EFFECTIVENESS OF USING RED DRAGON FRUIT AS AN ALTERNATIVE TOOTH COLORING AGENT TO DETECT DENTAL PLAQUE

Riri Prissilia Tabuan*, Eldarita, Siti Hidayati
Department of Dental Health, Yogyakarta Ministry of Health Polytechnic,
Jl. Kyai Mojo, No. 54 Bener, Tegalrejo, Yogyakarta
Email: ririptabuan@gmail.com

ABSTRACT

Background: Oral health problems, especially caries and periodontal disease, can be caused by poor dental cleaning, leading to plaque accumulation. Materials that can help see dental plaque are disclosing solutions. Disclosing solution is the most commonly used material.
Objective: To determine the effectiveness of applying red dragon fruit extract (Hylocereus Polyrhizus), red dragon fruit juice and disclosing solution as an alternative tooth coloring material.
Methods: The type of research used is Quasi Experiment. The population of this study were students of class XI MIPA. The sample was 45 respondents with purposive sampling technique.
Results: Total contrast color score of red dragon fruit juice was higher 86.7% while red dragon fruit extract was 40%, total pleasant aroma score of red dragon fruit juice was higher 100% while red dragon fruit extract was 13.3%, total pleasant taste score of red dragon fruit juice was higher 100% while red dragon fruit extract was 13.3% and total stickiness score of disclosing solution was higher 73.3% than red dragon fruit juice 6.7%.
Conclusion: The ability of red dragon fruit extract (Hylocereus Polyrhizus) in terms of coloring plaque cannot be used as a tooth coloring material while red dragon fruit juice can be used as an alternative tooth coloring material because it is much safer and more comfortable to use, does not cause allergic reactions and is not a carcinogen, besides that it also tastes good, but it is still lacking in terms of duration of color intensity in the oral cavity compared to chemical-based disclosing solutions.
Keywords: Red dragon fruit, Red dragon fruit juice, Disclosing solution, Dental coloring material

EFEKTIVITAS PENGGUNAAN BUAH NAGA MERAH SEBAGAI ALTERNATIF BAHAN PEWARNA GIGI UNTUK MENDETEKSI PLAK GIGI

Riri Prissilia Tabuan*, Eldarita, Siti Hidayati
Jurusan Kesehatan Gigi Poltekkes Kemenkes Yogyakarta,
Jl. Kyai Mojo, No.54 Bener, Tegalrejo, Yogyakarta
Email: ririptabuan@gmail.com

ABSTRAK

Latar Belakang: Masalah kesehatan gigi dan mulut terutama karies dan penyakit periodontal dapat disebabkan karena pembersihan gigi yang kurang baik sehingga menyebabkan terjadinya akumulasi plak. Bahan yang dapat membantu melihat plak gigi yaitu *disclosing solution*. *Disclosing solution* adalah bahan yang paling umum digunakan.
Tujuan: Diketahuinya efektivitas pengolesan ekstrak buah naga merah *(Hylocereus Polyrhizus)*, sari buah naga merah dan *disclosing solution* sebagai alternatif bahan pewarna gigi
Metode: Jenis penelitian yang digunakan adalah *Quasi Experiment*. Populasi penelitian ini siswa kelas XI MIPA. Sampel sebanyak 45 responden dengan teknik *purposive sampling*.
Hasil: Jumlah skor warna kontras sari buah naga merah lebih tinggi 86.7% sedangkan ekstrak buah naga merah 40%, jumlah skor aroma sedap sari buah naga merah lebih tinggi 100% sedangkan ekstrak buah naga merah 13.3%, jumlah skor rasa enak sari buah naga merah lebih tinggi 100% sedangkan ekstrak buah naga merah 13.3% dan jumlah skor daya lekat *disclosing solution* lebih tinggi 73.3% dibandingkan sari buah naga merah 6.7%.
Kesimpulan: Kemampuan ekstrak buah naga merah *(Hylocereus Polyrhizus)* dalam hal mewarnai plak belum bisa dijadikan bahan pewarna gigi sedangkan sari buah naga merah bisa digunakan sebagai alternatif bahan pewarna gigi karena jauh lebih aman dan nyaman digunakan, tidak menimbulkan reaksi alergi dan bukan bahan karsinogen, selain itu rasanya juga enak, namun masih kurang dalam hal durasi intensitas warna di dalam rongga mulut dibandingkan dengan *disclosing solution* berbahan kimia.
Kata Kunci: Buah naga merah, Sari buah naga merah, *Disclosing solution*, Bahan pewarna gigi