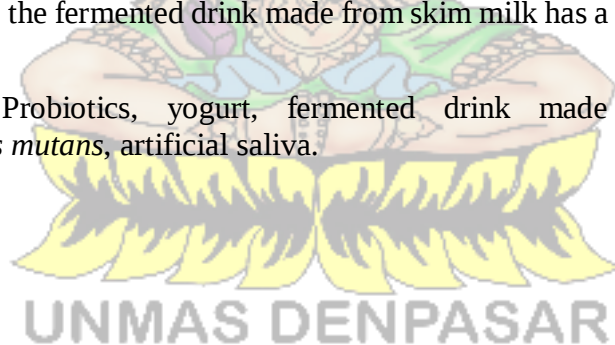


**BENEFITS OF PROBIOTIC YOGURT AND FERMENTED BEVERAGES
BASED ON SKIM MILK TO DECREASE THE NUMBER OF
Streptococcus mutans BACTERIA IN CHILD DENTAL CARIES
ABSTRACT**

According to *World Health Organization* survey data, dental caries remains a major oral health problem in most industrialized countries, affecting 60-90% of school children and most adults. *Streptococcus mutans* is considered as one of the most virulent caries-producing microorganisms because it can colonize and initiate plaque formation on the tooth surface through its ability to synthesize extracellular polysaccharides from sucrose. The most popular probiotic products for children are yogurt and fermented drinks made from skim milk. The purpose of this study was to determine the effect of yogurt probiotic drinks and skimmed milk-based fermented drinks on reducing the number of *Streptococcus mutans* bacteria in dental caries in children. This research is an in vitro laboratory experimental research with a post test only control group design with 4 minutes of soaking probiotic yogurt, 2 minutes of skimmed milk-based fermented drink and 4 minutes and 2 minutes of negative aquadest control in artificial saliva that has been prepared. interacted with *Streptococcus mutans*. The mean number of *Streptococcus mutans* bacteria after interaction with yogurt was 38.2 CFU/ml. The average number of *Streptococcus mutans* bacteria after interacting with fermented drinks made from skim milk was 13.8 CFU/ml. The results showed that probiotic yogurt drinks and fermented drinks made from skim milk could reduce the number of *Streptococcus mutans* bacteria. There is a difference in the number of decreases in *Streptococcus mutans* where the fermented drink made from skim milk has a greater decrease than yogurt.

Keywords: Probiotics, yogurt, fermented drink made from skim milk, *Streptococcus mutans*, artificial saliva.



**MANFAAT PROBIOTIK YOGURT DAN MINUMAN FERMENTASI
BERBAHAN DASAR SUSU SKIM TERHADAP PENURUNAN JUMLAH
BAKTERI *Streptococcus mutans* PADA KARIES GIGI ANAK**

ABSTRAK

Menurut data survei *World Health Organization*, karies gigi tetap menjadi masalah kesehatan mulut utama di sebagian besar negara industri, mempengaruhi 60-90% anak sekolah dan kebanyakan orang dewasa. *Streptococcus mutans* dianggap sebagai salah satu mikroorganisme penghasil karies yang paling virulen karena dapat berkoloni dan menginisiasi pembentukan plak pada permukaan gigi melalui kemampuannya mensintesis polisakarida ekstraseluler dari sukrosa. Produk probiotik yang paling digemari anak-anak adalah yogurt dan minuman fermentasi berbahan dasar susu skim. Tujuan penelitian ini untuk mengetahui pengaruh minuman probiotik yogurt dan minuman fermentasi berbahan dasar susu skim terhadap penurunan jumlah bakteri *Streptococcus mutans* pada karies gigi anak. Penelitian ini merupakan jenis penelitian eksperimental laboratoris secara in vitro dengan rancangan penelitian *post test only control group design* dengan perendaman probiotik yogurt 4 menit, minuman fermentasi berbahan dasar susu skim 2 menit dan kontrol negatif aquadest 4 menit dan 2 menit pada saliva buatan yang telah diinteraksikan dengan *Streptococcus mutans*. Rerata jumlah bakteri *Streptococcus mutans* setelah diinteraksikan pada yogurt adalah sebanyak 38,2 CFU/ml. Rerata jumlah bakteri *Streptococcus mutans* setelah diinteraksikan pada minuman fermentasi berbahan dasar susu skim adalah sebanyak 13,8 CFU/ml. Hasil penelitian menunjukkan bahwa minuman probiotik yogurt dan minuman fermentasi berbahan dasar susu skim dapat menurunkan jumlah bakteri *Streptococcus mutans*. Terdapat perbedaan jumlah penurunan *Streptococcus mutans* dimana minuman fermentasi berbahan dasar susu skim memiliki jumlah penurunan yang lebih besar daripada yogurt.

Kata kunci : Probiotik, yogurt, minuman fermentasi berbahan dasar susu skim, *Streptococcus mutans*, saliva buatan.

UNMAS DENPASAR