

Manufacturer's Recommendations for Alternate Dental CBCT QA Program

**VaTech: Model PAX i3D, i3D Green, and i3D Smart**

**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	PAX-i3D Smart PHT-30LFO Technical Manual Appendix E Pages 7-10	Must work properly								
2	Film Processing QC Testing	Daily	None, not applicable	None, not applicable								
3	CT Number for Water	Daily	Vatech Imaging and Performance Calibration & Inspection Phantom Kit Manual  CT Number Check Phantom Appendix C Pages 16-17	CT Number Check Phantom <ul style="list-style-type: none"> <li>• PaX-i3D Smart – A0001319 (End User phantom kit)</li> <li>• PaX-i3D – A0300203 (End User phantom kit)</li> <li>• PaX-i3D Green – A0300204 (End User phantom kit)</li> </ul> <table border="0"> <tr> <td><u>Material</u></td> <td><u>Range (HU)</u></td> </tr> <tr> <td>Air</td> <td>(-1200 to - 800)</td> </tr> <tr> <td>Water</td> <td>(-200 to 200)</td> </tr> <tr> <td>Teflon</td> <td>(800 to 1200)</td> </tr> </table>	<u>Material</u>	<u>Range (HU)</u>	Air	(-1200 to - 800)	Water	(-200 to 200)	Teflon	(800 to 1200)
<u>Material</u>	<u>Range (HU)</u>											
Air	(-1200 to - 800)											
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4	Field Uniformity	Daily	QA Phantom Kit User Manual Appendix A Pages 16- 21	Subtract the minimum average value from the maximum average value among the 5 ROI's. The difference should be less than 400HU.								
5	Laser Film Printer QC	Weekly	None, not applicable	None, not applicable								
6	Low Contrast Resolution	Initial & Annually	Vatech Imaging and Performance Calibration & Inspection Phantom Kit Manual  S&C Check Phantom Appendix C Pages 20-21	PE cylinder: Minimum visible size 8.0mm								
7	High Contrast Resolution	Initial & Annually	Vatech Imaging and Performance Calibration & Inspection Phantom Kit Manual  S&C Check Phantom Appendix C Pages 20-21	Air Hole: Minimum visible size 1.0mm								
8	Noise	Initial & Annually	Vatech Imaging and Performance Calibration & Inspection Phantom Kit Manual  Uniformity Phantom Check Appendix C Pages 19-20	Lower Specification Limit 0  Upper Specification Limit 150								

9	Scan Localization Light Accuracy	Initial & Annually	Vatech Imaging and Performance Calibration & Inspection Phantom Kit Manual  Geometry Check Phantom Appendix C Page 24	Eccentricity Lower Specification Limit=0.97 Upper Specification Limit =1.00  Circle Area Ratio Lower Specification Limit=0.80 Upper Specification Limit=1.20
10	Medical Physicist's QC Survey	Initial & Annually	Same as NJAC 22.10(a)	Same as NJAC 22.10(a)
11	Medical Physicist's Quality Assurance Program Review	Initial & Annually	Same as NJAC 22.10(a)	Same as NJAC 22.10(a)