

PROMJENE VISKOZITETA KRAVLJEG I SOJINOG JOGURTA TOKOM SKLADIŠTENJA UZ PRIMJENU INULINA

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Sažetak: Cilj ovog rada bio je ispitati promjene viskoziteta kravljeg i sojinog probiotskog jogurta sa različitim sadržajem inulina (IN) tokom 10 dana čuvanja na temperaturi 5°C. Kravlje i sojino mlijeko bez dodataka i sa dodatkom 1,0% IN i 2,0% IN je fermentisano sa 0,005g/l inokuluma probiotske starter kulture DriSet BIOFLORA, ABY 438: *Lactobacillus acidophilus*, *Streptococcus thermophilus* and *Lactobacillus bulgaricus* (Vivolac Culture Corporation, Indiana, USA). Proizvedene su različite varijante kravljeg (cy) i sojinog (sy) jogurta (Cont; 1%IN-cy; 2%IN-sy; sy; 1%IN-sy; 2%IN-sy). Promjene viskoziteta praćene su 1., 5. i 10. dana skladištenja. Viskozitet uzoraka mjeren je tokom 3 min (očitanje je vrijednost svakih 30 s) pri brzini rotacije vretena (Ø4) od 20 o/m, korištenjem *BROOKFIELD Digital Viscometer, DV-E* (Brookfield Engineering Laboratories, USA). Praćene su i promjene pH vrijednosti tokom fermentacije i skladištenja pomoću laboratorijskog pH-metra (pH HI2002 Meter, HANNA Instruments, USA). Svi uzorci jogurta proizvedeni od kravljeg mlijeka su fermentisali za 5 sati, a uzorci proizvedeni od sojinog mlijeka za 8 sati, što znači da suplementacija inulinom nije uticala na brzinu fermentacije. Tokom skladištenja na 5°C nešto više pH vrijednosti zabilježene su kod uzoraka sa dodatkom 1%IN,sy i 2%IN,sy, u odnosu na sve ostale uzorke, ali je unutar svakog uzorka pojedinačno uočena stabilnost tokom 10 dana skladištenja. Viskozitet proizveden od kravljeg mlijeka, bez obzira na dodatke, imao je statistički značajno veće vrijednosti ($p < 0,05$) u odnosu na vrijednosti viskoziteta sojinog jogurta. Unutar samih uzoraka, ne primjećuju se značajne promjene u viskozitetu od 1. do 10. dana skladištenja.

Ključne riječi: viskozitet, kravlji i sojin jogurt, inulin, vrijeme skladištenja

CHANGES IN THE VISCOSITY OF COW AND SOY YOGURT DURING STORAGE WITH THE APPLICATION OF INULIN

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Abstract: The aim of this work was to examine changes in the viscosity of cow's and soy probiotic yogurt with different inulin content (IN) during 10 days of storage at 5°C. Cow and soy milk without additives and with the addition of 1.0% IN and 2.0% IN were fermented with 0,005g/l inoculum of mixed probiotic starter culture DriSet BIOFLORA, ABY 438: *Lactobacillus acidophilus*, *Streptococcus thermophilus* and *Lactobacillus bulgaricus* (Vivolac Culture Corporation, Indiana, USA). Different varieties of cow (cy) and soy (sy) yogurt (Cont; 1%IN-cy; 2%IN-sy; sy;1%IN-sy; 2%IN-sy) were produced. Viscosity changes were monitored on the 1st, 5th and 10th storage days. The viscosity of the samples was measured during 3 min (the value was read every 30 s) at a rotation speed of the spindle (Ø4) of 20 rpm, using a BROOKFIELD Digital Viscometer, DV-E (Brookfield Engineering Laboratories, USA). Changes in pH during fermentation and storage were also observed using a laboratory pH meter (pH HI2002 Meter, HANNA Instruments, USA). All yogurt samples produced from cow's milk fermented in 5 hours, and samples produced from soy milk in 8 hours, which means that inulin supplementation did not affect the rate of fermentation. During storage at 5°C, slightly higher pH values were recorded in samples with the addition of 1%IN,sy and 2%IN,sy, compared to all the other samples, but stability was observed inside each sample individually, during 10 storage days. The viscosity produced from cow's milk, regardless of additives, had statistically significantly higher values ($p<0.05$) compared to the viscosity values of soy yogurt. Inside the samples, no significant changes in viscosity were observed from the 1st to the 10th day of storage.

Keywords: viscosity, cow and soy yogurt, inulin, storage time