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Czech J. Food Sci.

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Šmidrkal:

The Influence of Interesterification of Structured Fats on the Properties of the Fat Blends

Czech J. Food Sci., 27 (2009): S293-
S296

Consistency, rheology and melting/solidification characteristics of model fat blends (FB) on the basis of interesterified structured fats (SF) are discussed. SF were prepared by an alkaline catalysed random interesterification of fully hydrogenated coconut (FHCO) and high-erucic rapeseed (FHHERO) oils with variable molar ratio (2:1; 1.4:1; 1:1; 1:1.4 and 1:2) of the medium chain (M; C8:0– C14:0) and long chain (L; C16:0– C22:0) saturated fatty acids (FA) to find out, if stearic/arachic/behenic acids can substitute palmitic/stearic acids in SF. This substitution in SF is possible at

molar ratios M:L 2:1 and 1.4:1 from the point of view of melting and solidifications characteristics as well as consistency and rheology for soft margarines. Lower molar ratios of M:L are suitable for FB of shortenings. The final ratio of saturated:unsaturated FA in FB for soft-margarines is 33:67 w/w.

Keywords:

fat blend; structured fat; rheology; consistency; interesterification; behenic acid

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