

CyberKnife® S7™ System Physics and QA Equipment

The equipment shown below should not be considered complete and is meant only as a starting point for decision making. If you have questions about specific equipment, please contact Accuray Customer Support to speak to a Medical Physicist for further details.

C=Commissioning **D**=Daily **M**=Monthly **A**=Annual **R**=Random **P**=Patient Specific QA

Item	Specifications	Use	C	D	M	A	R	P
Water Tank	0.1 mm measurement accuracy capable of 0.2 mm step spacing, OCR in-plane and cross-plane as well as 15°, 45°, 105° and 135° angle increments, to scan up to 125mm off axis (or 172mm off axis if fixed SSD beam profile scanning will be used) and 300mm deep, diode compatible	OCR, TPR, Output Factors	✓			✓	✓	
TMR Option	Measure TPRs directly rather than converting from PDDs so this option will save data collection time	TMR	✓			✓	✓	
Diodes with No Buildup (2X)	Contact Accuray Physics Support as the specifications for individual diodes are continuously changing	OCR, TPR, Output Factors	✓			✓	✓	
Computer	Laptop	Water Tank Software, Dose Analysis Software, etc.	✓	✓	✓	✓	✓	✓
Farmer Chamber	A Farmer chamber smaller than 0.6cc (e.g. 0.3cc) should be considered to reduce OCR effects	Absolute Dose Calibration	✓		✓	✓	✓	
Calibration for Farmer Chamber	May need build-up cap depending on country's calibration procedure	Absolute Dose Calibration				✓	✓	
Digital Barometer	Calibrated	Absolute Dose Calibration	✓		✓	✓	✓	
Thermometer	Water compatible, calibrated with 0.2 C scale	Absolute Dose Calibration	✓		✓	✓	✓	
Electrometer	Calibrated over the ion chamber and diode range used	Absolute Dose Calibration, Verifies Dose Delivery to Phantom, Commissioning Measurements	✓		✓	✓	✓	✓
Electrometer Calibration	Calibration for each scale used by the electrometer	Absolute Dose Calibration, Verifies Dose Delivery to Phantom	✓		✓	✓	✓	✓
Daily QA Device	Meets local QA requirements	Daily Output Check, Flatness & Symmetry		✓	✓		✓	

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Flatbed Film Scanner	See current recommendations from ISP for scanning their Radiochromic Film	Film Analysis for Targeting Accuracy	✓	✓	✓	✓	✓	✓
MLC QA Software	QA software must have the ability to analyze Bayouth (Garden Fence) film tests	MLC QA	✓		✓		✓	
Slab Phantom with Fiducials	At least 200x200 mm with enough depth to provide for sufficient backscatter at the depth of measurement. <ul style="list-style-type: none"> • plugs and holes for ion chamber and/or film inserts and/or TLDs • accurately known dimensions for structural features • inhomogeneities 	Verifies Point Dose Delivery to Phantom	✓			✓		✓
Film & Micro Volume Ion Chamber Slabs	Must be compatible with the slab phantom	Verifies Dose Delivery to Phantom	✓			✓		✓
Micro Volume Ion Chamber	Small volume ion chamber less than 0.125cc is recommended	Verifies Dose Delivery to Phantom	✓			✓		✓
Isodose Comparison Software	Able to import film measurements and treatment planning RT Dose files	Patient Specific QA Analysis						✓
kV Contrast & Resolution Phantom	Ability to mount at a 45 deg. angle to the floor. Analysis software very helpful but not required	Verify Imaging System	✓			✓	✓	
kVp Meter	80-150 kV range	Verify Imaging System	✓			✓	✓	

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Dynamic Thorax Phantom		Verification of Xsight® Lung Tracking Imaging	✓		✓	✓		
4D CT QA Insert		Verification of 4D Treatment Planning	✓		✓	✓		
Electron Density Phantom	Mass and electron densities provided over the clinical range of use	Convert CT Numbers to Density Values for Treatment Planning	✓			✓	✓	
Survey Meter	Standard vault survey meter for 6MV Linac	Radiation Surveys	✓					

**If you have questions about specific equipment, please contact Accuray Customer Support at: +1.877.668.8667
customersupport@accuray.com**

Important Safety Information:

Most side effects of radiotherapy, including radiotherapy delivered with Accuray systems, are mild and temporary, often involving fatigue, nausea, and skin irritation. Side effects can be severe, however, leading to pain, alterations in normal body functions (for example, urinary or salivary function), deterioration of quality of life, permanent injury, and even death. Side effects can occur during or shortly after radiation treatment or in the months and years following radiation. The nature and severity of side effects depend on many factors, including the size and location of the treated tumor, the treatment technique (for example, the radiation dose), and the patient's general medical condition, to name a few. For more details about the side effects of your radiation therapy, and to see if treatment with an Accuray product is right for you, ask your doctor.

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