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OMEGA FATTY ACIDS, PHENOLIC COMPOUNDS AND LIPOLYSIS OF CHEDDAR CHEESE SUPPLEMENTED WITH CHIA (*SALVIA HISPANICA* L.) OIL

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Effect of supplementing cheddar cheese with chia oil on Omega fatty acids, phenolic compounds and lipolysis of cheddar cheese was investigated. Milk fat was partially replaced with chia oil i.e., 2.5%, 5%, 7.5% and 10% (T₁, T₂, T₃ and T₄). Cheese prepared from 100% milk fat served as control, ripened at 60°C for 90 days. Concentration of α-linolenic in control and T₃ was 0.51% and 12.55%. HPLC characterization revealed the concentration of chlorogenic acid, caffeic acid, quercetin, phenolic glycoside-k and phenolic glycoside-Q in T₃ were 0.15, 0.26, 0.62, 1.55 and 1.97 mg/ml. Concentration of cholesterol in 90 days ripened control and T₃ was 119 and 92 mg/100g with lower concentration of organic acids and no

difference in sensory characteristics of cheddar cheese up to T₃ level. These results suggest that concentration of omega fatty acids and phenolic compounds can be enhanced in cheddar cheese by supplementing with chia oil.

Biography

Rahman Ullah is a PhD Scholar in the Department of Dairy Technology at University of Veterinary and Animal Sciences, Lahore, Pakistan. He is currently working on the project of functional dairy products. He published more than eight papers in reputed journals. He has been to University of Kentucky, USA as Visiting Research Scholar.

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