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LAWADEE LERTTRILUCK : LIQUID STATE FERMENTATION OF CITRIC ACID FROM N-PARAFFIN BY YEASTS. THESIS ADVISOR : ASSIST. VINICH KHAMVIWAT, ASSO. PROF. SONGSRI KULPREECHA, Ph.D. 142 PP. ISBN 974-581-626-4

Twenty five strains of yeasts were screened. It was found that 16 strains of yeasts could grow and produce acids. Only 7 strains could produce citric acid by utilizing n-paraffin as a carbon source. Candida oleophila C-73 gave the highest yield of citric acid (29.5 g/l) in n-paraffin containing medium. The optimal compositions of production medium for citric acid fermentation by Candida oleophila C-73 contained 10% (w/v) n-paraffin (Exxpar-451), as a sole carbon source, and 0.2% (w/v) anmonium nitrate as a nitrogen source. The other important compositions were 0.01% (w/v) potassium dihydrogen phosphate, 0.05% (w/v) magnesium sulfate heptahydrate, 0.02% (w/v) manganese sulfate monohydrate, 0.1% (w/v) yeast extract and 10% (w/v) calcium carbonate. The optimal condition for citric acid production was carried out acrobically by rotary shaken at 300 rpm, 25 ^{o}C with the addition of 0.001% (w/v) 2, 4-dinitrophenol after cultivation for 24 hours. The highest citric acid production (131.5 g/l) was obtained after 6 days of cultivation.