AbstractID: 6395 Title: GafChromic XR-QA Film in Testing Panoramic Dental Radiography

Purpose: The location and the field size of the incident X-ray beam in panoramic dental radiography most often cannot be ascertain visually. These parameters are needed for quality control testing and dosimetry determination. To alleviate this problem, GafChromic XR-QA film was tested on two panoramic systems. **Method and Materials:** For each system, the dose-area product was computed with the length of a cross section image of the incident beam and the exposure measurement with a pencil ion chamber. The result was confirmed by direct analysis of a dose distribution on a film. Placement of the ion chamber was determined by these images. The dose-area products were thus determined to be 713 $cGy.mm^2$ and 721 $cGy.mm^2$. From these values, the effective doses were computed to be 5.2 μSv and 5.3 μSv respectively. **Results and Conclusion:** This version of radiochromic film has thus been demonstrated to be a useful complement to a pencil ion chamber in the testing of a panoramic radiography system.