Section 1 - Evaluation of ACR PET Phantom

PET Acquisition Parameters		CT Acquisition Parameters		Reconstruction Techniques	
Beds		Topo mAs		Reconstruction	
Time/Bed		Topo kVp		Iterations	
Matrix		mAs		Subsets	
Zoom	1	kVp		Filter	
Isotope	^{18}F	No. Slices		Setting	
Activity		Slice Thickness		Slice Thickness	10 mm

Note	Images should be acquired with whole body protocol with the same settings that are used for routine clinical studies. The entire phantom should be reconstructed with the same protocol used for whole body scans including pre- and post- reconstruction filters. Slices should be 1 cm thick.

ACR PET Phantom Dilution			
	Dose	Time	Dose Ratios
Patient Dose			
FDG Dose (A) mCi			FDG Doses: B/A
FDG Dose (B) mCi			
Test Dose #1 µCi			Test Doses: 1/2
Test Dose #2 µCi			
Actual Start Time			

☐ Transaxial Images Saved In 10mm Slices Saved

Section 2 - SUV Evaluation
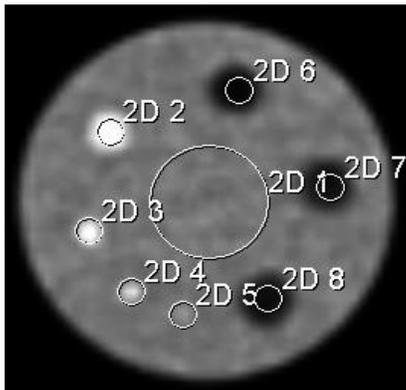
Measured SUV's			
Cylinders	Min	Mean	Max
Bone			
Air			
Water			
25 mm			
16 mm			
12 mm			
8 mm			
Background			

☐ SUV Image Saved With Mean, Min, and Max SUV Values

Section 3 - PET/CT Gantry Alignment

Notes	Pass / Fail
Does PET/CT Gantry demonstrate adequate alignment?	

☐ Fused Transaxial and Axial Images Saved

Section 4 - Count Rate

Phantom Activity	Total Count Rate	Mode	Pass / Fail
		2D	
		3D	

Notes
Include all info for Siemens scanners

Section 5 - Video Display

SMPTE Steps	Measured Luminance (Cd/m^2)
0%	
10%	
20%	
30%	
40%	
50%	
60%	
70%	
80%	
90%	
100%	

Visual Assessment	Pass/Fail
95% Patch Visible	
5% Patch Visible	
Distortion Acceptable	
Tearing or Blurring	
Focus Acceptable	

Uniformity	
Pattern	Measured Luminance (Cd/m^2)
Top	
Bottom	
Left	
Right	
Center	

Section 6 - System Interlocks

Gantry Housing	The gantry housing is intact and adquately secured?	
Cables	Cables are secure and void of fraying or exposed wiring?	
Switches	All switches are functioning correctly? No errors were noted when powering the camera on/off?	
Gantry Controls & Motions	Gantry control and motions functioning as designed?	
Table	The table is damage free and is capable of supporting patient loads? Table motion adequate for this system?	
Emergency Stop	Emergency stop swithces functioning as designed?	

Section 7 - Dose Calibrator

Dose Calibrator		
Test	Test Date	Pass/Fail
Constancy		
Linearity*		
Accuracy*		

	Date	Pass/Fail
Most Recent NRC Inspection*		

* must be submitted to ACR

Section 8 - Quality Control

PET QC	Frequency	Last Performed
DQA (Daily QA)	Daily	
Normalization	Quarterly	
Well Counter Calibration	Quarterly	

CT QC	Frequency	Last Performed

Display QC	Frequency	Last Performed
SMPTE Evaluation	Monthly	

Comments

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