

# SUSTAINED RELEASE FLOATING *IN SITU* GELLING SUSPENSION OF ACYCLOVIR

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## ABSTRACT

Acyclovir has a 10-30 % oral bioavailability with a half-life of 2-3 h. Acyclovir mainly gets solubilized in acidic conditions, and its absorption is found in the upper GIT. The primary aim of this research work was to formulate gastroretentive dosage form of acyclovir that can float on gastric content. The polymer used was sodium alginate, while the floating agent was calcium carbonate. The dependent variables of drug release, floating lag time and viscosity were significantly impacted by sodium alginate and CaCO<sub>3</sub> concentrations. To assess the desired release pattern, a dissolution was performed in 0.1 N HCl at 50 rpm. Shear-thinning behaviour, instant gelation, 99.2 % drug release at 12 h, and instant floating ability greater than 12 h in 0.1 N HCl were all observed in the suspension. Consequently, a sustained-release floating dosage form for acyclovir, with a duration of 12 h, was successfully developed.