

THE DIFFERENCE BETWEEN APPLYING BEETROOT EXTRACT AND *DISCLOSING SOLUTION* AS PLAQUE COLORING SUBSTANCE ON STUDENTS OF DENTAL NURSING DEPARTMENT OF POLTEKKES KEMENKES YOGYAKARTA

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ABSTRACT

Background: Dental plaque can be seen by *disclosing solution*. *Disclosing solution* contains chemical dyes and other dyes which has weaknesses in their utilization so that they can be the basis for the development of natural plaque coloring substance derived from beetroot.

Objective: To discover the difference between applying the beetroot extract and the *disclosing solution* as plaque coloring substance on the students of Dental Nursing Department of Poltekkes Kemenkes Yogyakarta.

Method: This is a Quasi Experimental research. The population was the students of Dental Nursing Department of Poltekkes Kemenkes Yogyakarta of 2017. Purposive Sampling was used for collecting the samples. The data was collected by applying the beetroot extract and the *disclosing solution*, using drop pipette. The variables being researched were: color, scent, taste, and other mouth structure colors. This research was conducted in February to April 2020. *Chi Square* was used for the data analyzing.

Results: There were differences in the color, scent, taste, and other mouth structure colors, based on applying the beetroot extract and the *disclosing solution*. The contrast color score of *disclosing solution* was higher, which was 90.3%, while the beetroot extract was 87.1%. The score for savory scent of *disclosing solution* was higher, at 74.2%; while for the beetroot extract was 58.1%. The score for good taste of beetroot extract was higher, at 80.6%, while for the *disclosing solution* was 6.5% and the score for not changing the other mouth structure color of the beetroot extract was higher, at 83.9%; while for the *disclosing solution* was 19.4%.

Conclusion: The beetroot extract and the *disclosing solutions* as plaque coloring substances have differences, that the beetroot extract has a good taste and does not change the other mouth structure colors, whereas the *disclosing solution* has a contrast color and savory scent.

Keyword: *Disclosing Solution*, Beetroot, Plaque Coloring, Students

PERBEDAAN PENGOLESAN EKSTRAK BUAH BIT DAN *DISCLOSING SOLUTION* SEBAGAI BAHAN PEWARNA PLAK PADA MAHASISWA JURUSAN KEPERAWATAN GIGI POLTEKKES KEMENKES YOGYAKARTA

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ABSTRAK

Latar Belakang: Plak gigi dapat dilihat dengan *disclosing solution*. *Disclosing solution* mengandung pewarna kimia dan pewarna lainnya yang memiliki kelemahan-kelemahan pada penggunaannya sehingga dapat menjadi dasar pengembangan bahan pewarna plak alami yang berasal dari buah bit.

Tujuan: Diketahui perbedaan pengolesan ekstrak buah bit dan *disclosing solution* sebagai bahan pewarna plak pada mahasiswa Jurusan Keperawatan Gigi Poltekkes Kemenkes Yogyakarta.

Metode: Jenis penelitian yaitu *Quasi Experiment*. Populasi penelitian yaitu mahasiswa Jurusan Keperawatan Gigi Poltekkes Kemenkes Yogyakarta angkatan 2017. Teknik pengambilan sampel yaitu *purposive sampling*. Data dikumpulkan dengan mengoleskan ekstrak buah bit dan *disclosing solution* menggunakan pipet tetes. Variabel yang diteliti yaitu warna, aroma, rasa dan warna struktur mulut yang lain. Penelitian dilaksanakan pada Februari-April 2020. Analisis data menggunakan uji *chi square*.

Hasil: Ada perbedaan warna, aroma, rasa dan warna struktur mulut yang lain dari pengolesan ekstrak buah bit dan *disclosing solution*. Jumlah skor warna kontras *disclosing solution* lebih tinggi, yaitu 90,3% sedangkan ekstrak buah bit 87,1%, jumlah skor aroma sedap *disclosing solution* lebih tinggi, yaitu 74,2% sedangkan ekstrak buah bit 58,1%, jumlah skor rasa enak ekstrak buah bit lebih tinggi, yaitu 80,6% sedangkan *disclosing solution* 6,5% dan jumlah skor tidak mengubah warna struktur mulut yang lain ekstrak buah bit lebih tinggi, yaitu 83,9% sedangkan *disclosing solution* 19,4 %.

Kesimpulan: Ekstrak buah bit dan *disclosing solution* sebagai bahan pewarna plak memiliki perbedaan yaitu ekstrak buah bit rasanya enak dan tidak mengubah warna struktur mulut yang lain sedangkan *disclosing solution* warnanya kontras dan aromanya sedap.

Kata kunci: *Disclosing Solution*, Buah Bit, Pewarna Plak, Mahasiswa