

# PALM-BASED SHORTENING FOR MULTI-LAYER BREAD

by: SIVARUBY, K; ISA, M; MISKANDAR, M S and FAIRUS, H

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**T**he shortening for multi-layer bread is specially designed to facilitate lamination of the dough in the baking of puff pastry products (*Figure 1*). Multi-layer bread is a unique traditional breakfast delicacy in Izmir, Turkey. As a staple, up to three pieces can be consumed per meal (each piece weighing 120 to 150 g). The bread is filled with a savoury or sweet filling to cater for the taste of an extensive range of customers. The palm-based shortening confers excellent baking properties for this local favourite and has replaced the traditional tallow or hydrogenated fats-based shortenings. This plastic shortening is also able to perform in other dough laminating systems in puff pastry (*Figure 2*).

## BENEFITS/ADVANTAGES

### Processing

- Carefully selected palm-based blends of natural oils.
- Specially designed fats with high crystallization rates.
- No additional cost for hydrogenation and interesterification.
- Able to function as desired flavour carrier.
- Can be stored at 25°C to 35°C.
- Does not require refrigeration, and can be transported at below 40°C.

### Health

- Suitable for vegetarians.
- Suitable for those with lactose intolerance.



*Figure 1. Shortening for multi-layer bread.*



*Figure 2. Final product with dough lamination system.*

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Malaysian Palm Oil Board, Ministry of Plantation Industries and Commodities, Malaysia  
P. O. Box 10620, 50720 Kuala Lumpur, Malaysia. Tel: 03-89259155, 89259775, Website: <http://mpob.gov.my> Telefax: 03-89259446



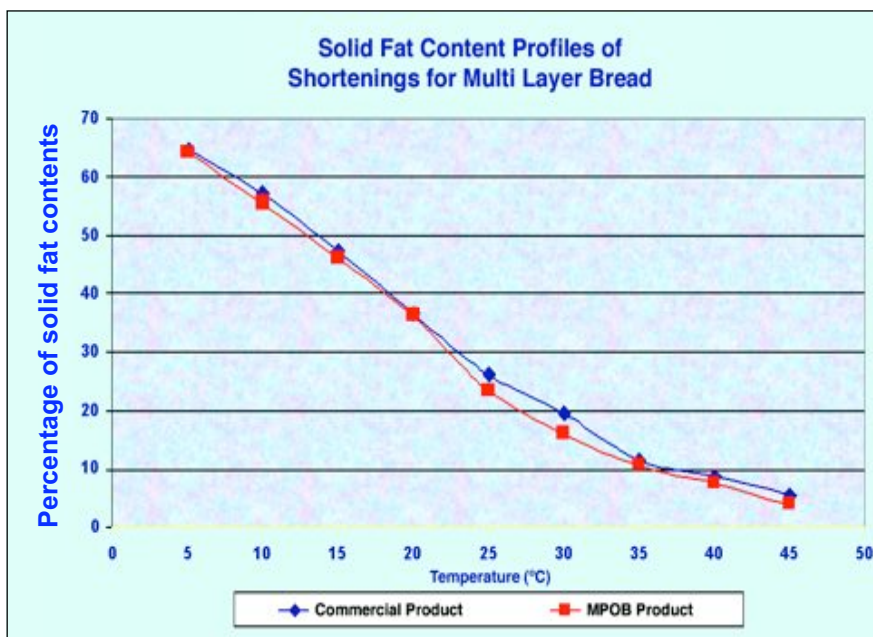


Figure 3. Solid fat content profile of commercial product and MPOB product.

## BAKERY PERFORMANCE

The multi-layer bread shortening was specially designed to facilitate extensive stretching of the dough during sheeting. This is the crucial attribute of a roll in fat. The flexibility of this robust shortening enables the shortening to withstand the forceful pressure applied during sheeting. This characteristic of the shortening allows the dough-fat-dough sandwich system to thin down to 1.0 to 1.5 mm. The shortening neither forms small lumps nor does it break up during sheeting, hence, providing a continuous and consistent fat layer.

In making the multi-layer bread, the dough is subjected to a unique sheeting process to lock in the fat for a dough-fat-dough system. The

initial sheeting is carried out by a rolling pin or a sheeter. The second stage is to spin the dough in air. The spinning teases out the dough into a very thin layer. The thin dough sheet is spread with a savoury or sweet filling and laminated to make a *bun* which is able to keep its structure without collapsing for 3 to 4 hr before baking. The strength of the formation is conferred by the shortening. During baking, the laminated dough undergoes uniform puffing to become flaky. The multi-layer bread shortening is also not sticky, hence, facilitates easy handling and reduces the skin loss.

## COMMERCIAL POTENTIAL

Economically feasible for the producers of shortening and margarine to add to their range of products.

For more information kindly contact:

Director-General  
MPOB  
P. O. Box 10620  
50720 Kuala Lumpur, Malaysia.  
Tel: 03-89259155, 89259775  
Website: <http://mpob.gov.my>  
Telefax: 03-89259446