

High cell density culture of *Anabaean variabilis* using repeated additions of nutrients and light energy

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Abstract

The basic requirements for high-density photoautotrophic cyanobacterial cultures in photobioreactors are suitable medium composition and proper light energy. Because phosphate was consumed first among nutrients in BG 11 medium, initial phosphate concentration in the medium was increased from 15 to 60 mg/l. Cell concentration reached 3.8 g dry cell/l in 6 days when initial phosphate concentration was 45 mg/l. As the increase of light lengthened the period of exponential growth phase and medium addition increased final cell density, high cell density culture was achieved using repeated additions of both nutrients and light energy. The final concentration was 4.6 g dry cell/l in 4.5 days.

References

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