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Identification of crocin, crocetin and zeaxanthin in Crocus sativus grown under controlled environment in Malaysia (Article)

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Abstract

∨ View references (15)

Purpose: The purpose of the study is to identify the high valuable compounds which are crocin, crocetin and zeaxanthin in the stigmas and stamens of Crocus sativus grown under controlled environment in Malaysia. Design/methodology/approach: Spectrophotometry and high-performance liquid chromatography (HPLC) analysis were used to identify and measure crocin, crocetin and zeaxanthin content qualitatively and quantitatively in the stigmas and stamens of C. sativus grown under controlled environment in Malaysia. Findings: The results of this study showed that crocin, crocetin and zeaxanthin were detected in the stigmas. However, among those three compounds, only crocetin was detected in the stamens. In the stigmas, the detectable level of crocin was high compared to crocetin and zeaxanthin. It was also found that crocetin was higher in the stamens compared to in the stigmas. Originality/value: This is the first attempt in Malaysia that the stigmas and stamens were directly purified from the natural sources by means of no addition of preservatives as C. sativus has never been grown here before. Furthermore, limited reports are available regarding the identification of compounds in saffron stamens. © 2018, Emerald Publishing Limited.

SciVal Topic Prominence ⓘ

Topic: Crocus | Rats | saffron samples

Prominence percentile: 97.710 ⓘ

Reaxys Database Information

View Compounds

Author keywords

Crocetin | Crocin | Crocus sativus | Zeaxanthin

Indexed keywords

Engineering controlled terms: Films | Resins

Engineering uncontrolled terms: Controlled environment | Crocetin | Crocin | Crocus sativus | Design/methodology/approach | Malaysia | Natural sources | Zeaxanthin

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