Evaluation of the Quality of Kefir with Various Additives (Mango, Pomegranate and Ginger) During Storage

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Abstract:

This study aimed to investigate the impact of plant-based additives at varying concentrations on quality of kefir during storage. Kefir was produced using traditional methods in four variants: a control (additive-free kefir) and three formulations supplemented with mango (*Mangifera indica L.*), pomegranate (*Punica granatum*), and ginger (*Zingiber officinale*) at concentrations of 0.5%, 1.0%, 1.5%, 2.0%, and 2.5%. Samples were stored for 15 days at 4 °C. Analyses were performed on days 1, 3, 5, 7, 10, and 15, evaluating content of total solids, milk fat, protein, sugar, ash, alcohol, carbon dioxide, and value of titratable acidity, and active acidity. Sensory evaluation assessed color, aroma, taste, consistency, and overall acceptability.

Data were statistically analyzed using JMP IN 7.0 (SAS Institute), with significance set at $p < 0.05$. Statistically significant differences were observed among all analyzed variants. The 2.5% additive level most effectively improved technological parameters (total solids, sugar, ash, alcohol) without