

# NAMARI OLIVE OIL SOAP

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**S**oap is the sodium salt of fatty acids from oils and fats of both animal and vegetable origin. It is the oldest cleaning agent known to man and also the most important anionic surfactant. In South-east Asia, soaps are primarily made from palm oil (PO) blended with either coconut oil or palm kernel oil (PKO). There are exceptions - India uses hardened rice brand oil instead of PO, China uses cattle or sheep tallow or lard from pigs and Australia generally uses beef tallow. A typical blend would be 80% tallow or PO and 20% coconut or PKO. An 80/20 formulation gives about the right balance of lather, rate of ware, cleaning ability and bar hardness.

In recent years, the overall use of toilet soap has declined in certain countries due to the promotion and popularity of non-soap personal cleansers such as bath and shower preparations, facial cleansers and liquid soap. In spite of this competition, bar soap is still the largest segment of personal wash that accounts for 63% dollar share compared to body wash 22%, liquid hand soap at 13% and antibacterial gel 2% (Kintish, 1999). At least on a price performance basis, the soap bar still has the advantages: costs less per unit weight, easily transported and has a long shelf-life and saves shelf space.

## AVAILABILITY OF SOAP NOODLES

Malaysia is currently the leading producer of soap noodles made from PO:PKO blends. There are now at least five oleochemical companies in Malaysia producing soap noodles via the fatty acid route with a total capacity of 230 000 t yr<sup>-1</sup>. The noodles are available commercially in various ratios of the oils, for example, 80:20, 70:30 and 60:40. The typical characteristics of Malaysian soap noodles are shown in Table 1 (Salmiah *et al.*, 1998).

## NAMARI OLIVE OIL SOAP

To meet the challenge of other cleansing preparations and to satisfy the ever-increasing demand of consumers today, soaps are personalized than ever before. It is no longer enough for a soap to just cleanse but it has also to offer additional benefits to the skin and mood. So a collaborative research and development project between Subnex Refrigeration Sdn. Bhd. and MPOB, has resulted in a Namari Olive Oil Soap (Figure 1).

Namari Olive Oil Soap is formulated with good quality soap noodles available commercially and is enriched with pure olive oil to condition the skin, leaving it soft and

TABLE 1. CHARACTERISTICS OF MALAYSIAN SOAP NOODLES

Product PO/PKO	TFM %	Moisture %	FFA (as palmitic) %	Sodium chloride %	Glycerol %	Seq.	Titre °C
60:40	79-82	10.5-13.0	1.3-2.0 max.	0.4-0.6	0.1-0.2	Present	38-45
60:40/SF7.5	81-83	10.0-11.0	3.5-4.5	0.4-0.6	0.1-0.2	Present	38-42
60:40/SF5	81-83	9.0-11.0	4.5-7.0	0.4-0.6	0.1-0.2	Present	38-42
75:25	79-81	10.5-12.5	1.3 max.	0.4-0.6	0.1-0.2	Present	42-44
70:30	79-81	10.5-12.5	4.5-5.5	0.4-0.6	0.1-0.2	Present	42-44
70:30/SF6	79-81	10.5-12.5	1.3 max.	0.4-0.6	0.1-0.2	Present	43-45
80:20	79-81	10.5-12.5	1.3 max.	0.4-0.6	0.1-0.2	Present	44-47
80:20 SF5	81-82	10.0-11.0	3.5-4.5	0.4-0.6	0.1-0.2	Present	44-46
100:0	79.5-81.5	11.5-13.5	1.3 max.	0.4-0.6	-	Present	48-52

Notes: SF - super fattening material, TFM - total fatty matter, FFA - free fatty acid, Seq. - sequestant.

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Figure 1. Namari Olive Oil Soap.

supple. It is further enriched with whey protein that offers a moisturizing effect to the skin.

### DETERGENCY PERFORMANCE

To simulate the cleansing power of Namari olive oil soaps, a detergency test on cotton AS 9 soiled with oil/pigment was carried out at 0.1% concentration, using deionized water at 50 ppm water hardness and at room temperature and 45°C. The detergency of Namari soap was found to be better or comparable to the commercial olive oil soap as shown in Figures 2 and 3.

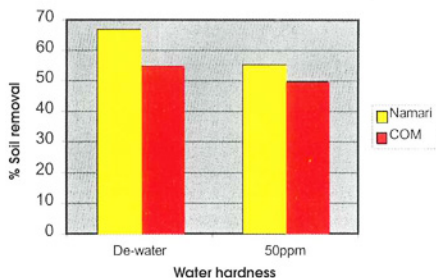


Figure 2. Detergency at 0.1% conc/RT.

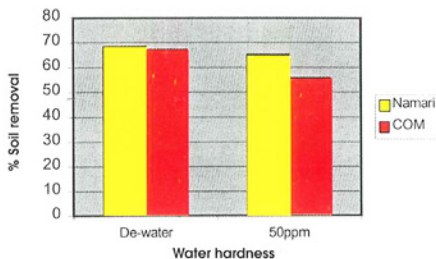


Figure 3. Detergency at 0.1% conc/45°C.

### CONCLUSION

With the availability of good quality palm-based soap noodles in Malaysia, the formulation of specialty soaps for niche markets can easily be achieved. Specialty soaps such as Namari soap which fetches a high price (RM 5.00 per 50 g or 7.50 per 100 g bar), provide another avenue for value addition to palm-based products.

### REFERENCES

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