

Radiation Therapy QC

	Module and Test	Radia Outputs
Catphan/OBI, kV/MV & Cone Beam	Varian 504 Catphan	Measures and plots material values and CT number linearity. Measures: slice width, ramp alignment, rod distances, low contrast detectability, measures uniformity, integral non-uniformity, plots integral non-uniformity profile, contrast-to-noise, scores low contrast objects, measures and plots MTF.
	Elekta 503 Catphan	Measures and plots material values and CT number linearity. Measures: slice width, ramp alignment, rod distances, low contrast detectability, uniformity, integral non-uniformity, plots integral non-uniformity profile, measures and plots MTF, uniformity mean difference, low contrast visibility.
	Siemens Image Quality Phantom	Geometrical measurements, central area mean and standard deviation, uniformity measurements, measures and plots MTF, low contrast target scoring.
	Catphan 500 Series	Measures and plots material values and CT number linearity. Measures: slice width, ramp alignment, rod distances, low contrast detectability, uniformity, integral non-uniformity, plots integral non-uniformity profile, contrast-to-noise, scores low contrast objects, measures and plots MTF.
ED	Cheese Phantom	Analyzes 20 density areas for mean material value. Computes standard deviation, noise, uniformity and Contrast-to-Noise ratio of each material. Performs a resolution test on the resolution plug(s). All of these are to comply with TG-148 sections: VI.B.2.a,b, c, and d.
	CIRS 062 + 062A (cone beam)	Measures and plots 17 density areas.
	Gammex 467	Measures and plots 17 density areas. Geometric measurement in X and Y direction.
EPID QC	RIT EPID	 Includes all TG-142 recommended MV imaging tests including geometric accuracy, EPID signal isotropy, resolution, low contrast detectability, uniformity and noise Support for all EPID devices: Varian aS500/ aS1000/ aS1200, Elekta iView and Siemens 25cm x 25 cm (tests large portion of panel)
DR/CR/Fluoro kV	Leeds TOR-18IBA Primus LPTW Normi-4DISC Plus	Mean, standard deviation and contrast ratio for each step Contrast-to-noise ratio for each low contrast object Uniformity and noise MTF reported for the resolution pattern Geometric distortion measurement
kV/MV	ISO Cube Phantom	kV/MV image coincidence, measures radiation / light field alignment for kV and MV, CBCT coincidence
Base Modules	DICOM image viewer and DICOM tag viewer	
	Several methods to locate and import images	DICOM directory browser, open directory browser, DICOM file filter for organizing images
		Batch processing of images
	RufueueC Database Z RITtrend™	All measurements can be tracked and plotted over time in the RITtrend™ database. Any number of databases can be used. All Statistical Process Control parameters measured and plotted.
	Monitor Image Quality	SMPTE pattern and TG18 images
	Manual Measurements	Distance, angle, profile, histograms, round and square ROI. ASCII output of profiles
	Output Formats	Print, PDF, Excel (with custom templates), XML

