AITC course 2023 : The application of a parabolic greenhouse solar dryer together with raw material preparation techniques to extend shelf-life and enhance quality of agricultural products

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Expertise:

- *Creation of trans-free fats via several methods of structure modification (e.g., blending, organogelation, chemical and enzymatic interesterification and fractionation) for industrial uses*
- *Crystallization of fats and oils under various conditions and under the influence of different additives (e.g., emulsifiers, plant waxes, high-melting fats, mono-, di-, and triglycerides)*
- *Characterization of fats and oils from seeds of exotic plants found in tropical countries*
- *Production of cocoa butter alternatives, margarine fats and shortening from exotic fats*
- *In-depth study of fat bloom mechanism in chocolate and compound coating*

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Publication:

Kannika Aumpai, Chin Ping Tan, Qiang Huang and Sopark Sonwai (2022). Production of cocoa butter equivalent from blending of illipé butter and palm mid-fraction. Food Chemistry. 384, 132535.

Thunchanok Sonprasert, Pimwalan Ornla-ied and Sopark Sonwai (2022). Synthesis of confectionery fat from illipé butter stearin and palm mid-fraction blends via enzymatic interesterification. International Journal of Food Science and Technology, 57, 3150-3161.

Pawitchaya Podchong, Kannika Aumpai, Sopark Sonwai and Dérick Rousseau. 2022. Rice bran wax effects on cocoa butter crystallization and tempering. Food Chemistry. 397, 133635

Khakhanang Wijarnprecha, Philipp Fuhrmann, Christopher Gregso, Matt Sillick, Sopark Sonwai and Dérick Rousseau (2022). Temperature-dependent properties of fat in adipose tissue from pork, beef and lamb. Part 2: rheology and texture. Food and Function. 13, 7132-7143

Khakhanang Wijarnprecha, Philipp Fuhrmann, Christopher Gregso, Matt Sillick, Sopark Sonwai and Dérick Rousseau (2022). Temperature-dependent properties of fat in adipose tissue from pork, beef and lamb. Part 1: microstructural, thermal, and spectroscopic characterization. Food and Function. 13, 7112-7122.