

ABSTRACT

**OPTIMIZATION OF KETOCONAZOLE TABLET FORMULA
CONTAINING COMBINATION OF STARCH 1500 AND AVICEL
PH 102 AS FILLER AND SODIUM STARCH GLYCOLATE AS
DISINTEGRANT**

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Tablets are the dosage form mostly used because economically it was relatively inexpensive and was used orally which makes it easy to use. The aim of this study was to determine the effect of a combination of Starch 1500-Avicel pH 102 as fillers and Sodium Starch Glycolate as disintegrant on the physical quality of tablets (hardness, friability, disintegration) and dissolution rate and to obtain an optimal formula . Tablets are made by the dry granulation method. The data obtained were statistically analyzed using Minitab® version 17 software. The results showed that increasing Starch 1500 in combination of Starch 1500 and Avicel pH 102 as well as increasing sodium starch glycolate reduced hardness, increased friability, increased disintegration time and decreased dissolution significantly. The white area inside the overlaid contour plot shows that it is the most optimal area and meets the physical quality requirements (hardness, friability, disintegration time) and dissolution rate. F2 was chosen as the most optimal formula because it is in a white colored area on the overlaid contour plot and has the greatest dissolution rate with % dissolved at the 30 minute is 99.69% and physical quality that meets the requirements namely hardness ($7.01 \pm 0, 17$) kP, friability (0.52)%, and disintegration time ($19.87 \pm 6,76$) seconds.

Keyword: Ketokonazol, Starch 1500, Aicel pH 102, Soidum Starch Glycolate