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Comparative Study of Floating Tablets of Theophylline by various methodologies of Formulation

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Abstract

The main intention of the present study is to develop the floating tablet of theophylline by employing various techniques and to execute the comparative study between the formulations. Various techniques are utilized for the formulating the floating tablets with an intention of prolonged gastric residence time and reduction in inconstancy of drug. Theophylline, an xanthine derivative bronchodilator is used as a model drug and three techniques for developing floating tablets were accustomed viz, direct compression effervescent technique, non-aqueous wet granulation technique and solvent evaporation technique. HPMC 15cps and Sodium alginate was used as polymer in all the formulations. Sodium bicarbonate and tartaric acid was utilized as gas generating agent. The prepared tablets were evaluated in terms of pre-compressional parameters, physical characteristics, in vitro drug release, floating duration and floating lag time. The optimized formulation shows that it could release the drug for more than 8 hours and remain buoyant for more than 8 hours.

Keywords: Theophylline, Direct compression effervescent technique, Non-aqueous wet granulation, Solvent evaporation technique, comparative study.

Biography

Sujan Neupane was an assistant professor in the Mallige College of Pharmacy, India. He has published many research articles and received many awards for his publications.



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