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Recovery of phycocyanin and chlorophylls from Anabaena cylindrica

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PURPOSE OF THE ABSTRACT

Cyanobacteria have attracted increased interest due to their composition. The present work focuses on the development of a sequential extraction methodology to obtain phycocyanin and chlorophyll from fresh samples of Anabaena cylindrica. The design of a method allowing the efficient extraction and purification of both classes of colorants produced by this species. The operation conditions in which the extractions occurred were optimized for both compounds. The proposed process consisted of a more sustainable method allowing the extraction of more than 90% of phycocyanin and 55% of chlorophyll in the samples. In the end, an integrated and sequential process of extraction and purification of both phycocyanin and chlorophyll was envisioned by applying a final step of separation using polymer-based aqueous biphasic systems (ABS).

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FIGURES

FIGURE 1

FIGURE 2

KEYWORDS
cyanobacteria | extraction | downstream processes | colorants

BIBLIOGRAPHY