Documents

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Production, optimization, purification and properties of uricase isolated from some fungal flora in Saudi Arabian soil
(2011) *Australian Journal of Basic and Applied Sciences*, 5 (10), pp. 220-230.

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Abstract
The present study deals with production, extraction and purification of the intracellular and extracellular fungal uricase. The fungal flora will be isolated from soil were (Aspergillua niger, Rhizopus stolonifer, Penicillium chrysogenum and Fusarium moniliforme). Optimization of some nutritional and physical factors in the basal medium in order to intensify the production of extracellular and intracellular uricases will be carried out. 0.1% uric acid, 0.2% sodium phosphate were higher inducer for A. niger uricases. The enzymes will be purified to homogeneity from the most uricase producing organism (A. niger) by salting out with ammonium sulphate, dialysis and passage through chromatography resins (Sephadex G-200 column, Sephadex G-100 and Diethylaminoethyl cellulose column) and test for purity by simple polyacrylamide gel electrophoresis technique. Three extracellular uricase UI, UII and UIII and one intracellular uricase UIV were obtained with specific activities 105.9, 81.25, 101.96 and 9.66, respectively. The molecular weight of A. niger extracellular uricase isoenzymes UI, UII, UIII and UIV were 39.70, 30.50, 55.30 and 18 KDa., respectively. Studying factors affecting the activity of the purified uricase enzyme will be determined.

Document Type: Article
Source: Scopus