DETERMINATION OF STEM BROMELAIN ACTIVITY FROM PINEAPPLE PLANT (*Ananas comosus*)

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ABSTRACT

DETERMINATION OF STEM BROMELAIN ACTIVITY FROM THE PINEAPPLE PLANT (*Ananas comosus)*

Entire parts of pineapple *(Ananas comosus)* contains proteinase enzyme called bromelain. The objectives of this study are to extract and purify bromelain enzyme from stem of the pineapple and to determine the bromelain enzyme activity from this plant. This studied covered the preparation crude extract of stem from pineapple. Then, purification of enzyme was done by ammonium sulphate precipitation and dialysis. Concentration of the bromelain present was estimated by using Lowry and Bradford method. Bromelain was assayed for its activity by hydrolysis of gelatin, and were represented by using gelatin digestion unit (GDU). The molecular weight of the stem bromelain was confirmed by using gel electrophoresis. It was found that GDU test showed that ammonium sulphate precipitation give the highest enzymatic activity that are 205.8959 GDU/gram. In Lowry method, crude stem showed the highest bromelain concentration that is -4.076 mg/ml whereas Bradford method showed dialysis has the highest protein concentration that is 109.227 mg/ml.