

Physical and sensory properties of berry craft sorbet with inulin and effect of storage on total monomeric anthocyanins

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Abstract. Sorbets are sweetened frozen desserts obtained from fruit or fruit juice and are very popular, especially in the summer months. The aim of this study was to evaluate the effect of the addition of inulin and *Stevia rebaudiana* on the viscosity, hardness, total monomeric anthocyanin (TMA) content and sensory attributes of blueberry and raspberry sorbets. Four types of sorbets were produced from each fruit studied – three with inulin (2, 6 and 8% by weight) and the other without inulin – using fresh fruit with the addition of water, stevia extract powder, pectin and lemon juice. The addition of inulin slightly increased the viscosity of blueberry sorbet and had a statistically insignificant influence on the viscosity of raspberry sorbet. Hardness of the berry craft sorbet samples was influenced more by the addition of 2 and 6% inulin. TMA values ranged from 35.85 ± 1.1 (raspberry sorbet sample and 8% inulin) to 43.00 ± 0.8 (blueberry sorbet sample and 6% inulin) mg cyanidin 3-glucoside/g fresh weight. The results indicated that the addition of 8% inulin led to a slight decrease in TMA values compared to the values obtained for samples without inulin for both types of fruit sorbets. Also, the results showed that TMA values were very constant throughout the storage period. A more intense red color was observed in the raspberry sorbets, which increased with the addition of 2 and 6% inulin. The sorbet with the most pleasant taste was the one with blueberries without added inulin (8.8 ± 0.02), while the sorbet with blueberries and 2% inulin was the least liked by the evaluators (8.05 ± 0.01). The raspberry sorbet (without inulin) obtained the highest score for flavor (9 ± 0.02), while the sorbet with blueberries and 8% inulin obtained the lowest score (8.4 ± 0.04).

Keywords: fruit craft sorbets; inulin; stevia; anthocyanin content.

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