INTRODUCTION

Orthodontic treatment is aimed at correction malocclusion in order to obtain healthy occlusion, both in its functional and aesthetical aspect, satisfaction and stability.

Removable orthodontic appliance consists of several parts, baseplate made of acrylic and attached on the palate or bottom of the lower jaw. Active component made os tanless srel wire function to move the teeth into desired place. Retention is used to bear the component so as not removed form the mouth and anchorage.

Many kinds of wire bends that can made as the basis of retention clasps, labial or, or pear-ties in the manufacture of orthodontic removable orthodontic appliance. Of the many variations of shape it, bend can be grouped into three groups: a) basic groups with retention resembles the letter L to the end of the rectangle, b) basic groups with retention of the O-like shape with circular ends of wire bends, c) basic groups with retention of bend wire zig-zag or meander.

In orthodontic clinic, a wire tag commonly used is L-shaped, however, determining its length is merely based on the tasted of operators, L-shaped tags allow them more easily use.

The orthodontic materials above not only consider the aesthetic value but also have gooc strength.

The strenght of a material is defined as the average strength capacity in which a material show plastic deformity in certain amount or the presence of fracture of certain material with the same size and shape.

MATERIAL and METHOD

From the analysis of test for normality (Kolmogorov Smirnov) significance of each value is 0.710 for group I, group II and group III of 0.933 at 0.886. Significance value of each group is greater than 0.05 (p > 0.05). This indicates that the data from each group spread out according to the normal distribution.

From the analysis of homogeneity test (Levene) shows for all the groups obtained significance value of 0.975 which is greater than 0.05 (p > 0.05), so can be concluded that these data are homogeneous.

DISCUSSION

The results of analysis of variance by using One way ANOVA F calculated values obtained at 4.602 with a significance value of 0.023. Significance value of 0.023 is smaller than the values of p (0.05). It shows among the three treatment groups was there a significant difference (significance) of compressive strength.

According Wayanandhika (2010) in his research, the form of a straight wire in the plate when the compressive strength tends to get split plate along the straight wire is compared with the wire that made T- type winding or coiled. It can be seen on the sample results of mean measurements using force measurement machine press on acrylic plate was found that the wire bent at the letter L on the plate causes the plate width easily split into two parts along a straight wire that forms the foot of the letter L.

The length of wire in the acrylic plate can affect the durability difference plate against the compressive strength. The longer the wire inside the plate acrylic plate compressive strength will decrease due to the adhesion properties of acrylic resin with a metal is zero. Because of the metal in the plate will reduce the volume and thickness of the plate. In this study the length of wire in the acrylic plate affects the compressive strength. The length of wire in the acrylic plate that gives the greatest strength is the length of wire with a size of 1.0 mm and a length of wire in most small acrylic plate lekanya strength is the length of wire with a size of 15 mm.

REFERENCE