

**ANALISIS BIOKIMIA KARBOHIDRAT SUSU SEGAR, YAKULT
DAN KEFIR DENGAN HIGH PERFORMANCE
LIQUID CHROMATOGRAPHY**

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INTISARI

Kualitas susu segar berpengaruh terhadap produk susu olahan. Karbohidrat susu segar yang mengalami perubahan oleh aktivitas bakteri diarahkan pada kesukaan konsumen. Tujuan dari penelitian ini adalah untuk mengetahui karbohidrat-karbohidrat pada susu segar, yakult dan kefir dengan menggunakan *High Performance Liquid Chromatography* (HPLC). Susu segar dari peternakan rakyat Daerah Istimewa Yogyakarta dicampur dan diinokulasi dengan starter bakteri yakult dan kefir kemudian diinkubasi pada suhu 39°C selama 24 jam. Data waktu tambat dijadikan dasar penentuan ragam karbohidrat. Kadar karbohidrat yakult dan kefir dianalisis deskriptif terhadap periode waktu inkubasi. Hasil analisis menunjukkan karbohidrat yang muncul berdasarkan waktu tambat adalah laktosa (7,493 min), glukosa (8,072 min), galaktosa (10,164 min). Kadar karbohidrat pada susu segar adalah laktosa (4,14%), glukosa (1,41%), dan galaktosa (0,77%). Kadar karbohidrat pada yakult adalah laktosa (0,79-3,56%), glukosa (1,06-1,60%), galaktosa (0,57-2,24%), sedangkan pada kefir besarnya laktosa (1,83-4,02%), glukosa (0,90-2,15%), galaktosa (0,46-1,91%). Analisis korelasi regresi yakult signifikan pada laktosa, sedangkan pada kefir signifikan pada laktosa dan galaktosa. Kemampuan panelis untuk menanggapi yakult lebih tinggi daripada kefir.

Kata kunci: Susu, Karbohidrat, Analisis kromatografi, Kesukaan konsumen.

**BIOCHEMISTRY ANALYSIS OF CARBOHYDRATES IN RAW MILK,
YAKULT, AND KEFIR USING HIGH PERFORMANCE
LIQUID CHROMATOGRAPHY**

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ABSTRACT

Raw milk's quality affected to milk products. Raw milk's carbohydrate that changing by bacteria activity was directed to consumer's acceptability. The aim of this research was to know carbohydrates presents in raw milk, yakult, and kefir using High Performance Liquid Chromatography (HPLC). Raw milk from dairy farmers in Daerah Istimewa Yogyakarta was mixed and inoculated with bacteria of yakult and kefir starters then incubated at 39°C during 24 hour. Data of retention time was became the basis to detected carbohydrate manner. Concentration of carbohydrate in yakult and kefir were descriptively analyzed along the incubation periode. The result showed that carbohydrates appeared depended on their retention time were lactose (7,493 min), glucose (8,072 min), and galactose (10,164 min). the concentration of carbohydrates appeared in raw milk were lactose (4,14%), glucose (1,41%), and galactose (0,77%). The concentration of carbohydrates appeared in yakult were lactose (0,79-3,56%), glucose (1,06-1,60%), and galactose (0,57-2,24%), while in kefir were lactose (1,63-4,02%), glucose (0,90-2,15%), and galactose (0,46-1,41%). Regression correlation analysis on lactose of yakult was significant, while on kefir was at lactose and galactose. Panelist ability to appreciated yakult was higher than kefir.

Key word: Milk, Carbohydrates, Chromatography analysis, Consumer's acceptability.