

ABSTRACT

The Influence of Wetting Agents at Premixing Stage on Piroxicam–Lactose–PVP K-30–Polyplasdon XL-10 Granule Characteristics Prepared by Fluid Bed Granulation (As the Intermediate Product of Piroxicam ODT)

Attempts were made to prepare orally disintegrating tablet (ODT) of piroxicam by employing fluid bed granulation method. The aim of the present study was to investigate and compare the properties of granule that the tablets based on prepared by wet granulation in a fluid bed granulator. This study is focused on the additional use of 0,5% wetting agents, namely Tween 80 and PVP K-30, to improve the wetting behavior and distribution of PVP K-30 as binder on granulated particles. The additions 0,5% Tween 80 (F1), 0,5% PVP K-30 (F2), and 0,25% Tween 80 together with 0,25% PVP K-30 (F3) were applied to observe the difference of physical characteristics of the formed granules in terms of flow rate, angle of repose, size distribution, moisture content, density, compressibility, porosity, compactibility, and the uniformity of active ingredient concentration as well. The research revealed that granules prepared by 0,5% PVP K-30 (F2), yielded the best result in term of its physical characteristics. Uniformity of active ingredient concentration studies revealed that the addition of 0,5% PVP K-30 was the optimal use of wetting agent encouraging the highest piroxicam concentration of the granules among others.

Keywords : piroxicam, orally disintegrating tablet, fluid bed granulator, wetting agents.