

Manufacturer's Recommendations for Alternate Dental CBCT QA Program

Owandy: Model I-Max Touch 3D

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	6.12.2 QC Program Test Page 46 Appendix A	Check the bubble level vs the bubble level of the machine and align the phantom using the mid-sagittal laser.
3	Patient Dose (Multiple Scan Average Dose) MSAD or Computed Tomography Dose Index-CTDI	Initial & Annually	6.10 CTDI information Page 40-41 Appendix A	Appendix A Page 41 Table 6.10.3 Measured Values
4	Pre-Patient Collimation Accuracy	Initial & Annually	6.8 Verification Method of Technical Factors Page 37 Appendix A	KV Minimum Value 60 Maximum Value 86 mA Minimum Value 6 Maximum Value 12 s Minimum Value 0.2 Maximum Value 15
5	Low Contrast Resolution	Initial & Annually	6.12.3 Noise and Contrast Scale Page 48, 51 Appendix A	L Contrast Resolution: Contrast > 250
6	CT Number for Water	Initial & Annually	6.11.5, CT number of water Page 44 Appendix A	Average Number for Water is 0 HU Accepted deviation: ± 100 HU
7	Slice Thickness	Initial & Annually	6.11.3 Slice Thickness Page 43 Appendix A 6.12.6 Nominal Tomographic Section Thickness Page 49 Appendix A	Average Slice Thickness: 0.185 mm Maximum accepted deviation is ± 10% The measure has to be in the range from 15.7mm to 19.0mm.
8	Field Uniformity	Initial & Annually	6.12.4 Uniformity check Page 48, 51 Appendix A	Homogeneity > 5
9	Low Contrast Resolution	Initial & Annually	6.12.3 Noise and Contrast Scale Page 48, 51 Appendix A	L Contrast Resolution: Contrast > 250
10	High Contrast Resolution (Modular Transfer Function - MTF 10%)	Initial & Annually	6.11.2 Modular Transfer Function (MTF) Page 43 Appendix A	Maximum accepted deviation is MTF 10% > 1

11	Noise	Initial & Annually	6.11.1 Noise Page 43 Appendix A	Average CNR is 3.5 Accepted deviation CNR >2.5
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)