

Manufacturer's Recommendations for Alternate Dental CBCT QA Program
Imaging Sciences International: Model I-CAT Precise
Table 3A Computed Tomography QC Requirements

Item	Required Test or Procedure	Frequency	Substitute Test or Procedure	Standard
1	Equipment Function "Indicators, Mechanical & other Safety Checks	Daily	Operator's Manual Chapter 2: Safety Items Pages 2-1 to 2-8 (Appendix E) Operator's Manual Chapter 14: Product Information- Preventative Maintenance Pages 14-13 to 14-15 Daily Function Test (Appendix G)	Must work properly
2	Film Processing QC Testing	None	None, not applicable	None, not applicable
3	CT Number for Water	Daily	Operator's Manual Chapter 12: QA Water Phantom Test Pages 12-9 to 12-12 (Appendix C)	Water Expected Value = 0 HU Range= (-70 to 70) HU
4	Field Uniformity	Daily	Operator's Manual Chapter 12: Uniformity Test Pages 12-12 & 12-13 (Appendix C)	Subtract each mean value from the mean value of the center of the ROI. If any difference is greater than 90, make sure phantom is correctly centered in FOV and re-measure. If the difference is still greater than 90, call technical support.
5	Laser Film Printer QC	None	None, not applicable	None, not applicable
6	Low Contrast Resolution	Initial & Annually	QA test to be performed using appropriate Low Contrast phantom. Low Contrast phantom is not provided by Imaging Sciences International.	*To be established by Medical Physicist
7	High Contrast Resolution	Initial & Annually	Operator's Manual Chapter 12: Line Pair Evaluation Pages 12-4 & 12-5 (Appendix D)	Verify the definition is present within line pairs 12,13,14.
8	Noise	Initial & Annually	Operator's Manual Chapter 12: Noise Level Test Pages 12-9 to 12-12 (Appendix C)	Water Expected Value = 0 HU Range= (-70 to 70) HU Air Expected Value= -1000 HU Range = (-930 to -1000) HU
9	Scan Localization Light Accuracy	Initial & Annually	Operator's Manual Chapter 11: Geometry Calibration Pages 11-4 & 11-7 (Appendix B)	Ensure the following is displayed: Landscape Scan 12 Beads detected Portrait Scan 8 Beads detected
10	Medical Physicist's QC Survey	Initial & Annually	Same as alternate Dental CBCT	NJAC 7:28-22.10
11	Medical Physicist's Quality Assurance Program Review	Initial & Annually	Same as alternate Dental CBCT	NJAC 7:28-22.4(a)7

*Where no performance standard is identified or expressed by the manufacture, the medical physicist shall establish the standard for the facility's CBCT unit with justification.