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Ibuprofen syrup made by mixed solubilization technique: Formulation and evaluation

Amrita Thakur

Rungta College of Pharmaceutical Sciences & Research, Rungta Educational Campus, Khoka-Kurud Road, Bhilai, Chhattisgarh 490024 Bhilai (C.G.) and School of Pharmacy, Vishwakarma University, Survey No 2, 3,4, Kondhwa Rd, Laxmi Nagar, Betal Nagar, Kondhwa, Pune, Maharashtra 411048, Pune (M.H.)
Corresponding author email: amritathakur01@gmail.com

Dr. D.K. Tripathi

Rungta College of Pharmaceutical Sciences & Research, Rungta Educational Campus, Khoka-Kurud Road, Bhilai, Chhattisgarh 490024 Bhilai (C.G.)

Dr. Hemant Badwaik

Shri Shankaracharya Institute of Pharmaceutical Science, Junwani, Bhilai, Distt. Durg Chhattisgarh- 490020, Bhilai (C.G.)

Dr. Kartik Nakhate

Shri Vile Parle Kelavani Mandals Institute of Pharmacy, Survey No. 499, Plot No 03, Mumbai - Agra National Hwy, behind Gurudwara, Samta Nagar, Dhule, Maharashtra 424001 Dhule (M.H.)

Abstract--The aim of the present study was to prepare a liquid dosage form (syrup) of a NSAID (ibuprofen) by mixed solvency technique. The syrup formulation was prepared by using mixed hydrotropic method in which potassium citrate, sodium citrate, potassium acetate and disodium hydrogen phosphate were used as hydrotropes. Glycerine and tween 80 were also used in the formulation. The syrup was prepared by agitation method. At first solubility of the model drug Ibuprofen was identified by dissolving it with different hydrotropes. It was observed that the solubility of ibuprofen increased with increase in concentration of the hydrotropes. However, it is difficult to develop a formulation with very concentration of hydrotropes. Therefore, co-solvent and surfactants were also added to enhance the solubility of the ibuprofen. Glycerine and tween 80 were used along with blends of hydrotropes to increase the solubility of Ibuprofen. The results, showed 3000 times increase in solubility of the ibuprofen drug. Also, the drug content of the prepared formulation was found to be 99.67% which proved the mixed

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