

EFFECT OF THE NATURE OF SURFACTANT ON THE REACTIVITY OF *C,N*-DIPHENYLNITRONE TOWARDS ACRYLONITRILE IN DIFFERENT MICROEMULSION SYSTEMS

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Abstract. The reactivity of the 1,3-dipolar cycloadditions of *C,N*-diphenylnitrone with acrylonitrile in different microemulsion systems has been investigated. The effect of the nature of surfactant (cationic, anionic), a component of water- and oil-borne microemulsions, on the rate of this reaction have been studied. The electrostatically attractive character of cetyltrimethylammonium bromide, a cationic surfactant, would bring the reactants closer to each other; hence, a rate enhancement would ensue, particularly within the water-rich zone. Besides, the fact that acrylonitrile played a dual role, as a component of the microemulsion and a dipolarophile in the cycloaddition reaction, made the work-up advantageously sound. Additionally, the increase in reagents molar ratio was found to promote higher reactivity.

Keywords: acrylonitrile, cycloaddition, isoxazolidine, microemulsion, nitrone.

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