

반응표면분석법을 이용한 *Arthrobacter* sp.의
카로티노이드 생산배지 최적화

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This study was conducted to optimize the medium composition for carotenoid production by *Arthrobacter* sp. through response surface methodology (RSM). *Arthrobacter* sp. was supplied from Polar and Alpine Microbial Collection, Korea Polar Research Institute. Using a Placket-Burman design, from which yeast extract, MgSO₄ and dextrose were identified as the significant factors affecting carotenoids production. RSM studies for carotenoids production have been carried out for three parameters of yeast extract, MgSO₄ and dextrose concentrations. These significant factors were optimized by experiments and RSM, as 1 g/L yeast extract, 0.0879 g/L MgSO₄ and 1 g/L dextrose. The experimentally obtained concentration of carotenoid was 288 mg/L, and it became 2-fold increase on concentration before optimization.