

**Sirona Alternate Dental CBCT QA Program**  
**Galileos: Table 6** Medical Physicist's Computed Tomography QC Survey

| Item | Required Test or Procedure  | Frequency          | Galileos Substitute Test or Procedure   | Standard   |
|------|---|--------------------|---|--|
| 1    | Scan Increment Accuracy   | None               | None – Not Applicable   | None – Not Applicable  |
| 2    | Scan Localization Light Accuracy  | Initial & Annually | Use of Constancy Phantom Test Installation Manual Procedure 12.2 Checking the Mechanical system adjustment (pg 161) Procedure 11 Checking the laser Light Localizer | +/- 2 mm   |
| 3    | Patient Dose (Multiple Scan Average Dose) MSAD or Computed Tomography Dose Index (CTDI) | Initial & Annually | Quality Inspection Report Manual Procedure 12.3.3 - Dosimetry (pg 175-176) Quality Test Report – Technique factors (pg 20)  | Model: Comfort GAX 5/GAX7 and S11.11 Acceptable Dose Range: 1.2 mGy to 2.3 mGy At: 85KVp, 28 mAs;<br><br>Model: Comfort Plus GAX 9 and S11.30 Acceptable Dose Range: 2.3 mGy to 4.5 mGy At: 98KVp, 28 mAs. |
| 4    | Pre-Patient Collimation Accuracy  | Initial & Annually | Same as alternate Dental CBCT   | As established by the Medical Physicist*   |
| 5    | Contrast Scale  | Initial & Annually | Use of Constancy Phantom Test Quality Inspection Manual Procedure 2.2-2.8 (pg 6-11)   | As established by the Medical Physicist*   |
| 6    | CT Number For Water   | Initial & Annually | Use of Constancy Phantom Test Quality Inspection Manual Procedure 2.2-2.8 (pg 6-11)   | Gray Scale Reference Value=3500, Tolerance= 3850 (+10%), Tolerance=3150 (-10%)   |
| 7    | Slice Thickness   | None               | None- Not Applicable  | None- Not Applicable   |
| 8    | Field Uniformity  | Initial & Annually | Use of Constancy Phantom Test Quality Inspection Manual Procedure 2.2-2.8 (pg 6-11)   | No artifacts present   |
| 9    | Low Contrast Resolution   | Initial & Annually | Use of Constancy Phantom Test Quality Inspection Manual Procedure 2.2-2.8 (pg 6-11)   | Reference Value = 0.002; Minimum Tolerance=0.001 (50%)   |
| 10   | High Contrast Resolution  | Initial & Annually | Use of Constancy Phantom Test Quality Inspection Manual Procedure 2.2-2.8 (pg 6-11)   | Minimum Tolerance = 1.4 lp/mm  |
| 11   | Noise   | Initial & Annually | Use of Constancy Phantom Test Quality Inspection Manual Procedure 2.2-2.8 (pg 6-11)   | SNR Reference Value= 60; Tolerance (+67%) = 100.2; Tolerance (-25%) = 45   |
| 12   | Scan Protocol Review  | Initial & Annually | Same as NJAC 7:28-22.10(a)  | Same as NJAC 7:28-22.10(a)   |
| 13   | Review of Facility and Technologists QC Tests   | Initial & Annually | Same as NJAC 7:28-22.10(a)  | Same as NJAC 7:28-22.10(a)   |
| 14   | Physicist Report and Recommendations  | Initial & Annually | Same as NJAC 7:28-22.10(a)  | Same as NJAC 7:28-22.10(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