## BRIEF COMMUNICATIONS

# QUANTITATIVE EVALUATION OF SOME SPECIES OF ST. JOHN'S WORT FOR THEIR LEVEL OF HYPERICINS BY THE HPLC METHOD

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The results of a qualitative evaluation of St. John's worts for the presence of hypericin have been given in a review [1]. Of the seven species of the genus Hypericum only in the herbage of common St. John's wort was the amount of dianthrone derivatives determined quantitatively [2, 3]. We have detected hypericin in the epigeal part of H. ascyron for the first time. Analysis of methanolic extracts from a raw material that had previously been treated with chloroform was performed on a Waters chromatograph using a Silasorb 7 μm (4 × 250 mm) column. The optimum solvent system for the separation of hypericin and pseudohypericin proved to be water–ethyl acetate–methanol–acetonitrile–phosphoric acid (41:25:22:9:3). The time of analysis was 25 min at a rate of flow of 0.8 ml/min; under these conditions the retention time of pseudohypericin was 13.7 min and that of hypericin 16.0 min. Detection was performed at a wavelength of 590 nm [4]. Hypericin that had been isolated from the herbage of common St. John's wort by chromatography on a polyamide sorbent was used as standard. A purified ethyl acetate extract (20.0 g) was deposited on a column with a diameter of 3 cm filled with polyamide the height of the layer of which was 30 cm. Elution was conducted with chloroform and with chloroform–methanol containing increasing concentrations of methanol. The process was monitored by PC in the 15% acetic acid system and by TLC in the chloroform–methanol (8:2) and benzene–acetic acid (4:1) systems. The eluates containing hypericin were combined and were purified by chromatography on the same sorbent. The results of the analysis are given below:

| Plam | Amount of | |
|---|---|---|
| | hypericin | psendahypericin |
| H. perforatum L. | 0,039 | 0,004 |
| H. maculatum Granz | 0,036 | 0,002 |
| H. tetrapterum Fries | 0,065 | 0,005 |
| H. elegans Steph. | 0,022 | 0,002 |
| H. scabrum L. | 0,007 | Not found |
| H. hirsutum L. | 0,001 | Not found |
| H. ascyron L. | 0,0004 | Not found |

## LITERATURE CITED

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