

# Synthesis and characterization both micellization and thermodynamic parameter of cationic surfactant mixture derived from vegetable oil

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## Description

The imidazolinium chloride salts have improved as a potential new material for a wide variety of industrial operations, due to their exceptional structures and properties. Therefore, recognition of the surface properties and thermodynamic criteria of this product is extremely important for fundamental and industrial operations. In this investigation a mixture of fatty imidazolinium chlorides was synthesized dealing with a novel method using sunflower oil as a promoter of fatty acids. The reaction of ethane-1, 2 diamine with a fatty acid yields a fatty imidazoline molecule. Hydrochloric acid was used to obtain fatty imidazolinium hydrochlorides with cationic surfactant properties. A FT-IR and NMR spectroscopic technique was using to establish the synthetic structure. The surface tension and conductivity as a function of the surfactant concentration in aqueous solution were measured at distinct temperatures, to figure out the ...