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EFFECT OF VARIOUS SUPERDISINTEGRANTS ON IMMEDIATE RELEASE FORMULATIONS OF SGLT2 INHIBITOR DAPAGLIFLOZIN

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ABSTRACT

Type II diabetes is the most common form of diabetes accounting for 90% of diabetes cases. Recently, few novels anti diabetic drugs emerging which belongs to sodium glucose transporter -2 inhibitors (SGLT2). These SGLT2 inhibitors prevent the reabsorption of glucose into blood by the kidney. The present study was under taken to evaluate the effect of various superdisintegrants on immediate release of SGLT2 inhibitor Dapagliflozin containing formulations. In the present study, total 12 formulations were developed various superdisintegrants like Sodium starch glycolate, crosscaremellose sodium, pregelatinized starch and kyron T-314 were used in varying concentration and tablets were prepared by direct compression technique. All the prepared formulations subjected for pre compression and post compression parameters, disintegration time, dispersion, wetting time profiles and *in-vitro* dissolution profiles. Results revealed that formulation containing 6% Kyron T-314 (IR12) was found to be the best amongst all other having 99.93% of drug release in 30 minutes. The optimized formulation IR12 (6% kyron T-314) also showed satisfactory drug content (99.65%), disintegration time of 20 seconds and satisfactory stability.

KEYWORDS: Dapagliflozin, Superdisintegrants, Disintegration Time, Type II Diabetes