



## Release Behavior and Bioadhesivity of a Hydrophobic Polyacid Gel

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**SUMMARY.** The release behavior of salicylic acid and the bioadhesion properties of crosslinked polyacid hydrophobic-gel disks, containing methyl methacrylate-co-methacrylic acid, were evaluated in simulated fluids. In gastric fluid a very low amount of drug was released with a minimal swelling and water uptake. The drug release was dependent of the drug precipitated in the interconnecting micropores of the disk structure. The transport and release type in this medium ranged from Fickian to zero order depending of drug loading. In intestinal fluid, disks swelled completely and the water absorption capacity was eight-fold its dry weight. In this case the released drug showed a biphasic behavior with a fast linear release ( $M_t/M_\infty \leq 0.6$ ), followed by a slow drug release controlled by the gel swelling. Bioadhesion was measured by the tensiometer method on pig mucosae, the results indicated that these polyacid hydrogels are weak bioadhesives on both gastric and intestinal mucosae.

**KEY WORDS:** Bioadhesion, Controlled release, Hydrogels, Hydrophobic polyacid gels.

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