

## Influence of Dental Prophylaxis in Tooth Color L\*a\*b\* Values

Autores: Ruben Pereira, João Silveira, Susana Dias, Ana Cardoso, Duarte Marques, António Mata

Instituição: International Association for Dental Research - IADR

Valor da bolsa: 200.00€

Apresentação durante o evento CED-IADR/NOF Oral Health Research Congress em Madrid, Espanha | 2019-09-19

### Resumo:

**Objectives:** To evaluate dental prophylaxis (DP) influence in tooth color L\*a\*b\* values assessed by a spectrophotometer.

**Methods:** For this diagnostic study, seventy volunteers were consecutively screened according to appropriate inclusion/exclusion criteria. Tooth color assessment was performed by a spectrophotometer, Spectroshade (SS) (MHT Optic Research, Italy; serial number HDL3973) in both upper incisors (11, 21) and canines (13, 23) of each patient. Previous to DP procedure, two measurements were performed to evaluate reliability and baseline  $\Delta E$  for the SS. One week after DP, measurements with SS were done in order to determine changes in tooth color. Results are presented as mean  $\pm$  standard deviation (SD) of CIE L\*a\*b\* values and  $\Delta E$  of global and individual teeth. SS reliability was assessed by intraclass correlation coefficient (ICC). Differences between baseline and after DP measurements were analysed with Student paired t Test with significance level set at  $\alpha=0.05$ . The perceptibility and acceptability thresholds values were considered as  $\Delta E=1.2$  and  $\Delta E=2.7$ , respectively.

**Results:** Sixty-six patients were included. ICC values obtained excellent reliability ranging between 0.76-0.98. Global  $\Delta E$  mean value  $\pm$  SD after DP was  $1.68\pm 1.47$  while individual teeth values were  $1.51\pm 1.05$ ,  $1.93\pm 1.71$ ,  $1.59\pm 1.42$  and  $1.70\pm 1.59$ , respectively for 11, 13, 21 and 23. Paired t test revealed a significant difference ( $P<0.01$ ) between  $\Delta E$  mean value at baseline control ( $1.08\pm 0.86$ ) and after DP ( $1.68\pm 1.47$ ). After DP, a decrease in b\* values was detected in all teeth, although without significant differences when compared to baseline.

**Conclusions:** After performing dental prophylaxis, tooth color values presented a statistically significant difference in  $\Delta E$  units detected by a spectrophotometer.

Anexos disponíveis:

[pdf](#) 2.24 MB | Bolsa: poster ou comunicação oral