

Efek Aplikasi *Sodium Fluoride 5% + Tri Calcium Phosphate* terhadap Mikroporositas Permukaan Enamel Gigi Insisive Sulung

(In Vitro)

ABSTRAK

Latar belakang: *Sodium Fluoride 5%+Tri Calcium Phosphate* adalah salah satu bahan *topical fluoride* yang dapat menghambat terjadinya demineralisasi dan meningkatkan remineralisasi. Bahan ini aplikasinya harus kontak dengan saliva agar ion-ion kalsium, fosfat dan fluoride tersebut aktif. **Tujuan:** Untuk meneliti efek aplikasi bahan *Sodium Fluoride 5%+Tri Calcium Phosphate* terhadap mikroporositas permukaan enamel gigi insisif sulung setelah demineralisasi. **Metode:** Empat mahkota gigi insisif sulung bawah dipotong secara vertikal, kemudian dibagi menjadi dua kelompok. Kelompok pertama, empat mahkota gigi tersebut dimasukkan ke dalam saliva buatan. Kelompok kedua dilakukan aplikasi bahan *Sodium Fluoride 5%+Tri Calcium Phosphate* pada bagian enamel gigi lalu dimasukkan ke dalam saliva buatan. Setelah 24 jam, kedua sampel dimasukkan ke dalam larutan demineralisasi (asam asetat 1M) 5 ml selama 3 hari. Setelah di inkubasi, sampel gigi dianalisa menggunakan *Scanning Electron Microscope* (Hitachi, TM 3000, Jepang). **Hasil:** Gigi insisif sulung yang diberi perlakuan bahan *Sodium Fluoride 5%+Tri Calcium Phosphate* didapatkan gambaran porus yang sedikit daripada kelompok kontrol. **Simpulan:** Pengulasan bahan *Sodium Fluoride 5%+Tri Calcium Phosphate* mengurangi mikroporositas pada gigi sulung.

Kata kunci: *Sodium fluoride, Tri Calcium Phosphate*, Enamel, gigi sulung.

The Effect of Application of *Sodium Fluoride 5% + Tri Calcium Phosphate* on Enamel Surface Microporosity of Primary Insisive

(In Vitro)

ABSTRACT

Background: *Sodium fluoride 5%+Tri Calcium Phosphate*, is one of the ingredients of topical fluoride, can inhibit the demineralization and enhance remineralization. It's application should be contacted with saliva for calcium, phosphate and fluoride activation. **Objective:** To determine the effects of application of *sodium fluoride 5% + Tri Calcium Phosphate* on enamel surface microporosity of primary insisive after demineralization. **Methods:** Four crown primary insisive teeth were cut vertically, then divided into two groups. The first group, four dental crown were put in artificial saliva. The second group, *Sodium fluoride 5%+Tri Calcium Phosphate* was applied in the enamel of the teeth and put it in artificial saliva. After 24 hours incubation, the samples were immersed into a solution of demineralization (1M acetic acid) 5 ml for 3 days. After incubation, the samples were analyzed using a Scanning Electron Microscope (Hitachi, TM 3000, Japan). **Results:** The primary insisive teeth were treated *Sodium fluoride 5%+Tri Calcium Phosphate* showed more porosity than the control group. **Conclusion:** The study revealed that the application of *Sodium fluoride 5%+Tri Calcium Phosphate* on the enamel primary teeth could decreased the microporosity.

Key words: *Sodium fluoride, Tri Calcium Phosphate, Enamel, Primary teeth.*