**P17**

The Reliability and Accuracy of Shade Matching Device
Nur Syuhadaa Amir Hamzah, Nurul Akma Mohamad, Azwatiee Abd Aziz
(Faculty of Dentistry, University of Malaya, Kuala Lumpur)

**Purpose of the study:** The aim of this study was to evaluate the reliability and accuracy of a newly developed digital shade guide.

**Materials and Method:** Using the shade-matching device (ShadeStar®), color matching was done on three sets of Vitapan 3D-Master shade guide. ShadeStar® was placed on a camera tripod which acted as a positioning jig to stabilize it during measurement. It was positioned 90 degrees to the shade tab and each of the shade tab was placed in a red playing dough to simulate the shade of the gingiva and identical colour shade tabs were placed on both sides to simulate adjacent teeth. A lamp with 18w (Philips,Netherland) was used to help in creating similar light intensity to the polyclinics. For reliability assessment, each shade tab from Vitapan 3D-Master was measured for ten non-consecutive times. For accuracy assessment, each shade tab from three shade guides was measured once by ShadeStar®. Data collected was analyzed using Microsoft Excel 2007 to calculate average reliability and accuracy of the device.

**Results:** Reliability of ShadeStar® was 80.4% and accuracy of ShadeStar® was 30.4%.

**Conclusion:** In this in-vitro study, ShadeStar® may be a useful tool to be used as an additional device apart from visual shade taking. However, further clinical studies need to be carried out in order to have a better prediction of its performance in actual clinical settings.

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**P18**

A Study of Mitotic Figures in Oral Epithelial Dysplasia and Oral Squamous Cell Carcinoma using Different Stains
Muhammad Syafiq Alauddin, Muhammad Khiratti Mat Zainal, Zuraiza Mohamad Zaini
(Faculty of Dentistry, University of Malaya, Kuala Lumpur)

**Purpose of study:** The objective of this study was to compare the number of mitotic figures in 3 different staining (Feulgen, Crystal Violet and H&E) and to compare the number of mitotic figures present in various grades of epithelial dysplasia and oral squamous cell carcinoma.

**Materials & Methods:** A total of 78 paraffin embedded sections, with mild dysplasia (19 samples), moderate dysplasia (16 samples), severe dysplasia (10 samples), carcinoma in situ (14 samples) and oral squamous cell carcinoma (19 samples) were obtained from Diagnostic Oral Pathology and Research Laboratory. All specimens were cut into 3 sections of 5µm each and were stained with Feulgen, Crystal Violet and H&E. The stained sections were evaluated separately and scored for the mean average of mitotic figures present under the light microscope Nikon ECLIPSE E400. The statistical analysis was done using One Way ANOVA.

**Results:** There were significant differences in mean number of mitotic figures between Feulgen and Crystal Violet ($p=0.000$) and H&E and Crystal Violet ($p=0.010$). There were significant differences in mean number mitotic figures count between different grades of oral epithelial dysplasia and oral squamous cell carcinoma ($p=0.000$). However, there was no significant difference in mean number of mitotic figures between carcinoma in situ and oral squamous cell carcinoma ($p=0.333$).

**Conclusion:** Feulgen and H&E stains provided definitive advantages over the Crystal Violet stain sections in selectively staining the mitotic figures. There were significantly increased in mean mitotic count with increasing severity of oral epithelial dysplasia and oral squamous cell carcinoma.