



## Preparation and *In Vitro* Characterization of Microparticles Loaded with Cimetidine: Analysis of Dissolution Data using DDSolver

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**SUMMARY.** Preparation and *in vitro* characterization of floating microparticles loaded with cimetidine (FMC) for oral delivery was the objective of this study. Non-solvent addition coacervation technique using hydroxypropylmethylcellulose (HPMC) as the rate controlling polymer was employed to achieve FMC. Three formulations of FMC were prepared and optimized regarding encapsulation efficiency and dissolution kinetics. Among all formulations, FMC2 having 1:3 ratio of cimetidine:HPMC exhibited the better *in vitro* performance regarding encapsulation efficiency and dissolution kinetics than that of FMC1 and FMC3. In conclusion, the FMC can be designed via non-solvent addition technique.

**KEY WORDS:** Cimetidine, Hydroxypropylmethylcellulose (HPMC), *In vitro* characterization, Microparticles.

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