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**EVALUATION OF COLOR AND WETTABILITY OF A UNIVERSAL
ADHESIVE MODIFIED BY INCORPORATING CHITOSAN CAPPED
CERIUM OXIDE NANOPARTICLES**

Abstract:

Purpose: To evaluate color and wettability of a universal adhesive modified by incorporating chitosan capped cerium oxide nanoparticles (C-CeNPs) at four different weight percentages. *Methods:* C-CeNPs was synthesized and characterized by FTIR, TEM, FESEM and EDS. Experimental groups; G I, II, III and IV were evaluated for color and wettability. Data were analyzed by ANOVA and Duncan's test. *Results:* FTIR charts confirmed assembly of chitosan and cerium. TEM revealed homogeneous distribution of C-CeNPs with particle size less than 50nm. FESEM showed a foam-like irregular microsphere of C-CeNPs. EDS confirmed the elemental analysis of C-CeNPs. Color absorption peaks for the experimental groups ranged between 430-470 nm wavelength. Mean contact angle values for G I, G II, G III and G IV were 21.1°, 40.43°, 42.35° and 46.07° respectively. *Conclusions:* Incorporating C-CeNPs did not significantly change the color of the experimental groups while it significantly changed their contact angle values.