

Radiometric and Spectroradiometric Comparison of Power Outputs of Five Visible Curing -Light Units

李勝揚

Lee S-Y;Chiu C-H;Boghosian A;Greener EH

Abstract

The spectral distributions of the radiation emitted by five visible range curing lights were measured spectroradiometrically. The light intensities in specific wavelength bands were evaluated by graphical integration. The results were then compared with the instantaneous readings of power density of all of the units as measured with a commercial curing radiometer. The data obtained by both techniques correlated well at narrower specific wavelengths (450-500 nm), which are assumed to be more effective for photopolymerization. This finding indicates that curing radiometer is sensitive to the desired wavelengths and may be an effective tool to quickly characterize the curing efficiency of dental photocuring sources in a clinical setting.