

BIOCHEMICAL AND HPTLC FINGERPRINTING IDENTIFICATION OF THE *HYPERICUM PERFORATUM* L. – FINISHED PRODUCTS

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Abstract: Based on the data obtained from the instrumental and biochemical fingerprinting of *Hypericum perforatum* L., an experimental program has been designed in order to test some intermediate products and final products as plant food supplements. Herbal supplements based on *H. perforatum* L., as single ingredient or in complex mixtures with other medicinal plant species have been selected and tests correlated with extensive phytochemical characterization of the plant species *H. perforatum* L. have been performed. Based on the results achieved, a extensive phytochemical and chromatographic characterization diagram was obtained which takes into account the correct identification of medicinal plant species and derived complex herbal food supplements.

Keywords: *Hypericum perforatum* L., herbal supplements, biochemical fingerprinting, HPTLC fingerprinting, authentication

1. Introduction

Hypericum perforatum L. (common St. John's wort, *Hypericaceae*), originally native to southern Europe, is commonly found throughout temperate regions. This species is an important medicinal herb, and extracts are widely recognized as valuable phytopharmaceutical agent [6]. *Hypericum perforatum* contains at least ten classes of biologically active compounds, of which two of the more important bioactive compounds, hypericin and hyperforin.[1,3] Research indicates that these compounds vary in concentration and or constituency depending on species origin, tissue type, genetics, and environmental factors. In addition, concentrations of these compounds can vary widely between accessions derived from the same species. *Hypericum perforatum* L. is the official source of *Hyperici herba* as accepted by both the Romanian Pharmacopoeia and the European Pharmacopoeia. According to European Medicines Agency /Committee on Herbal Medicinal Products/Assessment. report on *Hypericum perforatum* L. herba, preparations of St. John's Wort/*Hypericum perforatum* (flowering aerial parts) are accepted for medicinal and traditional use [9]. The products of St. John's wort are

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