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Studies on Drug Release Kinetics and Mechanism from Sustained Release Matrix Tablets of Isoniazid using Natural Polymer Obtained from *Dioscorea Alata*

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Abstract : Sustained-release (SR) matrix tablets of Isoniazid and polysaccharide isolated from tubers of *Dioscorea alata*, at different drug to polymer ratios, were prepared by using wet granulation method. The formulated tablets were also characterized by physical and chemical parameters and results were found in acceptable limits. The investigation focuses on the influence of the proportion of the matrix material on the mechanism and the release rate of the drug from the tablets. In vitro drug release appears to occur both by diffusion and a swelling-controlled mechanism, indicates the drug release from the tablet was non-Fickian super case II transport. The drug release data fit well to the Korsmeyer equation.

Keywords : Isoniazid, Sustained-release, *Dioscorea alata*, Natural polysaccharide, etc.

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