SENSORY, PHYSICAL AND CHEMICAL PROPERTIES OF CHOCOLATE ICE CREAM WITH ORANGE FIBER AS FAT REPLACER


The direct relationship between diet and health has been causing changes in eating habits of consumers who demand healthier food, like food with reduced fat content. Dietary fiber has been used in such products as a potential fat replacer. Residues of orange juice production are an interesting source of dietary fiber, because they are available in large quantities, have a low cost and are also rich in bioactive compounds. This study aims to evaluate the effect orange fiber as fat replacer in chocolate ice cream. Three ice cream formulations were prepared: standard ice cream (S), orange bagasse and peel fiber added ice cream (F1,) and orange bagasse and peel fiber subjected to pretreatment to remove the bitter flavor added ice cream (F2). Chemical, physical and sensory analyses were performed. The addition of orange fiber in ice cream represented a mean fat reduction of 73%, with no difference between F1 and F2 (5.15 ± 0.25 and 4.89 ± 0.02%, respectively) treatments. Melting rate of F1 (2,34 ± 0,17 %min⁻¹) was smaller than S (2,48 ± 0,08 %min⁻¹) and F2 (2,55 ± 0,06 %min⁻¹) but not significant (p<0,05). Among the sensory attributes evaluated by the judges there was a significant difference (p<0.05) between flavor, aftertaste and overall acceptability attributes. The standard ice cream showed the highest scores when compared to fiber added ice cream, indicating that the fiber pretreatment was not effective to improve its flavor. The buying intention of the judges in relation to ice cream with reduced fat content was 72% for F1 and 74% for F2.