

分离工程

响应面法优化螺旋藻中叶绿素的超声提取工艺

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摘要

关键词

[螺旋藻](#) [叶绿素](#) [超声提取](#) [响应面法](#)

分类号

Optimization of ultrasonic extraction of chlorophylls from *Spirulina platensis* by response surface methodology

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Abstract

Chlorophylls were extracted by using ultrasonic from *Spirulina platensis*. Single factor examination and response surface analysis experiments were adopted to investigate the effects of extraction time, extraction solvent, solvent concentration, ratio of liquid to solid and extraction grade. The results showed that the optimal process parameters for this method were: extraction time of 56.5 min, ethanol concentration of 48.3% (vol) of ethanol/acetone solvent, and ratio of liquid to solid of 7.9 ml·g⁻¹. The optimized chlorophylls extraction yield was 1.28%. The comparison experimental results indicated that the yield of chlorophylls by ultrasonic extraction was higher than that obtained from conventional solvent extraction.

Key words

[Spirulina platensis](#) [chlorophylls](#) [ultrasonic extraction](#) [response surface methodology](#)

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