Thesis Title Purification of uricase from *Candida utilis*

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ABSTRACT

Uricase (urate oxidase, E.C. 1.7.3.3) is an enzyme responsible for the breakdown of the purine to allantoin in variety of living systems.

Due to its potential use in clinical chemistry and in therapy, uricase has been isolated and purified from various sources. Attempts have been made to purify uricase from *Candida utilis*. Crude extract was fractionated by 40-60% saturated ammonium sulfate precipitation, DEAE-cellulose column chromatography and Sephadex G-200 column chromatography, respectively. The enzyme was purified about 37 fold at 11% yield. The molecular weight of purified uricase estimated by gel filtration on Sephadex G-200 column was 120,000 Da. The molecular weight of sub-unit was 30,000 Da on SDS-polyacrylamide gel electrophoresis. The optimum pH and the optimum temperature for the

enzyme were 8.5 and 37°C respectively. The K_m value for uric acid of the enzyme was 10-11 μM.