ABSTRAK

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Program Studi	:	Kedokteran Gigi
Judul	:	Pengaruh Suhu Penyajian Teh Hitam (*Camellia sinensis*) terhadap Kekerasan Resin Komposit Nanohibrid
Pembimbing	:	dr. Muflihatul Muniroh, M.Si.Med, Ph.D drg. Nadia Hardini, Sp.KG

Tujuan: Mengetahui pengaruh penyajian teh hitam (*Camellia sinensis*) dengan suhu 5 ± 1° C dan 50 ± 1° C terhadap kekerasan resin komposit nanohibrid. **Metode:** Jenis penelitian ini adalah kuasi eksperimental laboratorium dengan *post test only group design*. Sebanyak 30 sampel resin komposit nanohibrid dibuat dan dilakukan *finishing-polishing* menggunakan bur *sof-lex disc.* Sampel dibagi ke dalam 3 kelompok; kelompok kontrol, kelompok teh hitam bersuhu 5 ± 1° C, dan kelompok teh hitam bersuhu 50 ± 1° C. Perendaman dilakukan sebanyak 56 siklus atau setara dengan 4 bulan pemakaian restorasi, dan dilakukan pengukuran kekerasan menggunakan *Vicker Hardness Tester.* Data dianalisis menggunakan uji *One Way Anova* dan dilanjutkan dengan uji *Post-Hoc LSD.* **Hasil:** Uji *One Way Anova* menunjukkan perbedaan yang bermakna dengan nilai p=0,000 pada kekerasan resin komposit nanohibrid setelah dilakukan perendaman dalam akuades bersuhu 25 ± 1° C, teh hitam bersuhu 5 ± 1° C, dan teh hitam bersuhu 50 ± 1° C. Pada uji *Post-Hoc LSD* juga menunjukkan terdapat perbedaan yang bermakna dengan nilai p<0,05 antar kelompok. **Kesimpulan:** Terdapat pengaruh suhu penyajian teh hitam terhadap kekerasan resin komposit nanohibrid.

Kata kunci: kekerasan resin komposit, nanohibrid, suhu penyajian, teh hitam.

ABSTRACT

Name	:	Garizqi Rindang Handayani
Study Program	:	Dentistry
Title	:	The Effect of Serving Temperature of Black Tea (*Camellia sinensis*) on the Hardness of Nanohybrid Composite Resin
Counsellor	:	dr. Muflihatul Muniroh, M.Si.Med, Ph.D drg. Nadia Hardini, Sp.KG

Objective: To determine the effect of serving black tea (*Camellia sinensis*) at temperatures of 5 ± 1° C and 50 ± 1° C on the hardness of nanohybrid composite resin. **Methods:** This study was a quasi-experimental laboratory research with a post-test only group design. A total of 30 samples of nanohybrid composite resin were prepared and received finishing-polishing using a sof-lex disc bur. The samples were divided into three groups; a control group, a group with black tea at 5 ± 1° C, and a group with black tea at 50 ± 1° C. Immersion was performed for 56 cycles, equivalent to 4 months of restoration use, and hardness measurements were conducted using a Vicker Hardness Tester. Data were analyzed using One Way ANOVA followed by Post-Hoc LSD testing. **Results:** The One Way ANOVA indicated significant differences with a p-value of 0.000 in the hardness of nanohybrid composite resin after immersion in distilled water at 25 ± 1° C, black tea at 5 ± 1° C, and black tea at 50 ± 1° C. The Post-Hoc LSD test also showed significant differences with a p-value <0.05 between groups. **Conclusion:** There is an effect of serving temperature of black tea on the hardness of nanohybrid composite resin.

Keywords: composite resin hardness, nanohybrid, serving temperature, black tea.