

Medium optimization for the production of astaxanthin using response surface methodology

최종일*, 김현도
전남대학교 생물공학과
(choiji01@jnu.ac.kr*)

In this study, surface response methodology was used to optimize the medium composition for the production of astaxanthin by *Paracoccus* sp.. A screening test was first conducted on 5 medium components using a Plackett-Burman design, from which MgSO₄ and yeast extract were identified as the significant factors affecting astaxanthin production. These significant factors were optimized by central composite design of experiments and response surface methodology. With the optimized medium compositions, the experimentally obtained concentration of astaxanthin was 1.021 mg/L, where it had been 0.4 mg/L before optimization.