

organic substance by oxidation. It is considered that ·OH which is the most reactive oxygen species in conjunction with amino acid radical may play an important role of softening the carious dentin.

## ◆ P11

### Effects of Dipping in Tooth Reserving Solution on Bond Strength of 4-META/MMA-TBB Dentin Bonding System.

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The purpose of this investigation was to determine the effect of dipping in tooth reserving solution on bond strength of 4-META/MMA-TBB dentin bonding system. The flattened dentin surface of bovine lower incisor was used for this investigation. The tooth were dipped in the tooth reserving solution (ViaSpan; Du Pont Pharmatical / Teeth Server "NEO"; Neo Dental Chemical products CO/ LTD, Japan/ Saline, Fuso Chemical CO, LTD, Japan) for 30 min. These tooth were rinsed with water syringe or not rinsed, and used to measure the tensile bond strength. The control was not dipped in the tooth reserving solution. Then, the 4-META/MMA-TBB dentin bonding system was applied. Tensile bond strength was measured at cross head speed 0.5mm/min in Instron. The data was statically analyzed by one way ANOVA, and Fisher's PLSD ( $p > 0.05$ ). It was suggested that the rinsing of the tooth after dipping in tooth reserving solution, especially in ViaSpan, was effective on tensile bond strength.

	19.0	19.1	17.9	20.4	14.5	16.5
Min. Value	15.2	7.3	11.4	7.7	10.3	8.3
Coefficient of variation	0.15	0.30	0.25	0.44	0.21	0.32

significant difference MPa, N=7

## ◆ P12

### Microleakage of Class V cavity restored with flowable and microfill composite resins after load cycling.

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Flowable and microfill composites have been recommended for Class V cavities. But the use of flowable composites is controversial because of its physical properties. Objectives: The aim of this study was to evaluate the microleakage of 6 composites (2 hybrids, 2 microfills, and 2 flowable composites) with/without load cycling. Methods: Notch-shaped Class V cavities were prepared on buccal surfaces of 180 extracted human upper premolars and then divided into non-load cycling group(G1) and load cycling group(G2). All preparations were restored with 6 composites shown in the Table (n=15). Samples of G2 were subjected to occlusal load (100N/50,000cycles; MTS 858, MTS Systems Corp., Minneapolis, Minn.). All samples were immersed in 2% methylene blue for 24 hours, and sectioned. Enamel and dentin margins were analyzed on a scale of 0(no leakage) to 3(3/3 of wall). Kruskal-Wallis One way analysis and Mann-Whitney U-test were used to analyze the results. Results: There was no significant difference among 6 composites in both enamel and dentin margins of G1 and G2. Load cycling did affect dentin margins restored with Revolution only ( $p < 0.05$ ).

	Z-250	Denfil	Heliomolar RO	Micronew	AeliteFlo	Revolution
G1/E	0.07 (0.26)	0	0	0	0.13 (0.35)	0
G1/D	1.27 (1.03)	1.33 (0.82)	1.27 (0.80)	1.33 (0.62)	1.4 (0.99)	1.47 (0.74)
G2/E	0.33 (0.82)	0.6 (0.83)	0.27 (0.80)	0.07 (0.26)	0.07 (0.26)	0.07 (0.26)
G2/D	1.87 (0.99)	2 (1.13)	1.73 (1.03)	1.73 (1.10)	1.73 (0.88)	2.4 (0.83)