

Effect of carbon, nitrogen source and other conditions for enhancing phycocyanin production

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ABSTRACT

Cyanobacteria (BGA) are prokaryotic photoautotrophs capable of doing photosynthesis and nitrogen fixation simultaneously. They have photosynthetic pigments like R-Phycoerythrin, B-Phycoerythrin, χ -Phycoerythrin, C-Phycocyanin, R-Phycocyanin, Allophycocyanin, Phycoerythrin-566, and Phycoerythrocyanin. Recent approaches are aimed to harvest these pigments for use as bio pigments in food and dye industries. Phycocyanin is a natural pigment gaining importance over synthetic colors, as they are non-toxic and non-carcinogenic. Among the different cyanobacterial genera screened for the maximum phycocyanin pigment production the genus *Westiellopsis* was found to be superior in phycocyanin production. The phycocyanin production was significantly enhanced by the parameters sodium carbonate as carbon source and potassium nitrate as nitrogen source. Among the cyanobacterial cultures studied, *Westiellopsis*-ARM 48 produced maximum phycocyanin content.

Key words : Cyanobacteria, Biopigment, Carbon, Nitrogen, *Westiellopsis*

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