Fluoride Uptake in vivo by Deciduous Enamel of Children from Neutral Fluoride and APF Mouthrinses

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Abstract. 173 exfoliated teeth were collected from three groups of children, age 9-10 years, who for three school years used daily one of three mouthrinses consisting of (a) 200 ppm F, 0.1 M phosphate at pH 4.0, (b) 200 ppm F at pH 7.0, or (c) a placebo rinse. The average F concentration at 5 µm in 58 placebo treated teeth was 595 ppm. After approximately 190 rinses, the average F concentration at 5 µm for the pH 7 and pH 4 fluoride rinse groups was 616 and 677 ppm, respectively. The difference between the control and pH 4 rinse was statistically significant. After an initial uptake, further increases in the fluoride concentration of deciduous enamel with continued rinsing was not observed.

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