

# EFFECTS OF FLUORIDE DENTIFRICE ON REMINERALIZATION OF DEMINERALIZED PRIMARY ENAMEL

Praphasri Rirattanapong<sup>1</sup>, Apiwan Smutkeeree<sup>1</sup>, Rudee Surarit<sup>2</sup>,  
Chavenkiat Saendsirinavin<sup>3</sup> and Vilasinee Kunanantsak<sup>4</sup>

<sup>1</sup>Department of Pediatric Dentistry, <sup>2</sup>Department of Physiology and Biochemistry,  
<sup>3</sup>Research Service Center, Faculty of Dentistry, Mahidol University, Bangkok;  
<sup>4</sup>Dental Department, Mae Chan Hospital, Chiang Rai, Thailand

**Abstract.** This study was performed to compare the remineralizing effects of various concentrations of fluoride containing dentifrices against artificial demineralization of primary enamel. One hundred twenty primary incisors were partly covered with a nail varnish, leaving a 1x1 mm window, then placed in demineralizing solution for 96 hours to produce artificial carious lesions 60-100  $\mu$ m in depth. They were assigned to 8 groups (A to H;  $n=15$ ). Groups A-D were exposed to a half pea-sized portion of dentifrice (0.16 g) and groups E-H were exposed to a pea-sized portion of dentifrice (0.32 g), both groups with fluoride concentrations of 0, 250, 500 and 1,000 ppm. The pH-cycling method was carried out for 7 days, then the teeth were cut through the lesions and examined under a polarized light microscope; photographs were taken and analyzed. Lesion depth was measured using a computerized method using the Image-Pro<sup>®</sup> Plus Program. The results were analyzed using the One way ANOVA and LSD tests. The mean lesion depth in the 2 non-fluoridated control groups (A and E) were significantly deeper than in the fluoridated groups. There were no differences found between the half pea-sized and pea-sized dentifrice.

**Key words:** demineralization, dentifrice, fluoride, remineralization

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Correspondence: Praphasri Rirattanapong, Department of Pediatric Dentistry, Faculty of Dentistry, Mahidol University, 6 Yothi Street, Bangkok 10400, Thailand.

Tel: 66 (0) 2203 6450

E-mail: dtppt@mahidol.ac.th