

ABSTRAK
ISOLASI DAN KARAKTERISASI AMILASE DARI BIJI ALPUKAT
(*Persea americana* Mill.)

Amilase merupakan enzim yang dapat memecah amilum atau pati menjadi monosakarida. Amilase juga banyak digunakan di dalam dunia industri, seperti industri roti, sirup, tekstil, deterjen, dan farmasi. Amilase dapat diperoleh dari hewan, tumbuhan, maupun mikroorganisme. Pada penelitian ini sumber amilase diperoleh dari biji alpukat. Amilase diekstraksi dengan bufer fosfat 50 mM pada pH 7 untuk memperoleh ekstrak kasar enzim. Ekstrak kasar kemudian difraksinasi dengan ammonium sulfat dengan variasi tingkat kejenuhan 40%, 50%, 60%, dan 70%, kemudian didialisis. Aktivitas amilase ditentukan dengan metode Fuwa dan penentuan kadar proteinnya menggunakan metode Bradford. Aktivitas spesifik tertinggi yang didapatkan yaitu sebesar 10,3328 U/mg pada tingkat kejenuhan 50%. pH optimum dan suhu optimum masing-masing diperoleh pada pH 9 dan suhu 50 °C.

Kata-kata kunci: Amilase; biji alpukat; aktivitas spesifik; fraksinasi; dialisis; metode Fuwa; metode Bradford.



ABSTRACT

ISOLATION AND CHARACTERIZATION OF AMILASE FROM AVOCADO SEEDS (*Persea americana* Mill.)

Amylase was an enzyme that can hydrolases starch into monosaccharides. Amylase was also widely used in industry, such as bakery, syrup, textile, detergent, and pharmaceutical industries. Amylase can be obtained from animals, plants, or microorganisms. In this study the source of amylase was obtained from avocado seeds. Amilase were extracted with 50 mM phosphate buffer at pH 7 to obtain the crude extract of the enzyme. The crude extract fractionated by salting out method used ammonium sulfate (NH₄)₂SO₄ with variation in concentration of 40%, 50%, 60%, and 70%, and dialysis used the phospat buffer. Amylase activity was determined by Fuwa method and determination of protein concentration used Bradford method. The highest specific activity obtained was 10,3328 U/mg at concentration 50%. The optimum pH and optimum temperature were obtained at pH 9 and 50 °C, respectively.

Keyword: Amylase; avocado seeds; specific activities; fractionation; dialysis; Fuwa method; Bradford method.

