

Abstract

Stabilizer brings downside on flavored milk which is altering the release of flavor and aroma of flavor profiles. But, it has the purpose to retain optimum properties of the emulsion body and mouthfeel. The function is related to texture improvement and physical stability including prevention of creaming and phase separation. The objective is to investigate the impact of stabilizers on the physicochemical properties (pH, °Brix, viscosity) and sensorial characteristics (9-point hedonic scales and ranking test) of strawberry flavored milk on day 1, day 7, and day 14. Hence, various dosages of flavor and stabilizer (0.01% of κ -carrageenan; 0.1% of gellan gum; alongside 0.15% of stabilizer-emulsifier mixture, consisting of κ -carrageenan, guar gum, and mono- and diglyceride) were analyzed. There were no significant differences in the sensorial attributes, including overall liking, appearance, strawberry aroma, strawberry flavor, milky flavor, milky aroma, mouthfeel, and aftertaste. Only sweet taste on carrageenan milk samples between day 1 and 14 had notable differences which is not reflected in the overall liking score hence regarded as inconsistent scoring. The physicochemical attributes also experienced significant differences in all of the attributes within day and stabilizers. The viscosity significance was caused by varying gel properties and bond with milk protein over storage days. Difference in °Brix, especially gellan gum sample, is due to having highest molecular weight hence higher friction rate and soluble solids value. κ -carrageenan is suitable for milk, however further research on stabilizers are required to validate the findings, focusing on milk mouthfeel.

Keywords: Carrageenan, Gellan Gum, Mono- and Diglyceride, Stabilizer, Strawberry Milk