

**American College of Radiology  
MRI Accreditation Program**

MRI Physicist/ Scientist  
**ACR Phantom Evaluation**

**Status**

Facility name:

Pass

Test Date:

Fail

Magnet Identification:

**On-Screen Measurements**

<b>Sagittal Locator</b>	
1	Length of phantom, end to end (mm)

	<b>Slice Location #1</b>	SE 500/20	SE 2000/80	Site T1W series	Site T2W Series
2	Resolution				
3	(1.10, 1.00, 0.90 mm)				
4	Slice thickness Top				
5	(fwhm in mm) Bottom				
6	Wedge (mm)  = +  = -				
7	Diameter (mm) ⊕				
8	⊖				

<b>Slice Location #5</b>	
9	⊕
10	⊖
11	⊗
12	⊙

<b>Slice Location #7</b>	
13	Signal Big ROI
14	(mean only) High
15	Low
16	Background Noise Top
17	Bottom
18	(mean ± std dev) Left
19	Right

<b>Low Con Detectability</b>		Site T1W series	Site T2W series
21	Slice Location #8 1.4%		
22	Slice Location #9 2.5%		
23	Slice Location #10 3.6%		
24	Slice Location #11 5.1%		

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<b>Slice Location #11</b>	
25	Wedge (mm)  = +  = -

26 Review Completed:  Yes  No

27 Measurements      ACR T1W      ACR T2W      Site T1W      Site T2W  
**Slice Thickness**      mm      mm      mm      mm

$$ST = 0.2 \times \frac{top \times bottom}{top + bottom}$$

**Slice Displacement** Slice #1      mm      ACR T2W      mm      < 5 mm ?

$$SD = \frac{\Delta x}{2}$$

Slice #11      mm      mm

**Percent Integral Uniformi** ACR T1W      ACR T2W      %      %       $\geq 87.5\%$  ?

$$PIU = 100\% * \left( 1 - \frac{high - low}{high + low} \right)$$

**Ghosting Ratio**      ACR T1W      < 0.025?  
 $GR = \left| \frac{(top + bottom) - (left + right)}{2 \times l \text{ arg } eROI} \right|$

28 Artifacts observed: *Check all that apply*

- 1  No artifacts observed
- 2  Artifact unacceptable
- 3  Excessive Ghosting
- 4  Excessive Truncation Artifacts
- 5  RF Noise/leaks
- 6  Quad Phase/DC offset
- 7  Aliasing
- 8  Geometric Distortion
- 9  Reconstruction Artifacts
- 10  Other

Additional Comments

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Qualified MRI Physicist/Scientist