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KEY WORD : AQUEOUS DISPERSION POLYMER/MATRIX TABLET

MALLIKA PONGSATHIT: INFLUENCES OF AQUEOUS DISPERSION POLYMER AND COMPRESSION FORCE ON PROPERTIES OF PROPRANOLOL HYDROCHLORIDE MATRIX TABLETS. ADVISORS: AMPOL MITREVEJ, Ph.D., NUTTANAN SINCHAIPANID, Ph.D. AND VARAPORN JUNYAPRASERT, Ph.D., 106 p. ISBN 974-662-515-2

Eudragit<sup>®</sup> NE 30D is a swellable aqueous dispersion polymer which was employed as a retarding agent in propranolol HCl matrix tablets by using fluidized bed granulator (GPCG1). The matrix tablets were composed of Eudragit<sup>®</sup> NE 30D as matrix material and Emcompress<sup>®</sup> as additive. The granules were prepared by wet granulation with 5, 10, 15 and 20 %w/w Eudragit<sup>®</sup> NE 30D and compressed to tablets at 400, 800 and 1,200 kgs forces. It was found that the release rates decreased with an increase in content of Eudragit<sup>®</sup> NE 30D. The effect of compression force on drug release was found to be non-significant. The compression force was employed sufficiently high in order to maintain the integrity of the tablets throughout the dissolution test. At these compression forces, the release rate could be independent of tablet porosity. It was found that the dissolution of the drug from the matrix tablets containing 20 %w/w Eudragit<sup>®</sup> NE 30D met USP 23 requirement for propranolol HCl extended-release; the release pattern appeared to follow first-order kinetic model.