

Manufacturer's Recommendations for Alternate Dental CBCT QA Program

KaVo: Model Orthopantomograph OP 3D

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	OP 3D User Manual, Section 2 Introduction, 2.8 Warnings and Requirements Pages 9-10 (Appendix B)	Must work properly
2	Film Processing QC Testing	Daily	None, not applicable	None, not applicable
3	CT Number for Water	Daily	3D Constancy Check Procedure Automatic 3D QC Program Pages 1-2 (Appendix A) Appendix A. 3D QC measurement values and results in the 3D QC CSV Table Page 9 (Appendix A)	If 3D QC test result is "Passed" then measurements are within manufactures specified limits. Reference value for Minimum PMMA ROI value: >- 10
4	Field Uniformity	Daily	3D Constancy Check Procedure Automatic 3D QC Program Pages 1-2 (Appendix A) Appendix A. 3D QC measurement values and results in the 3D QC CSV Table Page 9-10 (Appendix A)	If 3D QC test result is "Passed" then measurements are within manufactures specified limits. Uniformity maximum value: < 250 Minimum PMMA ROI value: > -10 Minimum PTFE ROI value: >1000 Maximum AIR ROI value: < 5
5	Laser Film Printer QC	Weekly	None, not applicable	None, not applicable
6	Low Contrast Resolution	Initial & Annually	3D Constancy Check Procedure Automatic 3D QC Program Pages 1-2 (Appendix A) Appendix A. 3D QC measurement values and results in the 3D QC CSV Table Page 9-10 (Appendix A)	If 3D QC test result is "Passed" then measurements are within manufactures specified limits. Minimum PMMA ROI value: > -10 Minimum PTFE ROI value: > 1000 Maximum AIR ROI value: < 40
7	High Contrast Resolution	Initial & Annually	3D Constancy Check Procedure Section 3: High contrast spatial resolution Pages 5-7 (Appendix A)	The visually identifiable space resolution must be at least 1LP/mm.

8	Noise	Initial & Annually	3D Constancy Check Procedure Automatic 3D QC Program Pages 1-2 (Appendix A) Appendix A. 3D QC measurement values and results in the 3D QC CSV Table Page 9-10 (Appendix A)	If 3D QC test result is "Passed" then measurements are within manufactures specified limits. Maximum PMMA STD Dev: < 115 Maximum PTFE STD DEV: <150 Maximum AIR STD Dev: < 5
9	Scan Localization Light Accuracy	Initial & Annually	OP 3D User Manual, Section 9 Installation, 9.9.8 Patient positioning light adjustment Pages 91-93 (Appendix B)	Exact alignment ensured by checking that lights hit and are parallel to 3D Geometry Calibration Phantom.
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