Production and characterization of ice cream with high content in oleic and linoleic fatty acids

Ice creams produced with unsaturated fats rich in oleic (OO, 70.7% of oleic) and linoleic (LO, 49.0% of linoleic) fatty acids, were compared to ice cream based on saturated coconut oil (CO, 50% of lauric acid). The globule size distribution of OO mix during aging (72 h at 4°C) followed a similar trend to CO mix, being stable after 48 h; whereas LO mix destabilized after 24 h. CO mix showed higher destabilization during ice cream production, but no significant differences among fats were observed in the particle size of the ice cream produced. The overrun was also lower for OO and LO ice creams (34.19 and 27.12%, respectively) compared to CO based ice cream (45.06%). However, an improved melting behavior, which gradually decreased from 88.69% for CO to 66.09% for LO ice cream, was observed.

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