

**Manufacturer's Recommendations for Alternate Dental CBCT QA Program  
Carestream Health: Models 9500, CS 9300, CS 9300 Select, CS 9000 3D and CS 8100 3D**

**Table 6**  
Medical Physicist's Computed Tomography QC Survey

<b>Item</b>	<b>Required Test or Procedure</b>	<b>Frequency</b>	<b>Substitute Test or Procedure</b>	<b>Standard</b>
1	Scan Increment Accuracy	Initial & Annually	None – Not Applicable	None – Not Applicable
2	Scan Localization Light Accuracy	Initial & Annually	QA Testing Procedure Carestream 3D Products Procedure – Page 6, Item 13 Positioning Aid Checking (Appendix B)	The software computes automatically if test has passed. A green bar indicates test has passed.
3	Patient Dose (Multiple Scan Average Dose) MSAD or Computed Tomography Dose Index-CTDI	Initial & Annually	DAP Meter Accuracy Comparison Reference: CS 8100 3D Equipment DAP Report, page 1-9 (Appendix A)	The accuracy of DAP is +- 30% when compared with the values that could be measured.
4	Pre-Patient Collimation Accuracy	Initial & Annually	QA Testing Procedure Carestream 3D Products Procedure—Page 8 Item 17 (Appendix B)	Must pass computer system testing procedure.
5	Contrast Scale	Initial & Annually	QA Testing Procedure Carestream 3D Products Procedure—Page 5 Item 11, Contrast measure; (Appendix B)	CBCT Unit must pass computerized system testing procedure
6	CT Number for Water	Initial & Annually	QA Testing Procedure Carestream 3D Products Procedure –Page 4 Item 9 Noise & Homogeneity (Appendix B)	The software computes automatically the signal/noise and homogeneity values. The Green bar indicates test has passed.
7	Slice Thickness	Initial & Annually	None- Not Applicable	None- Not Applicable
8	Field Uniformity	Initial & Annually	QA Testing Procedure Carestream 3D Products Procedure –Page 4, Item 9 Noise & Homogeneity (Appendix B)	The software computes automatically the signal/noise and homogeneity values. The Green bar indicates test has passed...

9	Low Contrast Resolution	Initial & Annually	QA Testing Procedure Carestream Imaging Quality Control Procedure –Page 37, Item 2.5.1.3.3 Low Contrast measurement (Appendix C)	Test phantom contains 4 circles that are used to do the Low Contrast measurement. The intent of this test is to assure that contrast ability remains constant over time. Standard to be established by Medical Physicist.
10	High Contrast Resolution	Initial & Annually	QA Testing Procedure Carestream 3D Products Procedure Page 5, Item 12 MTF measurement (Appendix B)	For MTF is automatically computed and its value at 10% is displayed
11	Noise	Initial & Annually	QA Testing Procedure Carestream 3D Products Procedure –Page 4 Item 9 Noise & Homogeneity (Appendix B)	The software computes automatically the signal/noise and homogeneity values. The Green bar indicates test has passed.
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)

Where no performance standard is identified or expressed by the manufacture, the medical physicist shall establish the standard for the facility's CBCT unit with justification.

