



CHEMICAL CHARACTERISTICS AND COMPOSITIONS OF PRICKLY PEAR SEEDS OILS EXTRACTED BY TWO DIFFERENT METHODS

Samia Motri^{1,3✉}, Rabeb Lassoued^{2,3}, Amira Touil¹, Fethi Zagrouba¹

¹ Environmental Science and Technology Research Laboratory Technopole BorjCedria, 1003 HammamLif, Tunisia

² Laboratory of Materials Molecules and Applications, IPEST, BP 51, 2070 La Marsa, Tunisia

³ Higher Institute of Technological Studies of Zaghouan, , 1121 Zaghouan, Tunisia

✉ motrisamia@gmail.com

<https://doi.org/10.34302/crpjfst/2024.16.3.4>

Article history:

Received:

January 14th, 2023

Accepted:

August 22nd, 2024

Keywords:

Extraction;

Prickly pear seeds;

Fatty acid;

Sterols;

Triglycerides.

ABSTRACT

The present work was undertaken to compare the physico-chemical characteristics, fatty acid and sterol compositions as well as the triglyceride composition of *Opuntia ficus indica* seed oils extracted using two different methods: cold pressing and Soxhlet extraction. The results showed that the prickly pear seeds (PPS) were (on a dry weight basis) : water 6.63%, ash 1.1%, oil 8.64%, and protein 9.18%. PPS were also a good source of K, and Mg. Solvent extraction had a significantly ($p < 0.05$) higher oil yield compared to cold pressing. The main fatty acids in PPS oils were linoleic (58.04% , 57.90 %) and oleic (26.29 % , 25.96 % in solvent-extracted and cold pressed oil, respectively. Fatty acid and sterol composition were not affected by the extraction method. The peroxide index and free acidity of the solvent-extracted oil was significantly higher ($p < 0.05$) than that of the pressed oil.
