

AN EMERGING VEGETABLE, (*Crithmum maritimum* L.), AS A SOURCE OF NUTRACEUTICALS: EXTRACTION, PURIFICATION AND CHEMICAL CHARACTERIZATION OF POLAR EXTRACTS.

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INTRODUCTION

Crithmum maritimum L., locally known as 'paccasassi', is a halophyte crop and its aerial parts are used as a vegetable as well as a traditional remedy. The plant is listed in Annex 1 of DM 10 August 2018 of the Italian Minister of Health regulating the use of botanicals in food supplements, where it is claimed as a **digestive**, **carminative** and **diuretic** agent. The plant capability to resist in high salinity environments is due to the production of secondary metabolites among which phenolic compounds, connected with **antioxidant** activity, are the most representatives.

AIM OF THE STUDY

The aim of this study was the **quali-quantitative** chemical **characterization** of *C. maritimum* extracts to put in evidence valuable compounds supporting the use in **nutraceuticals** and **functional foods**

EXPERIMENTAL

- C. maritimum* aerial parts were **dried, ground** and **extracted by percolation** with ethanol 70%.
- The extract has been **purified** using an Amberlite® XAD7HP sorbent resin.
- The **identification and quantification** of phytochemicals have been performed using HPLC-DAD-MS/MS.



HPLC-MS/MS

Extraction

Purification

Crithmum maritimum

RESULTS

The extract was mainly composed of **phenolic compounds**:

flavonoids:

rutin (1.60-4.33 mg g⁻¹),

kaempferol-3-O-rhamnoside (0.07-0.33 mg g⁻¹).

hydroxycinnamic acids:

5-O-caffeoylquinic acid (32.04-166.21 mg g⁻¹),

3,5-di-O-caffeoylquinic acid (8.44-38.86 mg g⁻¹),

4,5-di-O-caffeoylquinic acid (5.70-25.85 mg g⁻¹).

