

Production of Alpha-Ketoglutarate by High-pressure reactor

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α -Ketoglutarate (also called oxo-glutarate) is an important nitrogen acceptor in metabolism. It is produced by oxidative deamination of glutamate or reductive carboxylation of succinate. It has been used for the production of creatin- α -ketoglutarate which used as a fitness supplement. In this study, we developed an efficient α -ketoglutarate production system using high pressure reactor. Moreover, covalently attached and aggregated L-glutamic dehydrogenase retained a high degree of stability, were easily recovered from the enzyme solution, and could be used repeatedly. Conversion yield of different pressure(14.69, 1000, 2000 and 3000psi) for High pressure reactor were 7.9%, 22%, 42.6% and 45.3%, respectively.