

**Manufacturer's Recommendations for Alternate Dental CBCT QA Program
Air Techniques Model: ProVecta 3D Prime & ProVecta 3D Prime Ceph**

Table 6

Medical Physicist's Computed Tomography QC Survey

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	Quality Control (QC) manual Provecta 3D Prime Chapter 2.7 Page: 15 – 17 (Appendix B)	Evaluated by ServiceTool software automatically. This point is passed when all relevant parameters are outlined green.
3	Patient Dose (Multiple Scan Average Dose) MSAD or Computed Tomography Dose Index-CTDI	Initial & Annually	ProVecta 3D Prime and ProVecta 3D Prime Ceph Operating Instructions Chapter 12 Pages: 58 – 60 (Appendix A) Quality Control (QC) manual Provecta 3D Prime Chapter 2.8 Page: 17 (Appendix B)	Measure DAP with Meter. accuracy of nominal value is $\pm 50\%$. CBCT image acquisition, normal image volume, 16.4s 90kV, 8mA : Nom : 631.5mgycm ² UL : 315.8mgycm ² OL : 947.2mgycm ²
4	Pre-Patient Collimation Accuracy	Initial & Annually	Quality Control (QC) manual Provecta 3D Prime Chapter 2.9 Pages: 18 – 19 (Appendix B)	Evaluated by ServiceTool software automatically. If the step is passed all relevant parameters are outlined green.
5	Contrast Scale	Initial & Annually	Quality Control (QC) manual Provecta 3D Prime Chapter 2.10 Pages: 19 – 22 (Appendix B)	Test with Hounsfield Test phantom. HU range: Water: -200 to +200 Air: -1200 to -800 Bone: 800 to 1200
6	CT Number for Water	Initial & Annually	Quality Control (QC) manual Provecta 3D Prime Chapter 2.1 Pages: 3 – 6 (Appendix B)	Test with Hounsfield phantom HU Range: - 200 to +200
7	Slice Thickness	Initial & Annually	None – Not Applicable	None – Not Applicable
8	Field Uniformity	Initial & Annually	Quality Control (QC) manual Provecta 3D Prime Chapter 2.2 Page: 6 (Appendix B)	The maximum mean value must not differ more than 400 HU from the minimum mean value.
9	Low Contrast Resolution	Initial & Annually	Quality Control (QC) manual Provecta 3D Prime Chapter 2.3 Pages: 7 – 8	At least 8mm PE cylinder is visible

			(Appendix B)	
10	High Contrast Resolution	Initial & Annually	Quality Control (QC) manual Propecta 3D Prime Chapter 2.4 Pages: 7 – 8 (Appendix B)	At least 1 mm drilled air hole visible
11	Noise	Initial & Annually	Quality Control (QC) manual Propecta 3D Prime Chapter 2.6 Page: 12 – 14 (Appendix B)	Consistency test DIN 6868-15 Initial Contrast -Noise value +/- 40% The test is passed when all parameters are displayed in green.
12	Scan Protocol Review	Initial & Annually	See N.J.A.C. 7:28-22.10(a)	N.J.A.C. 7:28-22.10(a)
13	Review of Facility and Technologist's QC Tests	Initial & Annually	See N.J.A.C. 7:28-22.10(a)	N.J.A.C. 7:28-22.10(a)
14	Physicist Report and Recommendations	Initial & Annually	See N.J.A.C. 7:28-22.10(a)	N.J.A.C. 7:28-22.10(a)