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Report on laboratory testing of Ease-it™

Resin composite: Enamel plus HFO UD3. The composite was placed in Ease-it™ for various periods of time prior to production of specimens for determination of degree of conversion or flexural strength and flexural modulus.

Degree of conversion: The resin composite was pressed into thin films between two transparent matrices, and light-cured for 20 s (XL 3000, 3M ESPE; power density = 460 mW/cm^2). The films were stored in water at 37º C for 1 week. The films were analyzed by infrared spectroscopy and the degree of conversion calculated. Each experimental series consisted of five films. A mean value and standard deviation were computed for the five films in each of the seven series.

Flexural strength and flexural modulus: The resin composite specimens (2 mm x 2 mm x 20 mm) were produced by light-curing for 5 x 20 s on top and bottom surface, respectively, between transparent matrices and glass slabs. The specimens were stored in water at 37º C for 1 week. The specimens were subjected to 3-point bending according to ISO 4049 following grinding and recording of specimen dimensions. Each experimental series consisted of six specimens. A mean value and standard deviation were computed for the six specimens in each of the four series.

Results

Time in Ease-it™	Degree of conversion (%)	Flexural strength (MPa)	Flexural modulus (MPa)
0	51.3 ± 0.9	110 ± 9	9562 ± 569
3 minutes	49.6 ± 1.3	119 ± 12	9574 ± 631
30 minutes	52.0 ± 1.7	-	-
24 hours	51.3 ± 1.0	107 ± 15	9076 ± 422
1 week	52.0 ± 1.1	-	-
1 month	52.4 ± 1.2	-	-
3 minutes in, 3 minutes out x 5	51.4 ± 1.1	117 ± 9	9476 ± 411

No statistically significant differences were found between the seven mean values of degree of conversion, between the four mean values of flexural strength, nor between the four mean values of flexural modulus ($P > 0.05$).

Conclusion: Storage in Ease-it™ had no effect on degree of conversion, flexural strength, and flexural modulus of the resin composite tested.