

IMRT QA System Comparison

QA System	GAFCHROMIC based IMRT QA system	MAPCHECK, MATRIX, & PTW seven29	EPID	Kodak CR Plate	Conventional Film System
Modality	Self-developing Radiochromic Film	Diode/Ion Chamber Array	Portal Imaging	Reusable Phosphor Plate	Radiographic (silver) Film
Spatial Resolution	High	Low	High	High (but falls very sharply over time)	high
Analysis Time	Fast	Fastest	Fast	Slow	Slow
Development time	Real time	Real time	Real time	Real time	Need time to process
Simultaneous analysis of multiple fields	Yes (under 5 minutes)	NO	NO	NO	Yes only with FilmQA™
Composite fields at varying gantry angles	Yes	NO	NO	NO	Yes
Wide dose range	Yes	Yes	Yes	Yes	saturates beyond 500cGy
Energy independent	Yes	NO	NO	NO	NO
Archive data	Yes. No additional purchase required	Additional purchase required	Additional purchase required	Additional purchase required	Yes. No additional purchase required
Compact system	Yes	Yes	NO	NO	NO
Versatile	Yes (works with other software and scanner)	NO	NO	NO	Yes (works with other software and scanner)
Short training time	Yes	Yes	NO	NO	NO
Easy and flexible workflow	Yes	Yes	NO	NO	NO
Operational expenses	Low	Low	High	High	Medium
Capital Cost	Very Low	Medium	Very High	High	Medium