

DENSITOMETRIC EVALUATION OF SPIRAEOSIDE AFTER DERIVATIZATION IN FLOWERS OF FILIPENDULA ULMARIA (L.) MAXIM.

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In traditional medicines of Europe, the water extract of *Filipendula ulmaria* (L.) Maxim. (Rosaceae) flowers has been used as antiinflammatory, analgesic and diuretic (1) and the compounds of this plant are known to be flavonoids tannins and salicylic acid derivatives (2). Spiraeoside (quercetin-4' glucoside) is the major and characteristic flavonoid of *Filipendula ulmaria* flowers and, for this reason, we determined its amount by HPTLC densitometry.

We measured the fluorescence of spiraeoside after derivatization by diphenylboric acid-2-aminoethylester (3). The measurement was achieved by means of a TLC Scanner programmed to work in reflection fluorescence at 330 nm (Mercury lamp, cut-off filter 450 nm).

We respected the following chromatographic procedure:

Layer: HPTLC plates silicagel 60 Merck

Mobile phase: ethylacetate-formic acid-water (6:1:1, v/v/v)

Standard solution (0.6, 0.8 and 1 µl). 4 mg of spiraeoside SCR in 10 ml methanol.

Sample solution: (0.4 µl): 0.250 g of *Filipendula* flowers were extracted by 25 ml methanol 60°C (2 hours). The solution was filtrated, evaporated and dissolved in 25 ml methanol.

After linearization, the concentration of spiraeoside was estimated by measurement of the different standard and samples mean areas. In our findings, the spiraeoside content ranged from 3 to 4.3 %.

The repeatability, reproducibility and the good linearity were confirmed by the validation of the method.

This HPTLC method is rapid and suitable for adoption in the future for the determination of spiraeoside in *Filipendula ulmaria* flowers and extracts.

References

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