

## SUPERCRITICAL FLUID EXTRACTION OF CAPSAICINOIDS FROM *Capsicum annuum L.* USING CARBON DIOXIDE

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Supercritical fluid technology is the most recommended method used for obtaining natural extracts, particularly on those where thermolabile compounds are contained. In Mexico a great variety of pepper fruits are cultivated. Extraction method to obtain capsaicinoids (capsaicin, dihydrocapsaicin, and nordihydrocapsaicin); which are responsible of the pungency in peppers. The aim of this work is to study the feasibility of the extraction of capsaicinoids from poblano dry pepper (*Capsicum annuum L.*) using supercritical fluids. Extractions were carried out in a dynamic flow type apparatus. The experimental conditions cover the range of (308 - 328) K and at pressures of 10, 20, 27.5 and 30 MPa. The flow-rate for carbon dioxide was fixed at 3 g/min using different extraction times (3, 6, 8 and 10 hours). The total capsaicinoids content were quantified by considering only capsaicin and dihydrocapsaicin by means of an HPLC chromatograph. According to the results, the maximum quantities of capsaicinoids were obtained at 30 MPa and 318 K.

**Keywords:** Carbon dioxide, *Capsicum annuum L.*, Capsaicinoids.

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