

Production to high concentration of GABA using pH controlled reactor

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Glutamate decarboxylase(GAD) is the enzyme which catalyses the conversion of glutamate onto GABA, through a single step α -decarboxylation. Gamma-aminobutyric acid, a four-carbon non protein amino acid, acts as the major inhibitory neurotransmitter of the central nervous system. Other physiological functions of GABA are induction of anti-hypertensive, prevention of diabetes, diuretic and tranquilizer effects. GABA is extensively used in pharmaceutical preparations and functional foods. In this study, investigated effects of pyridoxal 5'-phosphate, initial MSG concentration and pH change. As a results, the 1 mole MSG was converted to 1 mole GABA during 10 hour using pH controlled reactor.