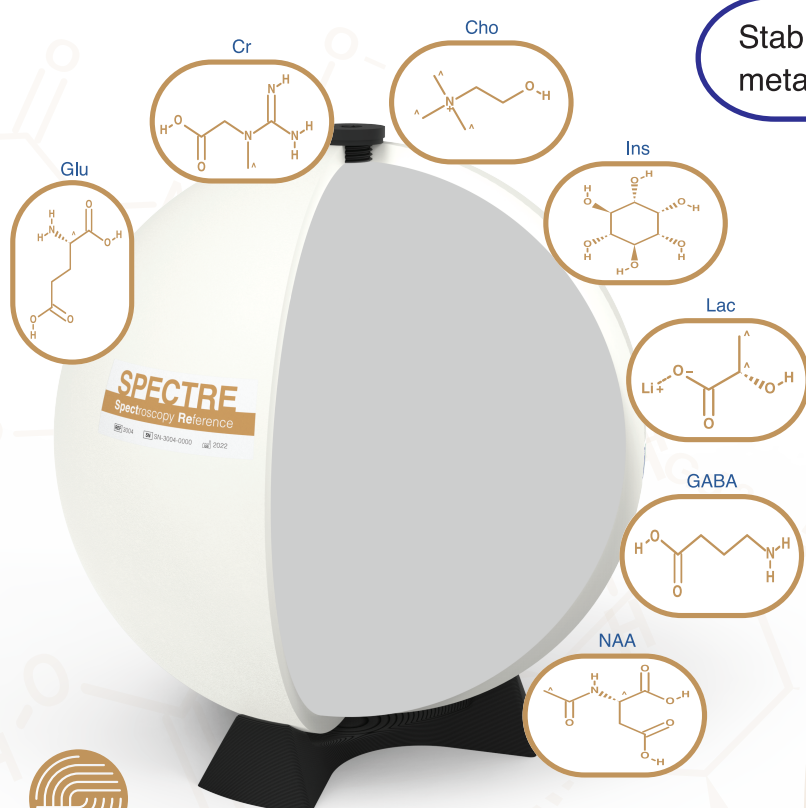
Available in 2 sizes  
18cm & 11cm

The SPECTRE (Spectroscopy Reference) phantom is designed for Quality Assurance measurements of Magnetic Resonance Spectroscopy (MRS). It contains a set of metabolites found within the brain at physiological concentrations and pH, all housed within a HDPE spherical shell.

Up to 70 SPECTRE phantoms can be made from the same batch, providing identical phantoms for use in multi-centre studies.

In addition to the metabolites typically used in MRS QA, our SPECTRE phantoms also include GABA (gamma-Aminobutyric acid) at the physiological concentration of 2mM, to allow performance testing of both standard (e.g. PRESS, LASER) and J-edited (e.g. MEGA-PRESS) MRS acquisitions.

Stable solution of the seven most common brain metabolites at physiological pH and concentrations.



Metabolite	Concentration
N-Acetyl-aspartic acid (NAA)	12.5 mM
Creatine (Cr)	10.0 mM
Choline Chloride (Cho)	3.0 mM
Myo-inositol (Ins)	7.5mM
Glutamate (Glu)	12.5mM
Lactate (Lac)	5.0 mM
Gamma-Aminobutyric acid (GABA)	2.0 mM

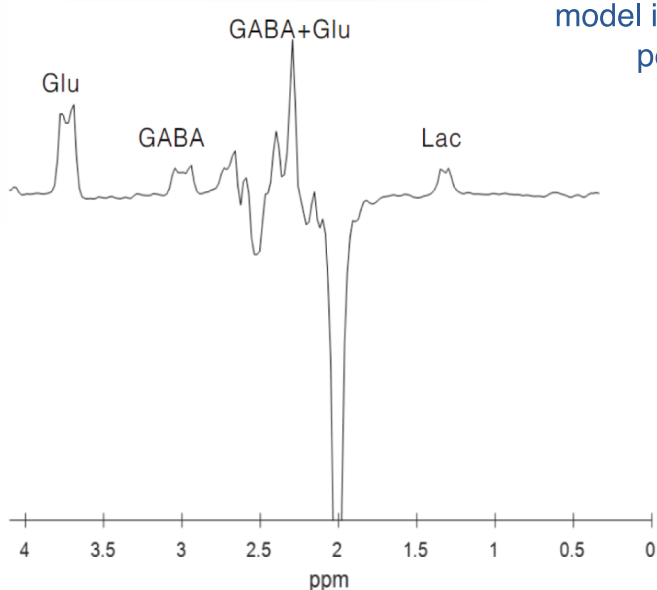
# SPECTRE

Assess the performance and reproducibility of both standard and edited Magnetic Resonance Spectroscopy sequences.

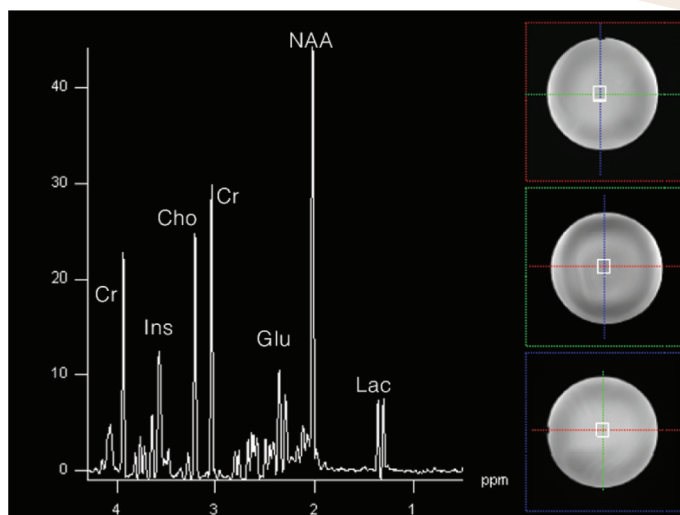


## SPECTRE Pico

Approximately a third of the size of our full size model. This model ideal for neonatal and pediatric studies.



Edited MEGA LASER difference spectra at 3T, TE=68ms



Example spectra acquired at 3T, TE =30ms

### Diameter

SPECTRE	180mm OD
SPECTRE Pico	110mm OD

### Contents

Water-based solution containing metabolites  
Potassium Phosphate pH Buffer (50mM)  
Gd-DTPA  
CMIT:MIT based preservative

pH (@20C)	7.4
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### Materials

HDPE (spherical shell)  
Nylon (cap)  
Nitrile (cap gasket)

### Includes

Liquid crystal thermometer  
Protective foam lined box  
Stand

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