

International Conference on

# Lipid Science & Technology

November 30 - December 02, 2015 San Francisco, USA

## Research of fat melting characteristics of physical blend and structure lipids by coconut oil and palm stearic oil

Guo-qin Liu<sup>1</sup>, Hua Zhang<sup>1,2</sup>, Bing Li, Ling Cheng<sup>1</sup> and Xiaoxi Li<sup>1</sup>

<sup>1</sup>South China University of Technology, China

<sup>2</sup>Yanbian University, China

The compatibility and non-isothermal crystallization properties of oils and fats have important effects on the taste and quality. For extension application scope of coconut and palm stearic oil, development special oil products based on them, Gas phase mass spectrum measured coconut oil and palm stearin oil with different mixing proportion of total fatty acids and Sn - two fatty acid composition of the fatty acid composition and melting characteristics of correlation, the compatibility of coconut oil and palm stearic oil, and the non-isothermal crystallization behavior of different proportions Physical blend oil and enzymatic preparation of structure lipid of the combined systems have studied by Pulsed NMR and DSC respectively. The results showed Different proportions of enzymatic preparation structure Sn-2lauric acid content (12.35-46.72%) is significantly higher than physical blend oil (5.86-30.75%). that there was a certain degree of eutectic phenomenon in complex system on the whole, and at a higher temperature (25-45°C) had better compatibility. In the process of non-isothermal crystallization, the double chain length  $\beta'$  crystals changed for three chain length  $\beta'$  crystals of flow-melting-point of proportion of coconut oil under the same cooling rate.

### Biography

Liu Guoqin is a professor of Light Industry and Food Science Department at South China University of Technology. Her major is Grain, Oil and Vegetable Protein. Her research interests are nutrition and safety of oil and fat. Her research achievement has been published more than 100 academic articles and 3 food books in a number of different journals and food book system. She has got more than 20 patents for inventions. At present, she is holding six research projects including China Government project and Guangdong Province Projects. In addition to his teaching and researching job, she is a reviewer of several journals and books, and she is frequently an invited speaker for professional and civic organizations.

[guoqin@scut.edu.cn](mailto:guoqin@scut.edu.cn)

### Notes: