

CONSISTENT QUALITY DIAGNOSTIC X-RAY IMAGES WITH MINIMUM RADIATION

It is not possible in the clinical use of the x-ray unit without IQ(D)P to ensure that the quality of the images remains satisfactory with the passage of time.

Patients of different anatomy and different compositions come to dental offices. They do not provide the optimal model for testing or installation of the unit. With the use of the phantom and proper protocol will visualize the problem within the whole system before it is visible on the clinical images.

We have many examples of IQ(D)P assisting with unit calibrations to add to Clinical Image Quality. We need IQ(D)P protocol to ensure that the owner has the best possible clinical images and that the use of the unit is meeting all regulatory standards.

Dose Standards Comparison – NCRP USA

NCRP Compared with Measurements on 27 Film X-Ray Units

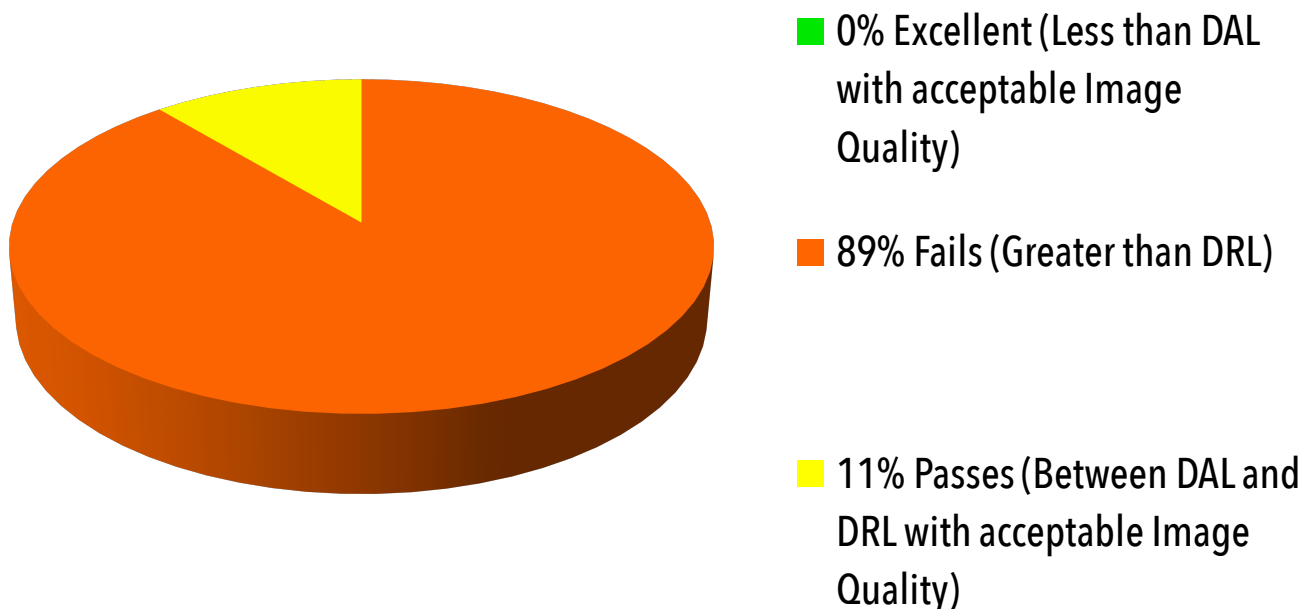


Figure 1: DRL Dose standards are not met in 89% of units tested



This DRL value is intended to be one standard, regardless of the type of imaging receptor used by the dentist; whether D or E-F speed film, or storage phosphor, charge-coupled device, complementary metal oxide semiconductor digital systems. It is recognized, and intended, that meeting this standard will most likely require dentists in the United States who use D speed film to convert to E-F speed film. Such a conversion requires only reducing the exposure time or mA by half. The kilovolt peak and processing conditions are otherwise unaffected. This conversion carries immediate patient benefits without loss of diagnostic quality (Ludlow et al., 2001b).

Dental Assistant Radiology and X-Ray Certification Information:

Dental assisting certification programs help develop a student's theoretical and practical knowledge of x-rays used in a dental setting for patient safety and risk reduction. Find out more about continuing education and career information.