

What is the Benefit of High-Oleic Oils During Storage of Foods Being Fried?

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Detmold

For the production of fried food palm olein or hydrogenated oils are first choice as frying medium. These oils are proven in practice with success since many years and they have advantages with regard to price, availability and applicability. Unfortunately palm olein contains high amounts of saturated fatty acids which are unfavourable in view of health aspects and hydrogenated oils are high in *trans*-fatty acids which are also reputed to be responsible for coronary heart diseases. Therefore the search for alternative oils is going on and research has shown that the use of high-oleic oils resulted in high-quality products with a high frying stability of the oil compared to common used frying media.

The problem of conventional rapeseed oil is that the use results in high-quality products after frying, but during storage the product becomes inedible very fast, because of the slight self life of the oil. Therefore the question is, whether it is possible to improve the quality of fried food during storage by use of HOLL rapeseed oil as frying medium? The assumption is that products being fried in high-oleic oils are more stable than products being fried in rapeseed oil and at least comparable stable to products being fried in common used frying oils, but unfortunately no data are available.

To answer this question a frying trial was carried out to evaluate the storage stability of potato crisps and doughnuts being fried in high-oleic low-linolenic rapeseed oil in comparison to high-oleic sunflower oil, palm olein and partially hydrogenated rapeseed oil. The products were stored under different conditions over a period of six month and the following parameters were used for the characterization of the product quality: sensory evaluation of the products, peroxide value, anisidine value, volatile aroma compounds, tocopherol content, polar compounds and oxidative stability.

The presentation describes the experiment and discusses the results and the conclusions.