

## Manufacturer's Recommendations for Alternate Dental CBCT QA Program

### Rayscan: Alpha System

**Table 6** Requirements for Dental CBCT

Item	Required Test or Procedure	Frequency	Substitute Test or Procedure	Standard
1	Scan Increment Accuracy	Initial Annually	None – Not Applicable	None – Not Applicable
2	Scan Localization Light Accuracy	Initial & Annually	None – Not Applicable	None – Not Applicable
3	Patient Dose (Multiple Scan Average Dose) MSAD or Computed Tomography Dose Index-CTDI	Initial & Annually	RayScan Alpha System Manufactures' SPEC. Test Document Section 2.2.1, pp. 5-7 (Appendix A)	CTDI <sub>w</sub> < 7.5
4	Pre-Patient Collimation Accuracy	Initial & Annually	RayScan Alpha System Manufactures' SPEC. Test Document Section 2.2.2, pp. 7-11 (Appendix A)	CT Collimator Size: within 20mm X 20mm
5	Contrast Scale	Initial & Annually	RayScan Alpha System Manufactures' SPEC. Test Document Section 2.2.3, pp. 12-14 (Appendix A)	Contrast 650 to 1100
6	CT Number For Water	Initial & Annually	RayScan Alpha System Manufactures' SPEC. Test Document Section 2.2.4, pp. 14-16 (Appendix A)	PMMA (HU)= 0 ± 100 (HU)
7	Slice Thickness	Initial & Annually	None- Not Applicable	None- Not Applicable
8	Field Uniformity	Initial & Annually	RayScan Alpha System Manufactures' SPEC. Test Document Section 2.2.5, pp. 17-19 (Appendix A)	Homogeneity ≥ 25
9	Low Contrast Resolution (Contrast to Noise Ratio-CNR)	Initial & Annually	RayScan Alpha System Manufactures' SPEC. Test Document Section 2.2.6, pp. 19-22 (Appendix A)	CNR ≥ 20
10	High Contrast Resolution (Modular Transfer Function - MTF 10%)	Initial & Annually	RayScan Alpha System Manufactures' SPEC. Test Document Section 2.2.7, pp. 22-25 (Appendix A)	MTF 10% > 1
11	Noise	Initial & Annually	RayScan Alpha System Manufactures' SPEC. Test Document Section 2.2.8, pp. 26-28 (Appendix A)	PMMA Noise < 100
12	Scan Protocol Review	Initial & Annually	Same as NJAC 22.10(a)	Same as NJAC 22.10(a)

13	Review of Facility and Technologists QC Tests	Initial & Annually	Same as NJAC 22.10(a)	Same as NJAC 22.10(a)
14	Physicist Report and Recommendations	Initial & Annually	Same as NJAC 22.10(a)	Same as NJAC 22.10(a)