

## Pengaruh penyikatan pasta gigi dengan kandungan charcoal terhadap perubahan warna SIKMR yang mengalami diskolorasi = The effect of charcoal toothpaste brushing on color change of discolored resin modified glass ionomer cement

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### Abstrak

Tujuan: Penelitian bertujuan untuk mengevaluasi pengaruh penyikatan pasta gigi dengan kandungan charcoal terhadap perubahan warna SIKMR yang mengalami diskolorasi akibat larutan kopi. Metode penelitian: Dua puluh empat spesimen Fuji II LC warna A3 berbentuk silinder (diameter 6 mm dan tebal 2 mm) dipolimerisasi menggunakan LEDMAX-Hilux selama 20 detik dengan iradiansi 800 mW/cm<sup>2</sup>. Spesimen direndam dalam akuades (37°C) selama 24 jam dan diukur warna awalnya dengan Colorimeter 3nh, NH 310. Spesimen direndam dalam larutan kopi (37°C) selama 7 hari, dibersihkan dengan ultrasonic cleaner, lalu diukur perubahan warnanya. Spesimen dibagi menjadi 3 kelompok (n=8) dengan penyikatan akuades, pasta gigi Colgate Total Professional CleanR, dan pasta gigi Colgate Total Charcoal Deep CleanR selama 4 menit 40 detik dengan beban 150 gram menggunakan sikat gigi elektrik Oral-B DB4010. Spesimen kemudian dibersihkan dengan ultrasonic cleaner dan diuji perubahan warnanya. Data dianalisis menggunakan uji One-Way ANOVA untuk menilai perbedaan perubahan warna antarkelompok penyikatan. Hasil: Hasil menunjukkan SIKMR dengan penyikatan pasta gigi tanpa charcoal memiliki perubahan warna yang signifikan antara kelompok penyikatan akuades dan pasta gigi charcoal (p<0,5). Peningkatan perubahan warna paling tinggi terjadi pada penyikatan dengan pasta gigi tanpa charcoal. Kesimpulan: Disimpulkan bahwa SIKMR setelah penyikatan menggunakan pasta gigi yang mengandung charcoal memiliki perubahan warna seperti kondisi penyikatan dengan akuades dan perubahan warna lebih rendah dibandingkan pasta gigi tanpa charcoal.

.....Objective: This study aims to evaluate the effect of brushing toothpaste with charcoal on discolored RMGIC due to coffee solution. Research method: Twenty four specimens of A3 color Fuji II LC cylindrical (6 mm diameter and 2 mm thick) polymerized using LEDMAX-Hilux for 20 seconds with an irradiance of 800 mW/cm<sup>2</sup>. The specimens were immersed in distilled water (37°C) for 24 hours and their initial color was measured with Colorimeter 3nh, NH 310. The specimens were immersed in coffee solution (37°C) for 7 days, cleaned with an ultrasonic cleaner, then the color change was measured. The specimens were divided into 3 groups (n=8) by brushing with distilled water, Colgate Total Professional CleanR, and Colgate Total Charcoal Deep CleanR toothpaste for 4 minutes 40 seconds with a load of 150 grams using an Oral-B DB4010 electric toothbrush. The specimens were then cleaned and measured for color changes. Data were analyzed using the One-Way ANOVA test to assess differences in color change between brushing groups. Results: The results showed that RMGIC that brushed by toothpaste without charcoal had a significant color change between RMGIC that brushed by aquades and toothpaste with charcoal (p<0.5). The highest increase color change occurred in brushing with toothpaste without charcoal. Conclusion: It is concluded that RMGIC after brushing using toothpaste containing charcoal has a color change such as brushing with aquades, and the

color change occurred was lower than toothpaste without charcoal.