

EFFECT OF FAT MIMETICS ON THE HEADSPACE RELEASES OF FIVE STRAWBERRY FLAVOR COMPOUNDS

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ABSTRACT

Consumers prefer to consume low fat foods rather than high fat foods based on health conscious. However, low fat foods mostly have poor quality on the flavor profile and texture. To make low fat foods have better quality, fat mimetics are widely used. In this study, the relationship between five strawberry flavor compounds (*cis*-3-hexen-1-ol, α -ionone, ethyl-3-methyl-3-phenylglycidate, γ -undecalactone, furaneol) releasing from six different emulsion systems (0% fat, 4% fat, 4% fat + Simplese[®], 4% fat + Litesse[®], 4% fat + Simplese[®]/Litesse[®], 10% fat) were determined. The results indicated that the flavor released of *cis*-3-hexen-1-ol, α -ionone, ethyl-3-methyl-3-phenylglycidate and γ -undecalactone were significantly decreased with increasing of fat levels, but furaneol had opposite result. The flavor release of α -ionone and ethyl-3-methyl-3-phenylglycidate were not affected by fat mimetics. However, using Litesse[®] as fat mimetic contributed similar flavor releasing to 10% fat of *cis*-3-hexen-1-ol and γ -undecalactone, and using Simplese[®] as fat mimetic contributed resembling flavor releasing to 10% fat of furaneol.