

Extraction of fucoxanthin from brown algae *Colpomenia sinuosa* and study of its antioxidant effect

Salman Bahremandi¹

Aria Ashja Ardalan^{*2}

Mozhgan Emtiazju³

Farnaz Rafiee⁴

1, 2, 3, 4. Marine Biology
Department, North Tehran
Branch, Islamic Azad University,
Tehran, Iran

***Corresponding author:**

a_ashjaardalan@yahoo.com

Received date: 2020.09.02

Reception date: 2020.11.05

Abstract

The aim of this study was extraction of fucoxanthin pigment from brown algae *Colpomenia sinuosa* in Qeshm Island (winter, 2019) and to investigate its antioxidant effect. In order to extract fucoxanthin pigment, these algae were used in medium containing methanol solvent and by chromatography (HPLC), column 18 with fixed phase, Silica peak presence of fucoxanthin {RetTime} in 3,893 minutes and with concentration of 18,255 (with Calculation of the area below the peak level) was obtained. To evaluate the antioxidant effect of free radical inhibition DPPH, the result of IC₅₀ based test was 0.29 mM and it was matched with two control samples and tested at three concentrations of 1, 0.1 and 0.01 mg / ml of fucoxanthin.

Keywords: Brown algae, *Colpomenia sinuosa*, Fucoxanthin, Antioxidants, DPPH, Persian Gulf.