

EVAPORATION OF ESTRAGOLE AND EUGENOL IN AQUEOUS
AND NONAQUEOUS MICROEMULSION SYSTEM

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NONAQUEOUS MICROEMULSION SYSTEM**

BY

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ABSTRACT

The solubility region for the aqueous and nonaqueous microemulsions with perfume, stabilized by Aerosol-OT (AOT) and Span 20 was determined. The perfumes used are eugenol and estragole. The result showed the presence of a large isotropic region emanating from the perfume/AOT axis towards the solvent corner whereas there is only small isotropic region emanating from the perfume/Span 20 axis towards the solvent corner. The weight loss due to the evaporation from the microemulsion system was found to be independent on the weight ratio of perfume and AOT, and the solvent content of the microemulsion. Higher weight ratio of surfactant:fragrance and solvent content led to a higher evaporation. AOT were tested to be good solubilizer in solubilizing estragole and eugenol whereas Span 20 is not a good solubilizer.

The evaporation were tested gravimetrically and best formulation of microemulsion system were determined.

ABSTRAK

Kawasan pelarutan untuk sistem mikroemulsi berair and tidak berair dengan minyak pewangi ditentukan. Span 20 dan Aerosol-OT (AOT) digunakan untuk menstabilkan system mikroemulsi ini. Keputusan menunjukkan kehadiran kawasan isotropik yang besar dari paksi pewangi/AOT ke paksi pelarut manakala kehadiran kawasan isotropik yang kecil dari paksi pewangi/Span 20 ke paksi pelarut. Kehilangan berat akibat daripda pemeruapan sistem mikroemulsi adalah didapati tidak bergantung kepada nisbah berat pewangi dan AOT, dan komposisi pelarut mikroemulsi. Nisbah berat antara surfactant:pewangi dan kandungan pelarut yang tinggi akan menyebabkan pemeruapan yang tinggi.

Pemeruapan mikroemulsi ini diuji secara gravimetrik dan formulasi terbaik system mikroemulsi ditentukan.