

Effect of the applied pressure on the essential characteristics of sodium starch glycolate tablets

ABSTRACT

Immediate onset of action in a lot of cases is extensively used than ordinary therapy, however; produce tablets with acceptable features as tensile strength, suitable with acceptable industrial limits, reduced ordered unit segregation tendency, and rapidly or appropriate disintegration time, is a classic problem. Use disintegrant is considered one of corner stone to achieve pharmaceutical tablets that meet requirements of recommended tablet formulation in the markets. Sodium Starch Glycolate as an elastic material (super disintegrant) is the component of compacted tablets by direct compression in current work. Uniaxial compaction process was implemented by utilizing a universal testing machine. The tablets were compacted under applied load ranging from 75 to 375 MPa. A 13 mm diameter cylindrical die was used to characterize the compression behaviour of the 1.0 ± 0.01 g of material. Number of the evidences from this study is, the tableted powder characteristics and the volume-pressure measurements relationship were investigated. The recommended tablet formulations were evaluated by using elastic relaxation, indirect tensile strength, friability, and disintegration tests. Applying load higher than 150 Mpa produces compacts with a longer disintegration time, low elastic relaxation, in addition to tensile strength and friability percentage identical to recommended tablets formulation in the markets.

Keyword: Pharmaceutical tablets; SSG; Tensile strength; Disintegratio; Direct compression (DC)

