

PALM-BASED SKIN CARE PRODUCTS

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MPOB TT No. 114 Palm-based Facial Cleanser

MPOB TT No. 117 Palm-based Cleansing Gel

MPOB TT No. 118 Palm-based Toner

MPOB TT No. 119 Palm-based Moisturizing Skin
Lightening Cream

MPOB TT No. 120 Palm-based Sunblock Cream

pollution. These oily residues can be removed by using facial cleanser, which is normally a milky form of (pourable) oil-in-water emulsion. This palm-based cleansing milk is formulated with high quality palm-based materials with mild emulsifiers which emulsify the oil residues, enabling it to be removed with damp cotton wool, leaving the skin feeling cleaned and refreshed (Figure 1). Evaluation of the ability of the formulation to remove soil has been carried out using silk soiled cloth (70D - silk soiled with WFK soil/sebum) at 0.1% concentration, water hardness 50 ppm and 350 ppm and room temperature and compared with a commercial sample. The result indicated that the palm-based cleansing milk removed soil better at 50 ppm water hardness compared to the commercial sample as indicated in Figure 2.

For the past couple of years, AOTC has been approached by many small and medium scale cosmetics companies for research and development of a product or a range of cosmetic products utilizing palm-based oleochemicals as the major raw material components. Some of them even requested AOTC for the improvement of their existing formulations and to replace the ingredients, as much as possible, with palm-based ingredients.

This positive development is not unfounded as a recent development in the cosmetics industry is advocating the use of natural, renewable and plant derived ingredients. Currently, palm-based oleochemicals, such as glycerin, fatty acids, fatty alcohols, fatty esters and fatty amine are widely used in cosmetics and personal care formulations to serve various functions such as humectants, emulsifiers, emollients, surfactants and conditioners.

The range of palm-based skin care products highlighted in this publication is a result of a collaboration between AOTC and Shi-Kin Cosmetic Industries for the development of a range of products with better quality and performance to replace their existing products already in the market.

PALM-BASED FACIAL CLEANSER

Most facial contamination is oily, either from make-up or sebum combined with perspiration and atmospheric



Figure 1. Palm-based facial cleanser.

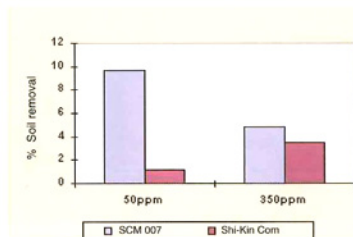


Figure 2. Detergency performance of facial cleansing milk at 0.1% concentrate.

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TABLE 1.

Sample description	Dose μ l	HIE score	Predicted dermal irritancy classification
Cleansing gel	50	0.00	Non-irritant
	75	0.00	Non-irritant
	100	0.02	Non-irritant
	125	0.00	Non-irritant

TABLE 2.

Sample description	Dose μ l	HIE score	Predicted dermal irritancy classification
Commercial	50	0.01	Non-irritant
	75	1.32	Irritant
	100	2.15	Irritant
	125	0.06	Non-irritant

Source: Rosnah, I (2001).

PALM-BASED CLEANSING GEL

This palm-based cleansing gel is formulated with mild surfactants enriched with vegetable-based protein to provide a conditioning and moisturizing effect to the skin (Figures 3 and 4). Evaluation by *in vitro* irritation assay for dermal irritation found that the product was non-irritant with a HIE (Human Irritancy Equivalent) score of only 0.2 (Table 1), while a commercial sample was found to be irritant with a HIE score 2.15 for the same dose (Table 2).



Figure 3. Palm-based cleansing gel.

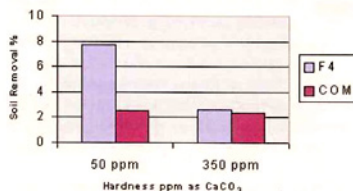


Figure 4. Detergency of facial cleansing gel F40.1%/RT/Silk (700).

The cleaning power of the palm-based cleansing gel in comparison with the commercial sample was carried out using silk soiled cloth (70D - silk soiled with WFK soil/sebum) at 0.1% concentration, water hardness 50 ppm and 350 ppm and room temperature. The palm-based cleansing gel was found to have better or comparable cleaning power compared to the commercial sample.

PALM-BASED TONER

This palm-based facial toner formulation is intended to be used after cleansing the face with facial cleansing milk or the cleansing gel to close the exposed pores after cleansing (Figure 5). It is specifically developed to impart a smooth and soothing feel after application.



Figure 5. Palm-based toner.

PALM-BASED MOISTURIZING SKIN LIGHTENING CREAM

Over the past few years, the skin lightening craze has been sweeping the ASEAN market. Everybody wants to have fairer and younger looking skin, hence, the need to create a lightening cream, which not only lighten but also moisturize the skin at the same time (Figure 6). This palm-based moisturizing skin lightening cream was specially formulated to moisturize the skin while gradually lightening it at the same time. A study conducted by Rosnah, I (2001) showed that the product was able to increase skin moisture by between 30.73% - 38.02% compared to the control as shown in Figure 7. The moisturizing effect is comparable to a commercial sample.



Figure 6. Palm-based moisturizing skin lightening cream.

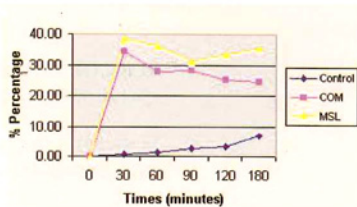


Figure 7. Acute moisturizing effect of moisturizing skin lightening (MSL) cream vs. control and commercial sample.

PALM-BASED SUNBLOCK CREAM

The main objective of creating a sunblock cream is to protect the skin from the harmful effect of UV radiation. This palm-based sunblock cream is a 2-in-1 formula formulated to act as foundation for the face while protecting it from the harmful effect of UV radiation (Figure 8). The cream has a sun protection factor of 15+ and is enriched with the natural goodness of natural palm-based vitamins E, A and co-enzym Q10.



Figure 8. Palm-based sunblock cream.

CONCLUSION

The interest in natural or naturally derived cosmetic products will continue to increase as more people are becoming aware of the possible side effects of animal or petroleum-based products. The availability of renewable raw materials derived from palm oil will continue to support the growth of the cosmetics and personal care industry in Malaysia.

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