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The present thesis is based on the following six papers,

- Paper I** Patil, S. R., Mukaiyama T, Rakshit, A. K. “Interfacial, Thermodynamic and Performance Properties of  $\alpha$ -Sulfonato Myristic Acid Methyl Ester – Hexaoxyethylene Monododecyl Ether Mixed Surfactants”, *J. Disp. Sci. Technol.*, **24** (5), 659, 2003.
- Paper II** Patil, S. R., Mukaiyama T., Rakshit, A. K. “ $\alpha$ - Sulfonato Palmitic Acid Methyl Ester–Hexaoxyethylene Monododecyl Ether Mixed Surfactant System: Interfacial, Thermodynamic, and Performance Property Study”, *J. Surfact. Deterg.* **7**, 87, 2004.
- Paper III** Patil, S. R., Rakshit, A. K. “Physicochemical properties of anionic-nonionic surfactant mixture:  $\alpha$ -sulfonato myristic acid methyl ester (MES) – nonaoxyethylene monododecyl ether (C<sub>12</sub>E<sub>9</sub>)”, *J. Ind. Chem. Soc.* **80**, 345, 2003.
- Paper IV** Patil, S. R., Rakshit, A. K. “Physico-chemical Properties of Aqueous  $\alpha$ -Sulfonato Palmitic Acid Methyl Ester - Nonaoxyethylene Monododecyl Ether Surfactant Mixture” (*to be communicated*).
- Paper V** Sharma, K S., Patil, S. R., Rakshit, A. K. “Study of the cloud point of C<sub>12</sub>E<sub>n</sub> nonionic surfactants: effect of additives”, *Colloids Surf. A*, **219**, 67, 2003
- Paper VI** Patil, S. R., Rakshit, A. K. “Membrane Electrode Sensitive to a Cationic Surfactant in Aquo-Organic Media”, *Anal. Chim. Acta* (*In Press*).

These papers have been referred to as Chapters II, III, IV, V, VI A and VI B respectively Chapter VI A does not represent Paper V in its whole entirety, as some data has not been included from it in thesis, because that is the work of my colleague Mr. K. S. Sharma All the chapters are in accordance with the format of the respective journals, where they are either published, accepted for publication or are to be communicated.