

Effect of immersion time in artificial saliva on flexural strength of provisional crown and bridge materials: light zpolymerization versus autopolymerization system

Tetelepta, Marzia Magdalena, author

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Abstrak

Objective: The aim of this study was to investigate the effect of immersion time in artificial saliva on the flexural strength of provisional crown and bridge (p-c&b) materials.

Materials and Methods: Two types of p-c&b materials were used in this study: Light polymerized p-c&b material (Revotek LC) and autopolymerized p-c&b material (PerfecTemp II). A total of 100 specimens were fabricated and measured according to ISO 4049/2000. A stainless steel mould was used to prepare 2mm x 2mm x 25mm bar shaped specimens. All materials were dispensed and manipulated according to the manufacturers' instructions. The specimens were divided into 5 groups (n=10). Each specimen of the first group was measured immediately after preparation. The second, third, fourth and fifth groups were immersed in artificial saliva at 37°C in an incubator for 1 hour, 1 day, 7 days, 14 days, respectively. Flexural strength was tested by Universal Mechanical Testing Machine Shimadzu in a 3-point bending test. The Repeated ANOVA and Post-Hoc Bonferroni test were used to compare the continuous variables between the groups.

Result: The results showed flexural strength of Revotek LC were higher than PerfecTemp II achieved the highest value in 7 days.

Conclusion: Flexural strength of p-c&b materials were influenced by immersion time in artificial saliva and the type of p-c&b materials.