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Research

Development and Characterization of Linagliptin Oral Disintegrating Tablets

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Abstract

Linagliptin is an anti-diabetic drug used for the treatment of type 2 diabetes, it is belongs to the class of dpp-4 inhibitor. It has long half-life of about 8.6-23.9 hours and hence to achieve immediate therapeutic action it needs immediate release tablet formulation. Among the various techniques using superdisintegrants is a simple approach to formulate immediate release tablets. It undergoes an extensive hepatic first pass metabolism leads to low oral bioavailability (30%). ODT can overcome this problem through improving its bioavailability with an immediate drug release. In the present work, Oral disintegrating tablets of Linagliptin were prepared by direct compression method using superdisintegrants such as Crosspovidone lycoat, and Tulsion. The dispersion time of tablets were reduced with increase in the concentration of super disintegrants like Crosspovidone, lycoat, and Tulsion. From the results obtained, it was concluded that Tulsion was found to be the best among the superdisintegrants, the highest drug release of F9 is 99.45% of the drug in 20 min.

Keywords: Linagliptin, Crosspovidone, lycoat, Tulsion, Oral disintegrating tablets.