

Introduction

Theophylline is well known used in asthma. Its therapeutic range is narrow, blood level concentration between 10-20 micrograms. Due to its toxicity and easily to be eliminated from blood circulation, to control the release rate and reduce the frequency of administration, it is necessary to prepare in controlled release dosage form. From several reports, the methods of production are spray drying techniques (Takeuchi, H. et al 1989), direct compression (Young, S. and Horng, Y., 1989), matrix tablet (Shah, A.C., 1989, Timmins et al 1992), membrane coated tablet (Marini et al 1991), Pelletization (Mario, A. et al 1983).

This experiment performed by wet granulation using Sodium alginate as hydrophilic polymer. (Alginate forms gel in water but it is insoluble at pH less than 3, Boylan, 1986). The release rate of tablet affected by gel formation and erosion of matrix. The release profile will show the release rate at different pH in term of diffusion constant and erosion constant. The pH relate to viscosity will be discussed. The releasing pattern of theophylline at different pH will be shown.