

오실라토리아 최적 성장을 위한 aeration rate와  
외부탄소원 선정 연구

이태윤<sup>†</sup>, 임준혁<sup>1</sup>

부경대학교; <sup>1</sup>부경대학교 화학공학과

(badger74w@pknu.ac.kr<sup>†</sup>)

The objective of this study was to determine optimum aeration rate for the cultivation of *Oscillatoria* sp. and also to find adequate acetate types and concentrations as organic carbon source for the cultivation of *Oscillatoria* sp. Among different aeration rates, 0.55 vvm resulted in the highest specific growth rate of 0.287 day<sup>-1</sup>. Among four different acetate compounds as organic carbon sources, ethyl acetate was found to be effective for *Oscillatoria* cultivation. The highest maximum specific growth rate (0.347 day<sup>-1</sup>), maximum biomass productivity (0.214 g L<sup>-1</sup> d<sup>-1</sup>), and maximum concentration (2.05 g/L) were obtain at the dosage of 30 mM of ethyl acetate. In summary, aeration and dosage of more than 20 mM of ethyl acetate is recommended for the efficient cultivation of *Oscillatoria*.