## **Equipment Performance Evaluation**

## Dental radiographic Unit 25 TAC §289.232(i)(7)(A)

Facility Name:	Registration No. Date:
Address:	City: TX Zip:
Phone:	Technician Signature:
Service Company: Patterson Dental Supply, Inc	Service Co. Registration no.
Survey Instrument used:	Calibrated/Intercompared date:
X-ray Unit Identification (From Control Panel)	
Manufacturer Model Number	Serial Number Location
TIMER ACCURACY	
Regulation: The accuracy of the timer shall meet the manufacturer's specifications. If the manufacturer's specifications are not obtainable, the timer accuracy shall be $\pm$ 10 percent of the indicated time with the testing performed at 0.5 second. (See 25 TAC §289.232(i)(6)(H)(i))	
Select one: Manufacturers specs which are	OR ± 10% tolerance
Time used for testing (Intraoral tested	at .5 sec (500msec) (30 Pulses)
Perform four measurements	
%	% %deviation
EXPOSURE REPRODUCIBILITY	
Regulation: When all technique factors are held constant, the coeffi	icient of variation of exposures for both manual and AEC systems shall not exceed
0.05. (See 25 TAC §289.232(i)(6)(I) )	·
Technique factors selected: mAk	Vp time
Perform four measurements:	Coefficient of variation:
	(Must not exceed .05)
kVp TEST	
Regulation: If the registrant possesses the manufacturer's kVp specs, the radiation machine shall meet those specs. Otherwise, the measures kVp shall	
be accurate within $\pm$ 10 percent of the indicated setting at no less than three points over the usual operating range of the machine. (For units with fewer than three fixed kVp settings, the unit shall be checked at those settings.) (See 25 TAC §289.232(i)(6)(J))	
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Select one: Manufacturers specs which are	OR ± 10% tolerance
	<del></del>
((Measured kVp – Indicated kVp) ÷ Indicated kVp) x 100 = % of Dev	riation
Undicated W/n Magazrad W/n Deviation 9/	
Indicated kVp Measured kVp Deviation % %	
%	
%	
Entrance Exposure (EE)	
Regulation:The in-air exposure limits for an average adult intraoral bite wing examination shall not exceed 450 mR for 60 kVp and above; 600 mR for less than 60 kVp. (See 25 TAC §289.232(i)(6)(M))	
Technique factors, for intraoral bite wing examination only, s	elected: kVp mA(s) time
Source to Skin Distance (SSD Source to Detector Distance (SDD	
Tip of cone is positioned within 1/2 inch or less from surface of instrument housing or detector?	
	Direct Measurement.
	EE: mR

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Registration Number: Equipment Performance Evaluation - Dental Unit Serial No.

**Tube Stability** 

Regulation: The x-ray tube shall remain physically stable during exposures. In cases where tubes are designed to move during exposure, the registrant

shall assure proper and free movement of the unit. (See 25 TAC \$289.232(i)(6)(K) )

For intraoral machines only:

For Panoramic and Cephalometric machines only:

Tube stable in all orientations? Free movement where designed?

Collimation

Regulation: See 25 TAC §289.232(i)(6)(L) Field Limitation shall meet the requirements of 25 TAC §289.232(i)(11)(B) and 25 TAC §289.232(i)(12)

Intraoral: Minimum Source to Skin Distance (SSD) X-ray field size at tip of cone

Field size ≤ to 7cm if the minimum SSD is 18cm or more; ≤ 6cm if the minimum SSD is less than 18cm

Source to Image Distance: Pan: Ceph: CBCT:

Panoramic: Image Receptor slit size: Transverse Vertical

X-ray Field size: Transverse Vertical X-ray Field misalignment at image receptor slit: Transverse Vertical

Cephalometric: Image Receptor size: Transverse Vertical

X-ray Field size: Transverse Vertical X-ray Field misalignment at image receptor: Transverse Vertical

(Misalignment cannot exceed 0.0 inches in the transverse axis and 0.5 inches in the vertical axis)

CBCT, Digital Pan Image receptor, Detector, FOV, Diaphragm size:

Measured x-ray field size: x
X-ray field misalignment: x

Alternative Results (please see attachments for documentation)

Audible and visual indication of x-ray

Warning label on x-ray visible.

Comments:

For any failure indicated during the Equipment Performance Evaluation, correction must begin within 30 days of the evaluation date and be completed within 90 days.

All records of the corrective action must be retained by the facility, and made available to the Department of State Health Services upon request.



Next Evaluation Due at 4 years, CBCT Due at 1 year. Or after a repair or reinstallation.

if CBCT

## Data entry page (optional)

Settings

Time set

mA set

kVp set 1 2 3 4

(Select Microsoft print to PDF)

Measured

kVp Dose Time

1

2

3

4

Texas state class found on registration certificates:

Services - 575 (Patterson)

Dental - 886

Veterinary - 571

Medical - 576 - EPE must be done by a Physicist

Medical CT - 567 - EPE must be done by a Physicist

\*\*Check on this if in a facility that may be a Medical class\*\*