

Manufacturer's Recommendations for Alternate Dental CBCT QA Program
PreXion3D Explorer & Explorer EX

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	PreXion 3D Explorer EX Operation Manual 3.2.6 Checking Scan Area (X-ray Scout Shot) Pages: 3-14 to 3-16 (Appendix A)	If the result after checking the display shows that the position is incorrect, adjust the patient's position again and repeat the operations from Step 6.
3	Patient Dose (Multiple Scan Average Dose) MSAD or Computed Tomography Dose Index-CTDI	Initial & Annually	PreXion 3D Explorer EX Operation Manual 7.9.1 Scan condition of each operating mode Pages 7-13 & 7-14 (Appendix A)	See reference dose tables. Tolerance less than 50%.
4	Pre-Patient Collimation Accuracy	Initial & Annually	PreXion 3D Explorer EX Operation Manual 3.2.6 Checking Scan Area (X-ray Scout Shot) Pages: 3-14 to 3-16 (Appendix A)	If the result after checking the display shows that the position is incorrect, adjust the patient's position again and repeat the operations from Step 6.
5	Contrast Scale	Initial & Annually	PreXion3D Explorer/Explorer EX Image Quality Assurance Procedure 2. Image quality assurance Procedure 2.1 Outline of Image QA for PreXion3D Explorer/Explorer EX Low contrast resolution & High contrast resolution Pages: 2, 7 to 9 (Appendix B)	High Contrast Resolution: Upper Limit 0.8 mm Contrast-to-Noise Ratio (CNR): Lower Limit 20
6	CT Number for Water	Initial & Annually	PreXion3D Explorer/Explorer EX Image Quality Assurance Procedure 2. Image quality assurance Procedure 2.1 Outline of Image QA for PreXion3D Explorer/Explorer EX CT number of water Pages: 2, 4 & 5	Upper Limit 100 Lower Limit -100

			(Appendix B)	
7	Slice Thickness	Initial & Annually	None – Not Applicable	None – Not Applicable
8	Field Uniformity	Initial & Annually	<p>PreXion3D Explorer/Explorer EX Image Quality Assurance Procedure</p> <p>2. Image quality assurance Procedure</p> <p>2.1 Outline of Image QA for PreXion3D Explorer/Explorer EX</p> <p>Uniformity of the Image</p> <p>Pages: 2 & 6 (Appendix B)</p>	Standard Deviation (SDev): Upper Limit 70
9	Low Contrast Resolution	Initial & Annually	<p>PreXion3D Explorer/Explorer EX Image Quality Assurance Procedure</p> <p>2. Image quality assurance Procedure</p> <p>2.1 Outline of Image QA for PreXion3D Explorer/Explorer EX</p> <p>Low contrast resolution</p> <p>Pages: 2, 7 & 8 (Appendix B)</p>	Contrast to Noise Ratio (CNR): Lower Limit 20
10	High Contrast Resolution	Initial & Annually	<p>PreXion3D Explorer/Explorer EX Image Quality Assurance Procedure</p> <p>2. Image quality assurance Procedure</p> <p>2.1 Outline of Image QA for PreXion3D Explorer/Explorer EX</p> <p>High contrast resolution</p> <p>Pages: 2 & 9 (Appendix B)</p>	Upper Limit 0.8 mm
11	Noise	Initial & Annually	<p>PreXion3D Explorer/Explorer EX Image Quality Assurance Procedure</p> <p>2. Image quality assurance Procedure</p> <p>2.1 Outline of Image QA for PreXion3D Explorer/Explorer EX</p> <p>Uniformity of the Image</p> <p>Pages: 2 & 6 (Appendix B)</p>	Standard Deviation (SDev): Upper Limit 70
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)