

INHIBITORY TEST OF AJWA DATE SEED EXTRACT (*PHOENIX DACTYLIFERA LINN*) ON THE GROWTH OF *STREPTOCOCCUS MUTANS* BACTERIA

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BACKGROUND :

A common issue among users of dentures is the inadequate cleaning and maintenance of the dentures, which leads to plaque buildup and an increase in the growth of *Streptococcus mutans* bacteria on the dentures. The use of herbal materials in the field of dentistry has been widely researched. One of them is the Ajwa date fruit (*Phoenix Dactylifera* Linn), which is already known to contain various essential nutrients. In addition to being consumed, Ajwa date seeds can also be utilized as a medicinal ingredient due to their antibacterial and antifungal properties.

METHOD :

The type of research conducted is a experimental laboratory with a *Posttest Only Design*. The data from this research is processed and then analyzed using the Shapiro-Wilk test method ($P\text{-Value} > 0.05$).

RESULTS & DISCUSSION :

The results of the normality test showed that the p-value was greater than 0.05 for the treatments at concentrations of 0.4%, 0.8%, 1.6%, 25%, and 50%, indicating a normal distribution. In contrast, the treatments at concentrations of 3.25%, 6.5%, and 12.5% showed p-values less than 0.05, indicating that these concentrations did not have a normal distribution. The results of the homogeneity test showed a p-value of 0.000, which is less than 0.05 ($p\text{-value} < 0.05$), indicating that the data is not homogeneous; therefore, the comparison test used was the Kruskal Wallis test.

CONCLUSION :

The extract of Ajwa date seeds at a concentration of 0.4% has an inhibition power of 13.91 mm, and at a concentration of 50%, it has an inhibition power of 15.84 mm against the growth of *Streptococcus mutans* bacteria.

KEYWORDS : Denture hygiene, Ajwa date seed extract, *Streptococcus mutans*.