ABSTRACT

CHARACTERIZATION OF PARACETAMOL ORALLY DISINTEGRATING TABLET WITH GELATIN BINDER 1% AND 2% USING DISINTEGRANT POLYPLASDone XL-10 5%
(Prepared with Mannitol Base using Freeze Drying Method)

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Paracetamol Orally Disintegrating Tablet (ODT) was made to solve incompliance problem caused by difficulties of swallowing, especially in pediatric and geriatric patient. Paracetamol ODT prepared by freeze drying method, using gelatin as binder (1% and 2%), polyplasdone XL-10 5% as disintegrant and mannitol as filler. Paracetamol, physical mixture and paracetamol ODT were then characterized using Powder X-Ray Diffractometry (PXRD), Differential Thermal Analysis (DTA) and Scanning Electron Microscope (SEM). Effect of varying concentration of gelatin as binder on physical tablet characterization was studied. PXRD study showed that the ODT formulation with 2% gelatin has the lowest degree of crystallinity compared with others. DTA study can’t represent the decrease of paracetamol crystallinity because overlapping of endothermic peaks occured between paracetamol and other excipients. Tablet characterization by SEM showed paracetamol ODT has porous structure that provide fast disintegration of tablet.

Keyword: orally disintegrating tablet; paracetamol; gelatin; polyplasdone XL-10; mannitol; freeze drying; characterization.