

## Effect of Swelling Pressure on Drug Release from Polyelectrolyte Micro-Hydrogel Particles

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**Abstract :** Hydrogels are extensively studied as matrices for the controlled release of drugs. To evaluate the mobility of embedded molecules, these drug delivery systems are usually characterized by release studies. In this contribution, an electronic device for swelling pressure measurement during drug release from hydrogel network was developed. Also, poly acrylic acid micro particles were prepared for prolonged and sustained controlled acetaminophen release. Effect of swelling pressure on drug release from micro particles studied under different environment pH in order to predict release profile in gastro-intestine medium. Swelling ratio and swelling pressure were measured in different pH.

**Keywords :** swelling pressure, drug delivery, hydrogel, polyelectrolyte

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