

Manufacturer's Recommendations for Alternate Dental CBCT QA Program

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Table 6 Requirements for Dental CBCT

Item	Required Test or Procedure	Substitute Test or Procedure	Standard
1	Scan Increment Accuracy	None – Not Applicable	None – Not Applicable
2	Scan Localization Light Accuracy	Section 5.1.1. Positioning and Artifact Tests Page 9 (Appendix A)	Check the centers for the X and Y planes are within ± 2 mm of the center of the phantom.
3	Patient Dose (Multiple Scan Average Dose) MSAD or Computed Tomography Dose Index-CTDI	Section 6 Dose Assessment Page 28-29 (Appendix A)	CTDI ₁₀₀ center value shall be within +/- 30% from 7.3mGy (with 40x40 Cassette) or 7.7mGy (with 80x80Cassette). at Arch
4	Pre-Patient Collimation Accuracy	Section 5.1.1. Positioning and Artifacts Tests Page 7-9 (Appendix A)	Record the X, Y, Z position in mm and write "Pass" in the check sheet if all three positions are within ± 2 mm.
5	Contrast Scale	Section 5.2.2. Contrast Resolution Test Page 22 (Appendix A)	Acceptable Grayscale values for G_001 Recon Filter: Aluminum: 187-233 Bone EQ. Resin: 87-123 Acrylic: 33-63 Air: <19
6	CT Number For Water	Section 5.2.1. Noise and Gray Scale (Uniformity) Test Page 19-22 (Appendix A)	Acceptable Grayscale values for D_001 Recon Filter: Aluminum: 140-180 Bone EQ. Resin: 102-138 Acrylic: 54-86 Air: <21
7	Slice Thickness	None- Not Applicable	None- Not Applicable
8	Field Uniformity	Section 5.2.1. Noise and Gray Scale (Uniformity) Test Page 19-21 (Appendix A)	Make sure the value for "Gray Scale (SD of 5 means)" is less than 12.5
9	Low Contrast Resolution	Section 5.2.2. Contrast Resolution Test Page 22 (Appendix A)	Acceptable Grayscale values for G_001 Recon Filter: Aluminum: 187-233 Bone EQ. Resin: 87-123 Acrylic: 33-63 Air: <19
10	High Contrast Resolution	Section 5.2.3. Spatial Resolution Page 20-25 (Appendix A)	Verify that the value for "MTF at 2 LP / mm" is at least 10%.
11	Noise	Section 5.2.1 Noise and Gray Scale (Uniformity) Test Page 19-21 (Appendix A)	The value for Noise (SD at A) center region is less than 12.5
12	Scan Protocol Review	Same as NJAC 22.10(a)	Same as NJAC 22.10(a)
13	Review of Facility and Technologists QC Tests	Same as NJAC 22.10(a)	Same as NJAC 22.10(a)
14	Physicist Report and Recommendations	Same as NJAC 22.10(a)	Same as NJAC 22.10(a)