

# **SENSORY ANALYSIS OF LOW FAT STRAWBERRY ICE CREAMS PREPARED WITH DIFFERENT FLAVOR CHEMICALS AND FAT MIMETICS**

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## **ABSTRACT**

The objective of this study was to understand the release behavior of five strawberry flavor compounds in ice cream with fat mimetics, and to reformulated low-fat ice cream with Simplese to match the flavor profile of full-fat ice cream.

Furaneol<sup>TM</sup> was perceived more strongly in full-fat ice cream, while *cis*-3-hexen-1-ol,  $\alpha$ -ionone,  $\gamma$ -undecalactone and ethyl-3-methyl-3-phenylglycidate were perceived more strongly in low-fat ice cream. However, ice creams with Simplese<sup>®</sup> and full-fat ice cream had similar sensory characteristics.

Cooked sugar flavor, sweetness and their aftertastes were determinants for the degree of taste similarity with full-fat ice cream. The reformulated product, which was the closest in sensory characteristics to full-fat ice cream, was either the one in which the concentration of  $\gamma$ -undecalactone was decreased individually by 25% or the product, in which  $\gamma$ -undecalactone and *cis*-hexen-1-ol were decreased by 25%.

No significant differences for consumer test between the reformulated products and full-fat ice cream.