

# **Synthesis of Ibuprofen-PEG Prodrug and Study the Hydrolysis at Different Phosphate Buffers**

## **Abstract:**

The present study is conducted to prepare Ibuprofen as polymeric prodrug to improve its important physiochemical properties, increasing water solubility and decrease its side-effects. The product is characterize by using chemical and spectral methods .Then controlled release of Ibuprofen in from its polymer, in different phosphate buffers ( pH =8.5, 7.5 and 1).The result show the percentage release of Ibuprofen was high at basic pH.

**Keyword:** prodrug, polymeric prodrug, Ibuprofen, PEG