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Innovative industrial frying oil improved with antioxidant-emulsifier and antipolymerizing agent formula: Polar compounds and fatty acid stability by repetitive frying

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Innovative frying oil "Spil Innova Fryoil" which contain antioxidant, emulsifier and antipolymerizing additive constituents was developed and the quality profiles of improved frying oil and fried food products with above-mentioned oil was evaluated. The physicochemical quality, sensory quality profile, gas chromatography (GC) fatty acid profile, total polar compound, oxidative stability (rancimate) and overall fried food quality of new oil and fried food were performed. It was determined that the total polar compound levels of Spil Innova Fryoil were stable between 1-15th (even 10th-15th) frying process. Linoleic acid (C18:2; omega-6) was preserved and no trans-acid increasing was found by repetitive frying; no increased amount of trans-oleic acid (elaidic acid) and trans-linoleic acid. It was observed that the used Jujube extract additive gave more stability to innovative frying oil; polar compounds of fried potato oils by 5th, 10th, 15th frying process and also the fried potato color was stable after repetitive frying.

Biography

Ozlem Tokusoglu has completed her PhD at Ege University, Department of Food Engineering at 2001. She is currently working as an Associate Professor in Celal Bayar University, Engineering Faculty Department of Food Engineering. She was a Visiting Scholar at the Food Science and Nutrition Department/University of Florida, Gainesville-Florida-USA during 1999-2000 and Visiting Professor at the School of Food Science, Washington State University, USA during April-May 2010. She has published many papers in peer reviewed journals and serving as an Editorial Board Member of selected journals. She has published two international book entitled *Fruit and Cereal Bioactives: Chemistry, Sources and Applications and Improved Food Quality with Novel Food Processing* and third book *Food By-Product Based Functional Food Powders* is in progress. She has also published two national books entitled *Cacao and Chocolate Science and Technology* and *Special Fruit Olive: Chemistry, Quality and Technology*.

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