**ABSTRACT**

R-Ondansetron hydrochloride is an antiemetic agent that can be used in the treatment of nausea, vomiting and motion sickness. It is very bitter in taste so the bitter taste of the drug was masked by Kyron T-134. Kyron T- 134 is a weak acid-cationic resin. The swelling time, stirring time and drug: resin ratio was found to affect the masking of taste, so it was observed that as the dissociation of cationic ion increases, better taste masking and increased drug loading were obtained.

The various superdisintegrants used in the present study were, crospovidone, sodium starch glycolate and croscarmellose sodium. Various formulations of ODT were prepared by direct compression method. The prepared orally disintegrating tablets were evaluated for general appearance, drug content uniformity, hardness, friability, wetting time, *In-vitro* disintegration time and *In-vitro* drug release studies. All the batches of the formulations possessed required physicochemical parameters. The most satisfactory formulation possessed minimum disintegration time of 16.00 sec and released maximum amount of drug in shortest duration of time of 30 min. It was found to be stable during stability studies conducted for 2 month as per ICH guidelines.

**Keywords:** ODT; R-Ondansetron hydrochloride; Taste masking; Superdisintegrants.