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## Farnaz Maleky

Department of Food Science and Technology, Ohio State University, USA

### Structuring liquid oils for enhancing the physiochemical properties of food

#### Abstract

Despite the ongoing debate on the exact relationship between dietary intake of saturated fatty acids (FSA) and human health, both saturated and trans fatty acids are suggested to be avoided in food products. In response to this demand, food researchers and manufacturers try to replace these lipids by mono/polyunsaturated fatty acids. The challenge, however, is to produce these new healthy foods while maintaining their desirable sensory quality and textural characteristics. In this study, we introduce our recent oil structuring techniques that are promising for the production of healthy food with desirable attributes. Different vegetable oils were solidified into semi-solid networks, and their physical and chemical stabilities were examined. The stable networks were introduced into few food products and the products sensory quality were evaluated through a trained sensory panel. The results confirmed that the developed oil networks have the potential to be expanded into other food products that aim to help the health of the society.

#### Biography

Dr. Maleky holds a B.Sc. degree in chemical engineering and M.Sc. and Ph.D. degrees in Food Science. She is a faculty member in the Department of Food Science and Technology at the Ohio State University. The most active area of her research is advancing the understanding of food structures and their characteristics at different length scales. Her research team focuses on developing new competitive processes/technologies that can address major issues in food quality and food development for health initiatives. Dr. Maleky's research outcomes propose new insights for better selection of raw materials, improving food processing, enhancing sensory attributes, and eventually providing health benefits

Dr. Maleky has over 60 peer-reviewed journal, patents, book chapters and scholarly publications and currently serves as an associate editor of Journal of Food Research International and the chairperson of the Edible Application Division in the American Oil Chemist's Society.

email: maleky.1@osu.edu