

**KARIOGENITAS SUSU FORMULA BERBASIS SUSU SAPI DAN SOYA  
BERDASARKAN PERTUMBUHAN KOLONI *Streptococcus mutans* DAN  
PH PLAK PADA ANAK USIA 1-2 TAHUN**

*CARIOGENITY OF COW'S MILK-BASED INFANT FORMULAS AND SOY-  
BASED INFANT FORMULAS BASED ON GROWTH OF *Streptococcus mutans*'  
COLONIES AND PLAQUE PH IN 1-2 YEARS OLD CHILDREN*

**ABSTRACT**

**Background:** Dental caries is one of the most prevalent infectious diseases and has a multifactorial etiology. Caries in children often called Early Childhood Caries (ECC) which affects about two and third of children under 3 years old. *Streptococcus mutans* is one of the main etiology in resulting caries. Carbohydrate, such as infant formulas, are believed to increase the number of *Streptococcus mutans* colonies and result in ECC. Infant formulas can be classified into two groups milk-based (cow's milk) and soy-based infant formulas. **Objective:** To find out which infant formulas that has more potential cariogenicity, whether the cow's milk based infant formulas or soy-based infant formulas based on growth of *Streptococcus mutans*' colonies and plaque pH in 1-2 years old children. **Material and methods:** This experiments use post-test only group design. Plaque sample is collected from 20 children that consume cow's milk-based infant formulas or soy-based infant formulas and is required all the criteria. Then, plaque sample is cultured on TYC agar. The number of *Streptococcus mutans*' colonies were counted on agar medium. Moreover, pH plaque is measured by pH indicator paper. Kolmogorof-Smirnov Test conducted to determine normal distribution, followed by Independent T-Test for further analyze. **Results:** There is no significant difference between cow's milk-based infant formulas and soy-based infant formulas,  $p=0,075$  ( $p>0,05$ ) for *Streptococcus mutans*' colonies and  $p= 0,673$  ( $p>0,05$ ) for plaque pH values. **Conclusion:** Both cow's milk based infant formulas and soy-based infant formulas have low cariogenicity as equal.

**Keywords:** Cariogenicity, Infant formulas, *Streptococcus mutans*, plaque pH.