ASSOCIATION BEHAVIOUR OF MIXED BILE SALT AND SODIUM OCTANOATE IN AQUEOUS SOLUTION

OOI SZEE YEN

DEPARTMENT OF CEHMISTRY
FACULTY OF SCIENCE AND TECHNOLOGY
UNIVERSITY COLLEGE TERENGGANU
UNIVERSITI PUTRA MALAYSIA

2000

ASSOCIATION BEHAVIOUR OF MIXED BILE SALT AND SODIUM OCTANOATE IN AQUEOUS SOLUTION

By

OOI SZEE YEN

Thesis Submitted in Partial Fulfillment of the Requirement for the Degree of Bachelor of Science (Hons.) in the Faculty of Science and Technology University College Terengganu University Putra Malaysia Terengganu

ASSOCIATION BEHAVIOR OF
MIXED BILE SALT AND SODIUM OCTANOATE
IN AQUEOUS SYSTEM

By

OOI SZEE YEN

Approved by:

Supervisor

(Prof. Dr. Hamdan B. Hj. Suhaimi)

Date: 3 May 2000

Co- Supervisor

(Dr. Mohd. Effendy ABD. Wahid)

Date: 4 May 2000

Project Co-ordinator

(Assoc. Prof. Dr. Norhayati B. Mohd. Tahir)

Date: 4 May 2000

Head of Chemistry Department

(Assoc. Prof. Dr. Ku Halim Ku Bulat)

Date: 3 Mei 2000

ABSTRACT

Studies on a mixed anionic surfactant system of bile salt and sodium octanoate/ decanol/ water system are carried out at 27 ± 1°C. Results indicated a composition of 0.9 mole fraction of bile salt exhibit a stable and largest micellar region. Results also indicated that the mixture behaved slightly nonideally and its superior properties are due to its synergistic interaction amongst the mixed which gave a molecular interaction parameter value, β of –6 to –6.5.

ABSTRAK

Kajian terhadap sistem surfaktan garam hempedu dan sodium octanoate/ decanol/ air telah dilakukan pada suhu 27 ± 1°C. Keputusan menunjukkan komposisi 0.9 pecahan mol garam hempedu adalah stabil dan mempunyai kawasan misel yang paling luas. Keputusan juga menunjukkan bahawa campuran tersebut menghampiri sifat tidak tidak unggul dan sifat yang lebih baik adalah disebabkan oleh interaksi sinergi antara kedua- dua surfaktan. Nilai parameter interaksi molekul, β adalah di antara –6 ke – 6.5.