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APPENDICES

Appendix A Calculation for Concentration of Surfactant Solution

The concentration of surfactant used is calculated by following Equeation A1.

From; $$wt.\%=\frac{m\times 100}{\%} \quad (A1)$$

Where,

wt.% = weight concentration, %

m = weight of surfactant, g

AM% = active matter, %

1 wt.% of surfactant solution; $wt.\%=\frac{m\times 100}{\%}$

$$1=\frac{m\times 100}{33.33}$$

$$m=3.333$$

From; $$C_1V_1=C_2V_2$$

Where,

V_1, V_2 = volume of surfactant solution, cm^3

50 cm^3 of 0.01 wt.% surfactant concentration;

$$1\times V_1=0.01\times 50$$

$$V_1=0.5$$

0.5 cm^3 of 1 wt.% surfactant solution was mixed with 49.5 cm^3 of de-ionized water to obtain 0.01 wt.% of 50 cm^3 surfactant solution.

Appendix B Critical Micelle Concentration (CMC) Measurement at 25±2 ^{o}C

Figures B1 to B4 shows the CMC measurement for each surfactant by measuring surfactant tension at various concentrations.

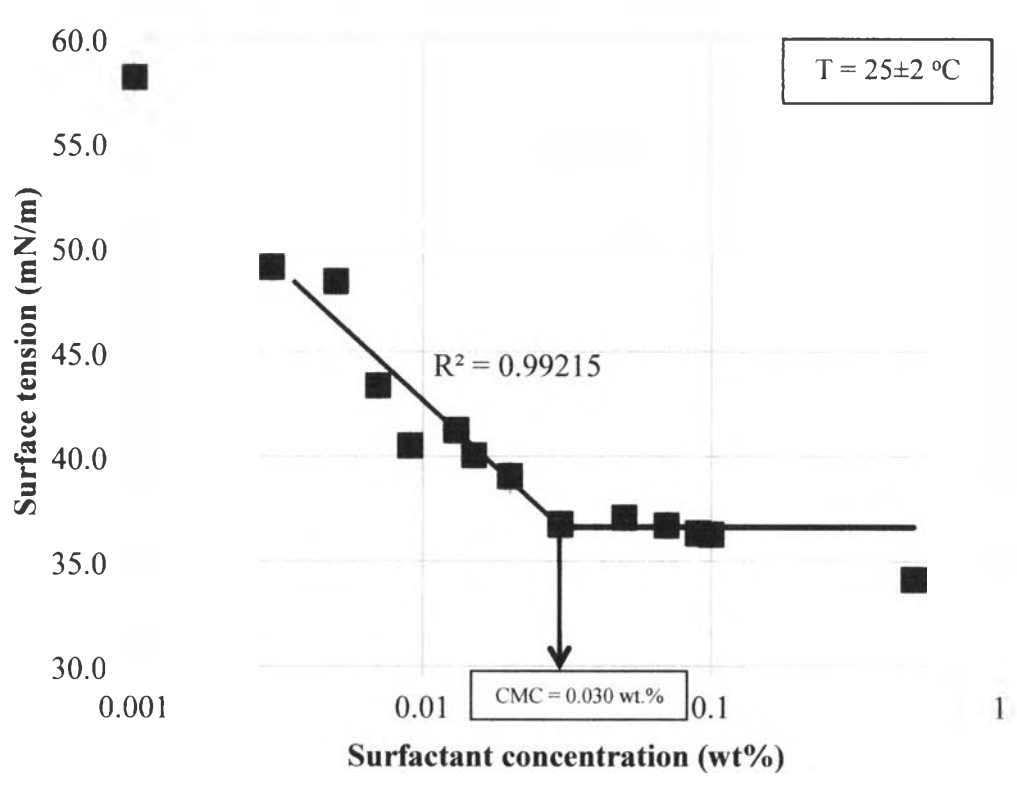

Figure B1 CMC of C15-18 internal olefin sulfonate at 25±2 °C.

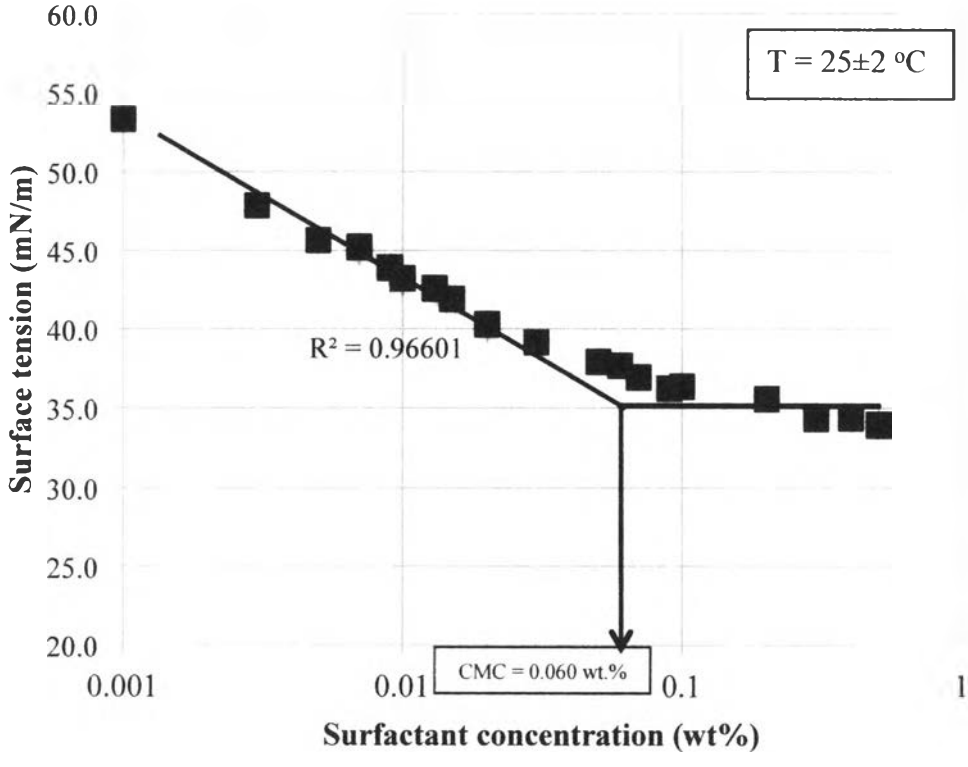

Figure B2 CMC of C19-23 internal olefin sulphonate at 25±2 °C.

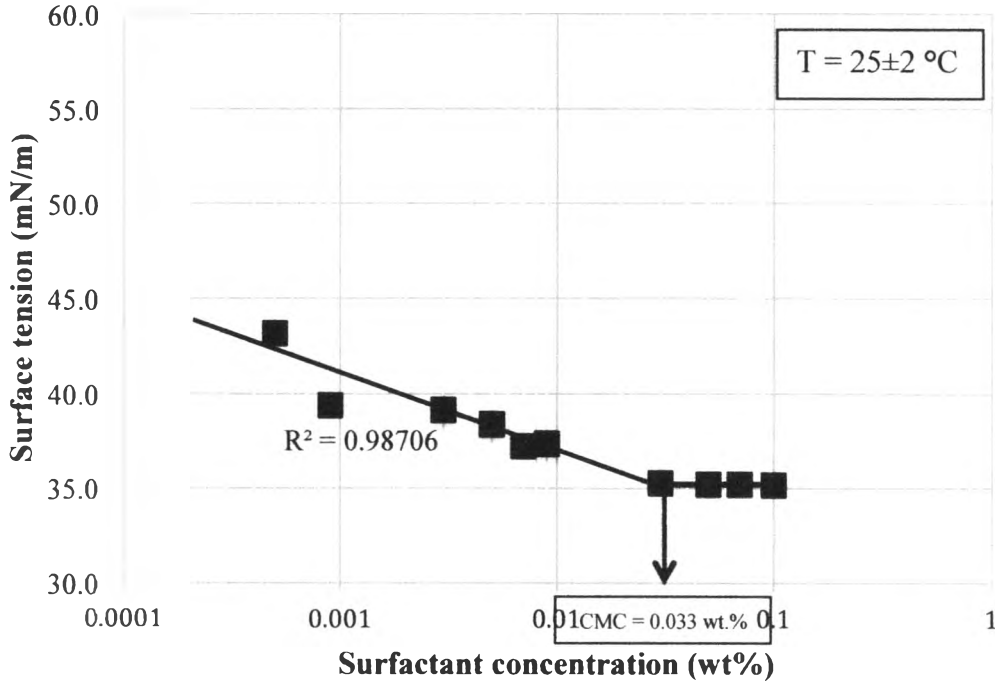

Figure B3 CMC of C16-17 alcohol alkoxy sulfate with 7PO at 25±2 °C.

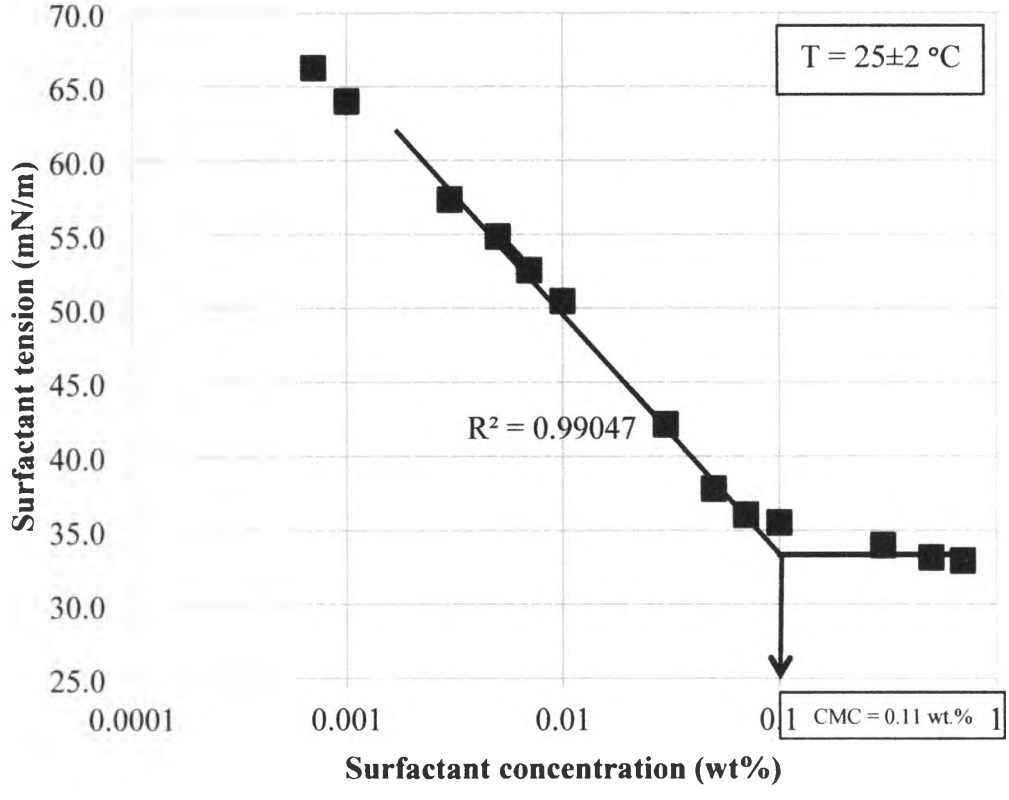

Figure B4 CMC of Sodium dodecyl benzene sulfonate (SDBS) at 25±2 °C.

Appendix C Repeatability of The Foam Stability Measurement

Figure C1 to C3 shows the repeatability of the foam stability measurement.

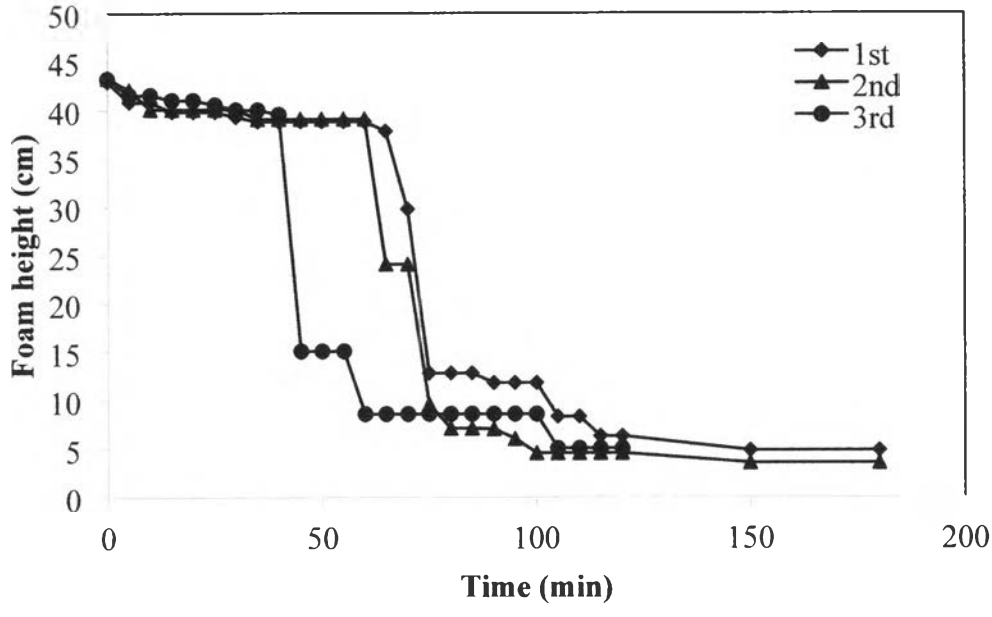

Figure C1 Repeatability of C15-18 IOS foam stability measurement.

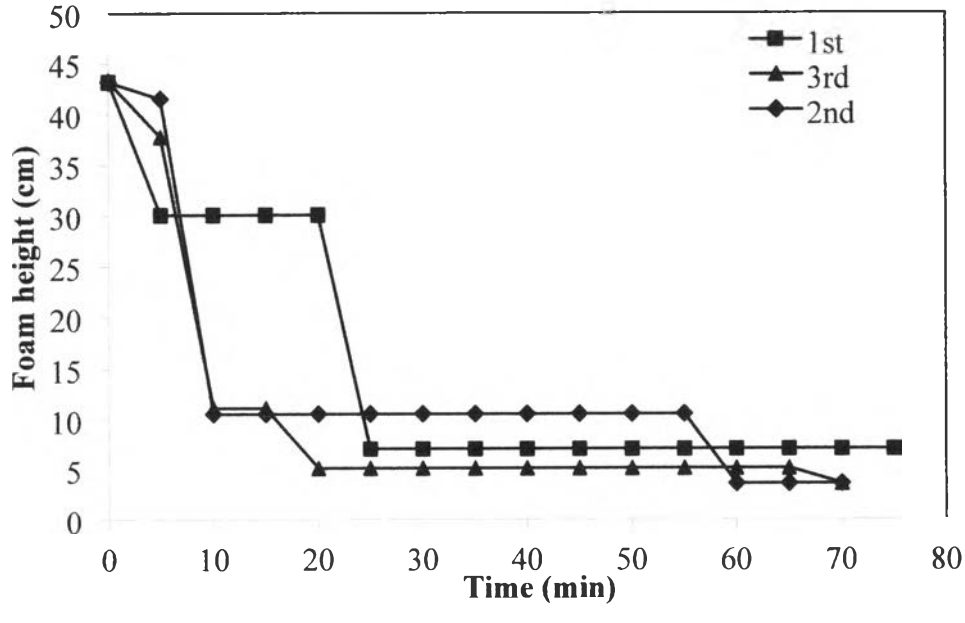

Figure C2 Repeatability of C19-23 IOS foam stability measurement.

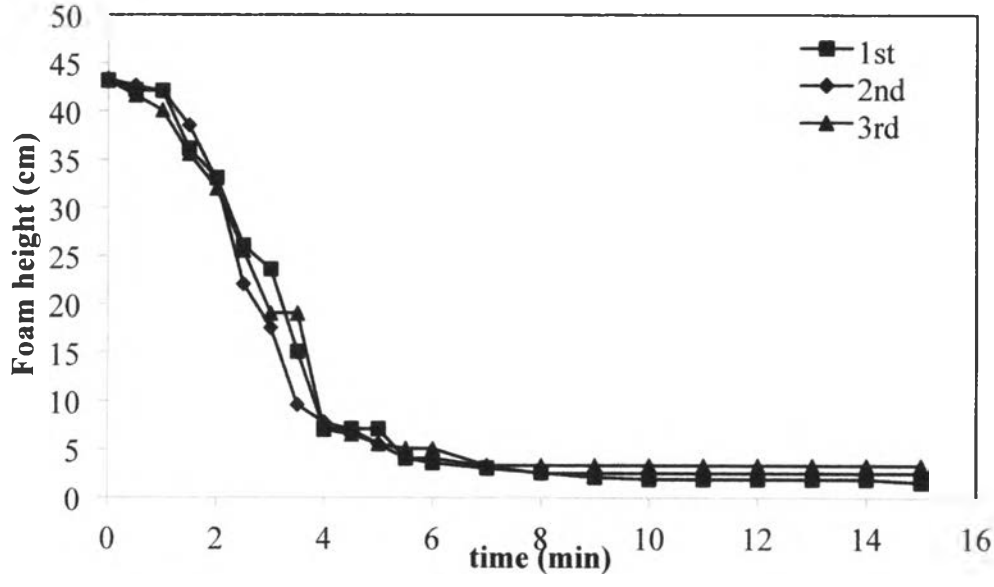

Figure C3 Repeatability of AAS foam stability measurement.

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