

ABSTRACT

FORMULA OPTIMIZATION OF LEVOFLOXACIN TABLET WITH PVP K-30 AS BINDERS AND SODIUM STARCH GLYCOLATE AS DISINTGRANTS

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The aim of this study was to determine the effects of PVP K-30 and Sodium Starch Glycolate againts tablet physical quality profile and dissolution of the tablet as well as the optimum formula of the Levofloxacin tablet. The formula made by Factorial Design 2^2 which has two factors and two levels on each factor. Four formulas were made by wet granulation method using 2% and 4% of PVP K-30 and 2% and 4% of Sodium Satrch Glycolate. Before compressing, the particle size distribution, amount of fines, moisture content, flow properties and angle of repose of the granules were evaluated. Once compressed, the physical quality evaluation (hardness, friability and disintegration) also dissolution test were performed on the tablets. The data obtained were statistically analyzed using the Minitab 17 software. The result showed that PVP K-30 increase the tablet hardness, the friability and the disintegration time but lower the dissolution, while Sodium Starch Glycolate decrease the hardness, increase the friability, insignificantly decrease the disintegration time and extend the dissolution. Area on the Overlaid Contour plot showed the optimum formula with feasible tablet physical quality profile (friabilty, disintegration time) and dissolution rate. Further research are needed.

Keyword: Levofloxacin; PVP K-30; Sodium Starch Glycolate; Factorial design; Tablet physical quality profile; Dissolution rate.