

STANDARD REFERENCE MATERIALS - FATTY ACID COMPOSITIONS OF PALM OIL, PALM OLEIN AND PALM STEARIN (SET NO. 2)

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Malaysia exports various palm oil products with different fatty acid compositions. To ensure that the products are within the trade specifications, they have to be tested before export.

Therefore, Standard Reference Materials (SRMs) of palm oil products are required to ensure that products meet the specifications. SRM is defined as a reference material, accompanied by a certificate, one or more of which properties have been certified by a procedure which accurately ascertain the values. Each certified value is accompanied by its error.

Currently, there are only two or three palm oil standards. Until now, the SRMs of many products are still not available. Also, these available standards are rather expensive. MPOB has thus conducted inter-laboratory cross-check programmes to produce palm oil SRMs. This will promote MPOB as a centre for quality control of palm oil products.

SPECIFICATIONS

The SRMs from palm oil products were successfully characterized and certified based on MPOB Test Methods (Figures 1 and 2). SRMs with high reliability were produced through cross-check programmes involving numerous accredited testing laboratories worldwide. A new series, focussing on the fatty acid composition (FAC) of palm oil products, was developed. This analysis



Figure 1. SRM from RBDPO, RBDPOo (a), RBDPOo (b), RBDPOo (c) and RBDPOs.

for authentication oils and fats, by qualitative and quantitative determinations of their FAC using capillary column gas chromatography (CAP-GC). The palm oil products - RBD palm oil, RBD palm olein and RBD palm stearin - are then awarded a detailed measurement certification for each fatty acids components. The certified fatty acid mass fractions for each SRM are evaluated to the 95% confidence level.

ADVANTAGES

- Inexpensive alternative to other SRMs;
- Lack of SRMs for palm oil products;
- Encourage use of palm oil SRMs for analysis;
- Standardization of specifications for palm oil products;
- Promote use of MPOB Test Methods;
- Harmonization of methods in palm oil analyses; and
- Promote ISO 17025:1999 laboratory accreditation.

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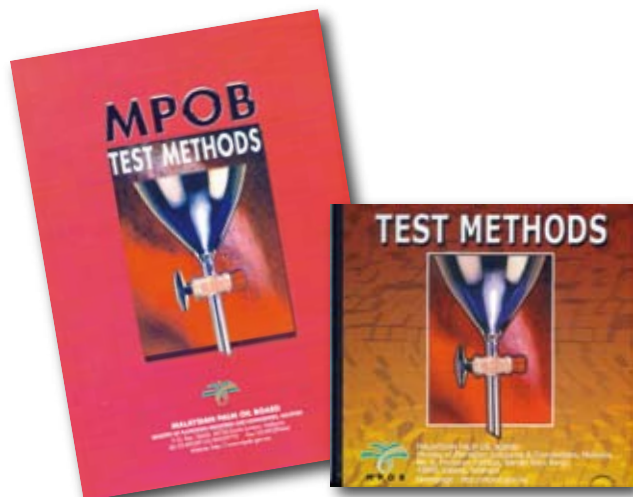


Figure 2. Publication and CD on MPOB Test Methods.

The SRMs are applicable for use by mills, refineries, food industries, oleochemical industries, research institutions, service laboratories, universities *etc.*

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