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"Microencapsulation of Matricine by a dehydrating liquid and assessment of its retention "

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Abstract:

Matricine of flowers of cultivated Matricaria chamomilla L. was isolated and identified by TLC, IR, UV and ^{1}H-NMR and quantified by HPLC. One of the lopophylic materials of this plant (matricine) has been used as antispasmodic and anti-inflammatory. Retention of matricine by microencapsulation technique was one of the objectives of this study. Encapsulation was carried out by cold dehydrating liquid method and effects of the various process parameters on retention of the matricine were evaluated. To achieve high retention values it was necessary to employ low core to shell material ratio, high solid concentration, high viscosity of the emulsion continuous phase, the use of absolute ethanol as desiccant, short contact times between capsules and desiccant, and low air pressure in the formation of microcapsules. Results suggested that the process might be much more efficient if continuous coextrusion of the emulsion and desiccant were used.

Keywords:

Microcapsules ، Microencapsulation ، Cold dehydrating liquid method ، Retention of matricine ، Acacia ، Matricaria chamomilla L

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