

## Physiochemical and Organoleptic Features of Goat Milk Kefir Made of Different Kefir Grain Concentration on Controlled Fermentation

<b>Title</b>	Physiochemical and Organoleptic Features of Goat Milk Kefir Made of Different Kefir Grain Concentration on Controlled Fermentation
<b>Author Order</b>	of
<b>Accreditation</b>	
<b>Abstract</b>	<p>Abstract. Kefir contains bacteria and complex yeast in protein and polysaccharide matrix formed during anaerobic growth. Kefir fermentation uses kefir grains as starter. This research was aimed to evaluate the physiochemical and organoleptic composition of goat milk kefir made of different kefir grain concentration at controlled fermentation. Materials used were 27 litres of Ettawah crossbred (PE) milk and kefir grains. The experimental research was subject to Completely Randomized Factorial Design with nine combined treatments namely kefir grain concentrations (1, 3, and 5%) and controlled pH fermentation (5.5, 5.0, 4.5) with three repetitions. The observed variables were total solids (%), kefir proximate (%), alcohol level (%), kefir grain profile (SEM) and kefir organoleptic semi-trained panel. Result demonstrated that kefir total solids in all treatments and interactions were generally equal but significantly affected kefir alcohol level, kefir protein percentage, fat content and ash content. Hedonic scale showed that different kefir grain concentration and pH in fermentation significantly affected goat milk kefir texture, flavor and aroma. It was concluded that 1% kefir grain concentration and 4.5 pH in fermentation produced the lowest alcohol level or 0.283% and had the most preferable flavor and aroma based on rank test.</p> <p>Key words: kefir, concentration, fermentation, goat milk, kefir grains</p> <p>Abstrak. Kefir mengandung bakteri dan ragi kompleks dalam protein dan matrik polisakarida yang terbentuk selama pertumbuhan anaerobic. Fermentasi kefir menggunakan biji kefir sebagai starter. Penelitian ini bertujuan mengkaji komposisi fisiokimiawi dan organoleptik kefir susu kambing yang terbuat dari biji kefir dengan konsentrasi berbeda pada fermentasi kontrol. Materi yang digunakan dua puluh tujuh liter susu kambing Peranakan Ettawah (PE) dan biji kefir. Penelitian menggunakan Rancangan Acak Lengkap pola faktorial dengan sembilan kombinasi perlakuan, yaitu konsentrasi biji kefir (1, 3, dan 5%) dan fermentasi pH kontrol (5.5, 5.0, 4.5) dengan tiga pengulangan. Peubah yang diamati adalah total padatan (%), perkiraan kefir (%), kadar alkohol (%), profil biji kefir (SEM) dengan panel organoleptik agak terlatih. Hasil penelitian menunjukkan bahwa total padatan kefir di semua perlakuan dan interaksi pada umumnya sama namun secara nyata mempengaruhi kadar alkohol kefir persentase protein kefir, kandungan lemak dan abu. Skala hedonik menunjukkan bahwa konsentrat biji kefir dan pH yang berbeda dalam fermentasi secara nyata mempengaruhi tekstur, rasa dan aroma kefir susu kambing. Disimpulkan bahwa 1% konsentrat biji kefir dan 4.5 pH dalam fermentasi menghasilkan kadar alkohol rendah atau 0.23% dan memiliki rasa serta aroma yang paling disukai berdasarkan uji peringkat.</p> <p>Kata kunci: kefir, konsentrat, fermentasi, susu kambing, biji kefir</p>
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