

Sample Report

MRI Large Phantom QC Report

By
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Acquisition date: 1400/--/--

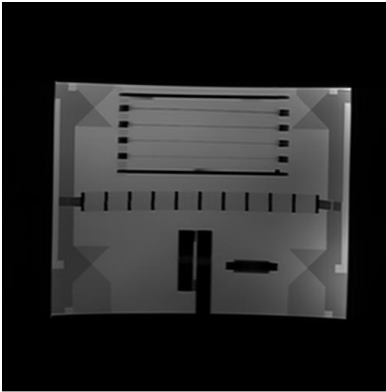
Report date: 1400/--/--

QUICK VIEW

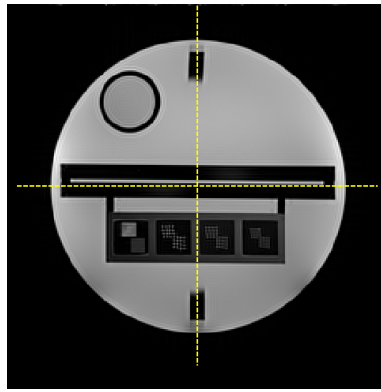
Test	Status	Description
1. Geometric Accuracy Measurements	Not Pass	Must be checked again -> Low acquisition bandwidth Phantom temperature Check!
2. High-Contrast Spatial Resolution	Pass	
3. Slice Thickness Accuracy	Pass	
4. Slice Position Accuracy	Pass	
5. Percent Image Uniformity	Pass	
6. Percent-Signal Ghosting	Pass	
7. Low-Contrast Object Detectability	Pass	

1. Geometric Accuracy Measurements

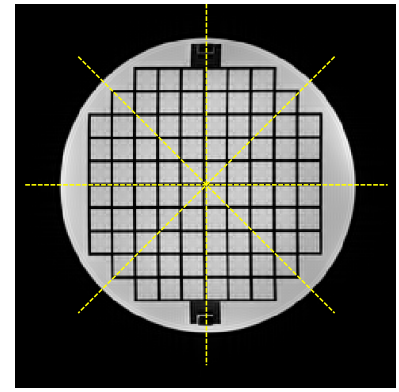
Sagittal Localizer



HiRA T1- Slice #1



HiRA T1- Slice #5



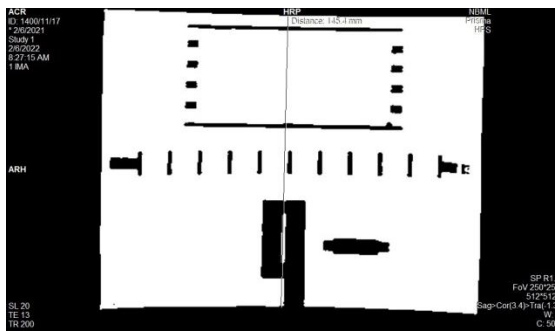
Dir	Len	Real	Status	Dir	Len	Real	Status	Dir	Len	Real	Status
UL	148	145.4	Not Pass	LR	190	189.80	Pass	LR	190	189.60	Pass
				UL	190	189.40	Pass	ULr	190	189.42	Pass
								UL	190	189.41	Pass
								UrLI	190	189.42	Pass

- * UL: Upper-Lower
- * LR: Left-Right
- * ULr: Upperleft-Lowerright
- * UrLI: Upperright-Lowerrleft

- * Dir: Direction
- * Len: Length

NOTE: All the measurements are in mm

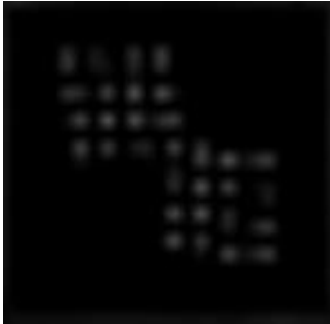
Test Status Not Pass





2. High-Contrast Spatial Resolution

HiRA T1- Slice #1



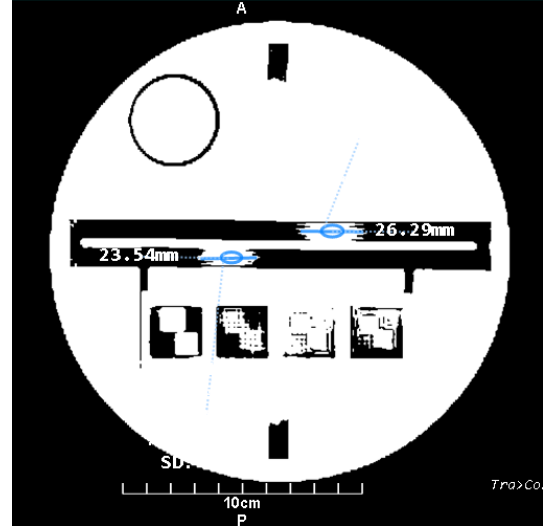
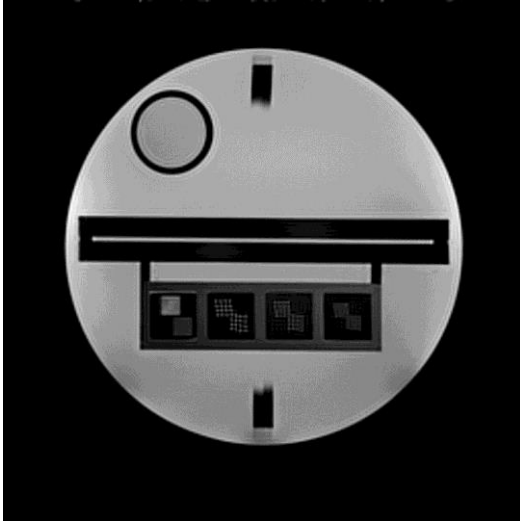
Resolution: 1.1 mm	Resolution: 1.0 mm	Resolution: 0.9 mm
Horizontal status: Pass	Horizontal status: Pass	Horizontal status: Pass
Vertical status: Pass	Vertical status: Pass	Vertical status: Pass

Test Status: Pass





3. Slice Thickness Accuracy



Slice #1	Signal Ramp (mm)		Slice Thickness (mm)		Limit (mm)		Status
	Upper	Bottom	Real	Prescribed	Upper	Bottom	
	26.29	23.54	4.95	5	5.7	4.3	Pass

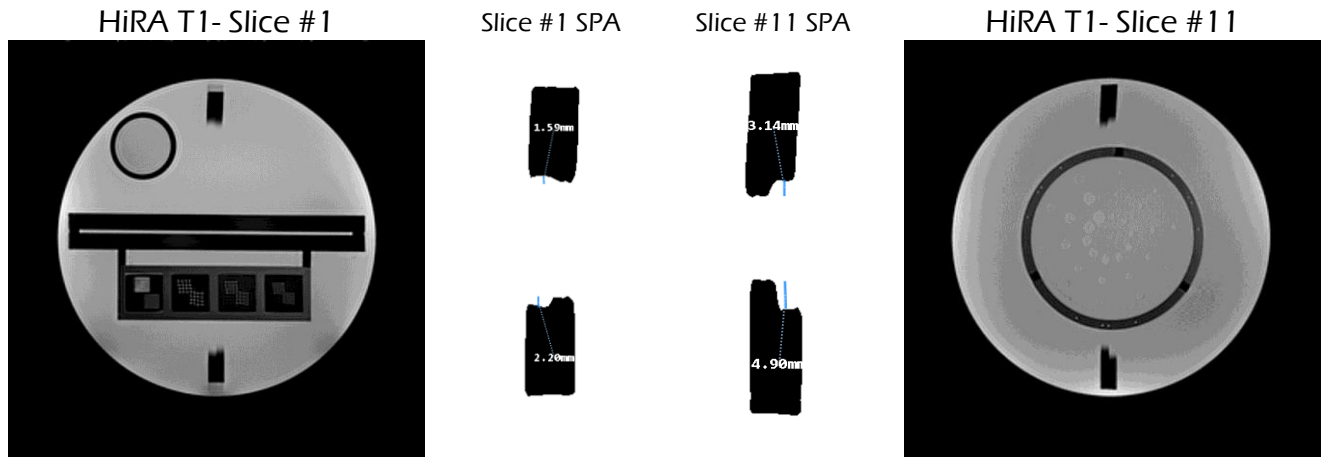
Test status

Pass





4. Slice Position Accuracy



	Upper Insert			Bottom Insert		
	Bars Diff (mm)	Location (mm)	Status	Bars Diff (mm)	Location (mm)	Status
Slice # 1	+ 1.59	+ 0.65	Pass	+ 2.20	+ 1.10	Pass
Slice # 11	- 3.14	98.43	Pass	- 4.90	97.55	Pass
Slab Diff (mm)		- 2.22			- 3.55	

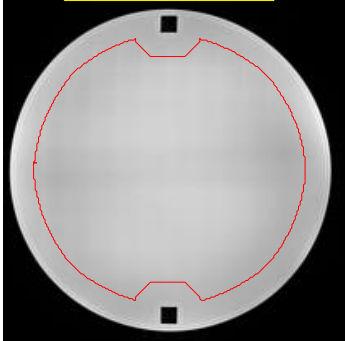
Test status **Pass**



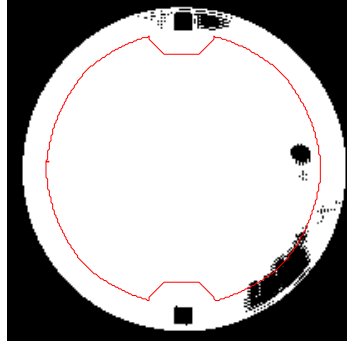


5. Percent Image Uniformity

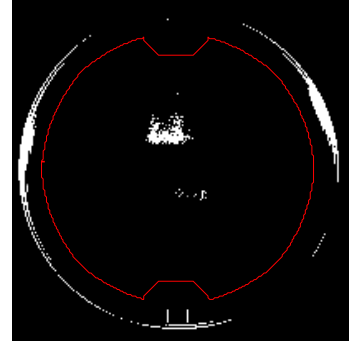
HiRA T1- Slice #4



Smean: 2475



Smin: 2198



Smax: 2668

$$PIU = 100 \times \left[1 - \frac{(\bar{S}_{max} - \bar{S}_{min})}{(\bar{S}_{max} + \bar{S}_{min})} \right]$$

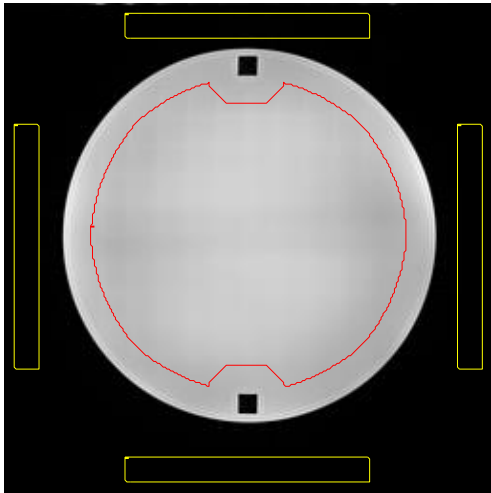
PIU = 90.34%

Test status Pass





6. Percent-Signal Ghosting



HiRA T1- Slice #4

Smean	Sfe1	Sfe2	Spe1	Spe2
1039	7.42	5.15	5.5	7.74

$$PSG = 100 \times \left| \frac{(\bar{S}_{FE1} + \bar{S}_{FE2}) - (\bar{S}_{PE1} + \bar{S}_{PE2})}{2\bar{S}} \right|$$

PSG = 0.07%

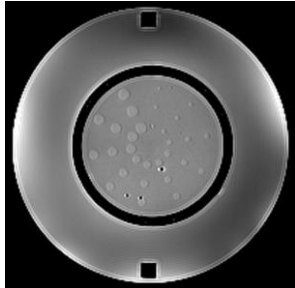
Status	Pass
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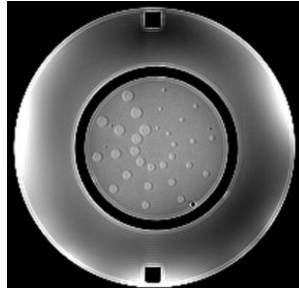


7. Low-Contrast Object Detectability

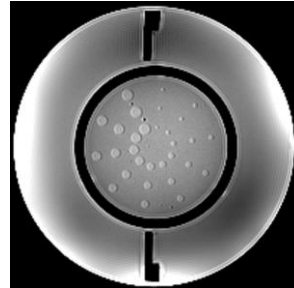
HiRA T1- Slice #8



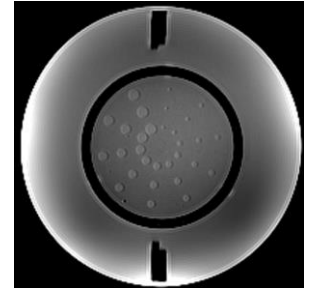
HiRA T1- Slice #9



HiRA T1- Slice #10



HiRA T1- Slice #11



Spokes
10/10

Spokes
10/10

Spokes
10/10

Spokes
10/10

Total Score: 40/40

Test Status:

Pass

