

## INTISARI

Menurut hasil Riset Kesehatan Dasar tahun 2018 menunjukkan bahwa prevalensi karies di Indonesia mencapai 88,8%. Salah satu faktor utama penyebab karies yaitu dari *host factor* (gigi dan saliva). Saliva memiliki peranan penting dalam menjaga keseimbangan dan mencapai homeostasis rongga mulut. Susu merupakan salah satu minuman yang dapat mempengaruhi *pH* saliva. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh susu sapi kemasan dengan pemanis/ bahan *aditive* dibandingkan dengan susu sapi murni kemasan tanpa penambahan pemanis/ bahan *aditive*. Terhadap derajat keasaman (*pH*) saliva tiruan.

Minuman susu sapi kemasan dengan pemanis/ bahan *aditive* dan susu sapi murni kemasan tanpa pemanis/ bahan *aditive* sebagai kelompok perlakuan sedangkan akuades steril sebagai kelompok kontrol. Masing-masing sampel sebanyak 2,5 ml dicampurkan dengan 2,5 ml suspensi bakteri *S. mutans* konsentrasi  $1,5 \times 10^8$  CFU/ml dan saliva tiruan sebanyak 2,5 ml. Dilakukan pengukuran *pH* saliva pada menit ke-5, 10 dan 30. Selanjutnya data dianalisis menggunakan uji statistik pada  $p < 0,05$ .

Hasil uji *Two Way ANOVA* menunjukkan bahwa terdapat perbedaan berdasarkan nilai *pH* antar durasi dan kelompok minuman susu sapi kemasan dengan pemanis/ bahan *aditive*, susu sapi murni kemasan tanpa penambahan pemanis/ bahan *aditive*, dan akuades steril. Hasil uji *Post-hoc Tukey* menunjukkan bahwa yang memiliki perbedaan yang signifikan hanya pada antar kelompok jenis minumannya saja. Kesimpulan dari penelitian ini adalah terdapat pengaruh susu sapi kemasan dengan pemanis/ bahan *aditive* dan susu sapi murni kemasan tanpa penambahan pemanis/ bahan *aditive* terhadap derajat (*pH*) saliva tiruan. Saliva tiruan setelah terpapar susu sapi kemasan dengan pemanis/ bahan *aditive* lebih rendah dibandingkan dengan susu sapi kemasan tanpa penambahan pemanis/ bahan *aditive*.

Kata kunci: Susu sapi kemasan, susu sapi murni, derajat keasaman (*pH*), saliva tiruan.

## ABSTRACT

According to the 2018 Basic Health Research, the prevalence of caries in Indonesia reached 88.8%. One of the main factors causing caries is host factors (teeth and saliva). Saliva plays a crucial role in maintaining balance and achieving homeostasis in the oral cavity. Milk is one beverage that can affect saliva pH. The purpose of this study was to determine the effect of packaged cow's milk with sweeteners/additives compared to packaged whole cow's milk without sweeteners/additives on the acidity (pH) of artificial saliva.

Packaged cow's milk with sweeteners/additives and whole cow's milk without sweeteners/additives served as the treatment group, while sterile distilled water served as the control group. A 2.5 ml sample of each sample was mixed with 2.5 ml of *S. mutans* bacterial suspension at a concentration of  $1.5 \times 10^8$  CFU/ml and 2.5 ml of artificial saliva. Saliva pH was measured at 5, 10, and 30 minutes. Data were then analyzed using statistical tests at  $p < 0.05$ .

The results of the Two-Way ANOVA test showed that there were differences based on pH values between the duration and groups of packaged cow's milk drinks with sweeteners/additives, pure packaged cow's milk without sweeteners/additives, and sterile distilled water. The results of the Tukey Post-hoc test showed that the only significant difference was between the types of drinks. The conclusion of this study is that packaged cow's milk with sweeteners/additives and pure packaged cow's milk without added sweeteners/additives have an effect on the pH of artificial saliva. Artificial saliva after exposure to packaged cow's milk with sweeteners/additives is lower than that of packaged cow's milk without added sweeteners/additives.

**Keywords:** Packaged cow's milk, pure cow's milk, acidity level (pH), artificial saliva