

**WAC 246-225A-070 Special requirements for dental extra-oral radiography.** Registrants shall use X-ray systems for extra-oral radiography that meet the following requirements for:

(1) Beam limitation.

(a) X-ray equipment designed for only one image receptor size at a fixed SID must be able to limit the size of the beam at the plane of the image receptor to no larger than the image receptor, and to align the center of the X-ray beam with the center of the image receptor to within two percent of the SID. In the case of extra-oral imaging systems where the image receptor can be turned vertically or horizontally, the beam-limiting device must also be able to be turned so that the dimensions of the beam match the image receptor dimensions at the image receptor plane.

(b) Intra-oral radiography systems used to perform cephalometric projections, including trans-cranial exams, must be equipped with a stable means to:

(i) Comply with the beam size dimensions in subsection (1)(a) of this section; and

(ii) Center the beam to the image receptor as required in subsection (1)(a) of this section.

(c) General purpose medical X-ray equipment used to perform dental radiography must:

(i) Have stepless adjustment of the dimensions of the X-ray beam so that the width and height of the X-ray beam are independently adjustable. The minimum beam size at an SID of 100 centimeters must be equal to or less than 10 by 10 centimeters.

(ii) Have a means for operators to visually set the width and height of the X-ray beam. The misalignment of the edges of the visually set light field with the respective edges of the X-ray beam along either the length or width of the visually set light field must not be more than two percent of the distance from the source to the center of the visually defined light field when the surface upon which it appears is perpendicular (at a 90 degree angle) to the central axis of the X-ray beam.

(iii) Have a means to indicate on the X-ray equipment when the axis of the X-ray beam is perpendicular to the plane of the image receptor and to align the center of the X-ray beam to the center of the image receptor to within two percent of the SID (five percent for equipment manufactured before August 1974). Dental lateral jaw examinations are excluded from this requirement.

(iv) Have a beam-limiting device that indicates the X-ray beam size in centimeters or inches at the plane of the image receptor to which the beam-limiting device is adjusted.

(v) Have an actual beam size at the plane of the image receptor that matches the indicated size to within two percent of the SID.

(2) SSD and SID.

(a) Dental extra-oral radiography systems must have a durable, securely fastened means to limit the SSD to not less than 23 centimeters. The requirement may be met when the beam-limiting device provides the required limits.

(b) Dental extra-oral radiography systems in which the SID is not fixed (such as an intra-oral system used for cephalometrics) must have a device or reference that will indicate the actual SID to within two percent of the indicated SID.

(3) Viewing device.

Dental extra-oral radiography installations must provide a viewing device (mirror, video camera, or glass window designed to reduce

exposure) so that operators of the X-ray equipment may observe the patient's head and neck area during the exposure without being exposed to the primary beam or stray radiation.

(4) Scattered radiation suppressing grids. When using scattered radiation suppressing grids, the grids must be:

(a) Clearly labeled with the SID for which the grids are designed to be used; and

(b) Used at the proper SID.

(5) X-ray film and screen requirements.

(a) X-ray film used for extra-oral imaging must be used before the expiration date specified by the manufacturer.

(b) The spectral sensitivity of the X-ray film used must be matched by the appropriate spectral output of the intensifying screens used in the cassettes as recommended by the film and screen manufacturers.

(c) Screens must be free of dirt, abrasions, and discoloration that would cause artifacts on the image.

[Statutory Authority: RCW 70.98.050 and 70.98.080. WSR 11-19-013, § 246-225A-070, filed 9/7/11, effective 10/8/11; WSR 08-14-074, § 246-225A-070, filed 6/26/08, effective 7/27/08.]