



PRO-MRI ACR模体是大型 MRI 体模，用于以高效的方式全面评估磁共振成像（MRI）的关键成像参数。体模可用于测量绝对值以进行校准。然而，其设计也针对高效的日常质量保证进行了优化。

模体可进行以下测试：

- 几何失真
- 空间分辨率
- 切片厚度和位置
- 切片间隙
- 图像带宽
- 低对比度可检测性
- 图像均匀性
- 信噪比 (SNR)
- 物理和电子切片偏移
- 参考点
- 带宽：水脂移位



技术参数:

- 外筒直径: 203 毫米 (8' ' ')
- 外筒高度: 165 毫米
- 内筒直径: 190 毫米 (7,5' ' ')
- 内筒高度: 150 毫米
- 模体中充满 10 毫摩尔 (mmol) 氯化镍溶液, 其中含有 0.45% 重量的氯化钠
- 每个模体的外部都刻有 "NOSE" 和 "CHIN" 字样, 以帮助定位模体进行扫描, 就像它是一个头部一样

分辨率插件:

- 四个孔阵列, 直径分别为: 0.9、1.0 和 1.1 毫米
- 孔之间的间距等于孔的直径
- 两个装有水和脂肪的小容器, 用于水脂转移评估

切片厚度插入件:

- 两侧各有 1 毫米宽的反向下降狭缝
- 狭缝形成两个以 1:10 下降的斜坡

几何扭曲插件:

- 3x3 孔阵列, 间距 60 毫米,
- 直径 1.5 毫米
- 边长 120 毫米
- 厚度 10 毫米

低对比度插件:

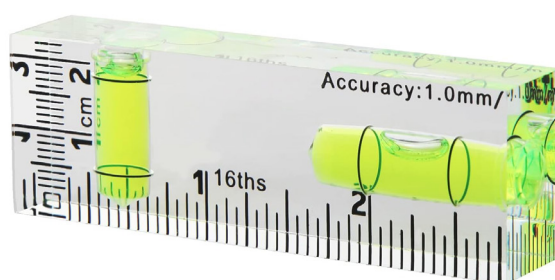
- 这些薄片和填充溶液的部分体积贡献产生对比: 1.4%、2.5%、3.6% 和 5.1%
- 每个圆盘包含 10 组 3 个孔, 排列成辐条
- 每个辐条的直径相同
- 直径范围从 7.0 到 1.5 毫米

切片位置精度:

- 一组成对的 45° 楔块。楔块交叉点之间的距离为 100 毫米

产品包括:

- 重型手提箱 (09-102)
- 可选 2 轴水平仪 (09-104-1)



产品特点:

- 符合:
 - MRI 认证计划大型和中型幻影测试指南, 2022 年 (ACR)
 - MRI 质量控制手册, 2015 年 (ACR)
 - AAPM Rep. 100 "MRI 设施验收和质量保证程序", 2010 年
- CE 认证
- 手册提供了执行每项测试、结果评估和注册的详细指南



Large MRI phantom for comprehensive evaluation of critical imaging parameters of magnetic resonance imaging (MRI) in a time efficient manner. The phantom can be used for the measurement of absolute values for calibration purposes. However, its design is optimized for time efficient daily quality assurance too.

It can be used to measure:

- geometric distortion
- spatial resolution
- slice thickness and position
- interslice Gap
- image bandwidth
- low contrast detectability
- image uniformity
- signal-to-noise ratio (SNR)
- physical and electronic slice offset
- point of reference
- bandwidth: water-fat shift



Technical data:

- outside cylinder diameter: 203 mm (8")
- outside cylinder height: 165 mm
- inside cylinder diameter: 190 mm (7,5")
- inside cylinder height: 150 mm
- the phantom is filled with 10 millimolar (mmol) nickel chloride solution containing 0.45% by weight sodium chloride
- the outside of each phantom has the words "NOSE" and "CHIN" etched into it as an aid to orienting the phantom for scanning, as if it were a head

resolution insert:

- four matrices of holes, diameters: 0.9, 1.0 and 1.1 mm
- spaces between the holes are equal to hole diameters
- two small containers with water and fat for water-fat shift evaluation

slice thickness insert:

- 1 mm wide counter-descending slits on both sides
- slits form two ramps descending at 1:10

geometric distortion insert:

- 3x3 holes array, 60 mm spacing,
- 1.5 mm diameter
- 120 mm on a side
- 10 mm thick

low contrast insert:

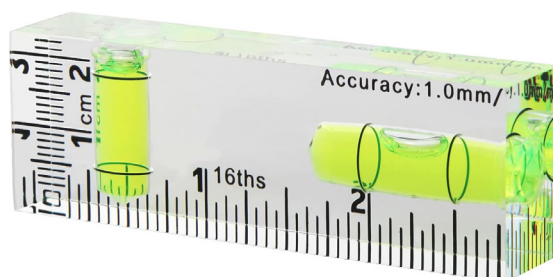
- partial volume contribution of these sheets and filling solution produce contrasts: 1.4, 2.5, 3.6, and 5.1%
- each disc contains 10 groups of 3 holes arranged in spokes
- each spoke has the same diameter
- diameters range from 7.0 to 1.5 mm

slice position accuracy:

- one set of paired 45° wedges. The distance between the intersection of the wedges is 100 mm

product included:

- heavy duty carrying case (09-102)
- optional 2-axis spirit level (09-104-1)



Product features:

- Complies with:
 - Large and Medium Phantom Test Guidance for the MRI Accreditation Program, 2022 (ACR)
 - MRI Quality Control Manual, 2015 (ACR)
 - AAPM Rep. 100 "Acceptance & Quality Assurance procedures for MRI facilities", 2010
- CE certified
- the Manual provides detailed guidelines for carrying out each test, results assessment and registration