ABSTRACT

Caries is one of the most common occur dental diseases with symptoms characterized by email and dentin demineralization caused by the activity of microorganisms in a carbohydrate that can be fermented.. Fissure sealant is preventive measures of caries which is applied to the pit and fissure of the back teeth. One way to evaluate the quality of a restorative material is the compressive strength test. The compressive strength is an important characteristic of a material, as most mastication in the form of compressive strength. The purpose of this study is to know the difference between the compressive strength of the material fissure sealant resin-based filled and resin-based unfilled.

Thirty-two specimens were divided into two groups (n = 16). The first group uses a fissure sealant resin-based material filled, while the second group uses fissure sealant material resin-based unfilled, then polymerization with twice light curing for 20 seconds. Compressive strength test was did by use a Universal Testing Machine, the unit results in Mpa.

Data was analyzed using Man Whitney test. Results of statistical test was 0.000 ($p < 0.05$), from this results can conclude that there are differences between the compressive strength of fissure sealant material resin-based filled with resin-based unfilled. The results showed a mean compressive strength of fissure sealant resin-based filled is greater than resin-based unfilled, which fissure sealant resin-based filled 0.315 MPa whereas the fissure sealant resin-based unfilled 0.246 MPa.

Keywords: Dental Caries, Fissure Sealant resin-based Filled, Fissure Sealant resin-based Unfilled, Compressive strength