

UNIVERSITI TEKNOLOGI MARA

PREPARATION AND EVALUATION OF NEEM
SEED OIL NANOCREAM USING SUCROSE
MONOESTER (OLEATE)

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ABSTRACT

The formation of oil in water (o/w) nanocream containing neem oil was formulated and developed for topical application in cosmetic product. Neem oil was used as it has been proved that neem oil extremely beneficial for the treatment of various skin conditions like acne, psoriasis, eczema, skin ulcers, as well as enhances promotion of wound healing of minor cuts, bruises and gashes by its astringent properties. An experimental study of neem oil nanomeulsion was performed through various formulations consisting of different proportions of sucrose oleate, neem oil, glycerol. The particle sizes and the acceptable proportion of surfactant-to-oil were taken into consideration in choosing the best neem oil nanophase gel formulation which later was processed into neem oil nanocream by adding gelling agent such as Carbopol 934 and 940 into the system. It was shown that the composition of oil and surfactant greatly influenced particle size of nanoemulsion. Next, the using of 20% of sucrose oleate as the surfactant coupled with 1.0% of Carbopol 940 as the thickening agent provided the neem oil nanocream with the best stability and the most favorable characteristic.