ABSTRACT

The purpose of this research work was to prepare immediate release tablets containing a low solubility drug. Mycophenolate mofetil is an immunosuppressant drug. A Simplex lattice design of experiment was used to study the effect of diluent, binder, disintegrating agent on the disintegration and dissolution of Mycophenolate mofetil tablets.

IR tablets containing Mycophenolate mofetil were prepared by using various superdisintegrants such as povidone, croscarmellose sodium and sodium starch glycolate by direct compression method. The superdisintegrants such as povidone, croscarmellose sodium and sodium starch glycolate were independent variables and the observed responses (dependable variables) were disintegration time, hardness and friability. The prepared IR tablets by the above mention method were evaluated for appearance, hardness, friability, disintegrating time, estimation of drug content and *in vitro* drug release studies. The best formulation shows the minimum disintegrating time of 31.6 ± 2.87 s and release maximum amount of drug in 24 min. Short term stability studies indicated no significant changes in hardness, friability, disintegration time, drug content and *in vitro* drug release studies.

Keywords: IR; Mycophenolate mofetil; immunosuppressant; Simplex lattice design.