P G04 DENSITOMETRIC EVALUATION OF FRAXIN IN LEAVES OF *FRAXINUS EXCELSIOR*

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In France and Belgium, leaf extract from *Fraxinus excelsior* are especially used as anti-inflammatory (1). This property could be at least partially explained by the ability of some coumarins to inhibit the formation of leucotrienes in polymorphonuclear leucocytes (2). For this reason, we determined the amount of fraxin by HPTLC densitometry. Like other hydroxylated coumarin glucosides, fraxin shows a blue fluorescence under UV light (366 nm); this property was used for its quantitative estimation. The measurement was achieved by means of a TLC Scanner, programmed to work in reflection fluorescence at 350 nm (Mercury lamp; cut off filter: 450 nm). We respected the following chromatographic procedure:

- Layer: HPTLC plates RP 18 Silicagel 60 Merck with concentrating zones
- Mobile phase: Phosphoric acid 0.2 % - Acetonitrile (60:40)
- Standard solution: 5 mg of fraxin SCR were dissolved in 100 ml MeOH-H_2O (1:1)
- Sample solution: 0.250 g of *Fraxinus* leaves were extracted by 25 ml MeOH at 40°C (90 mins). The solution was evaporated and dissolved in 10 ml MeOH-H_2O (1:1)
- Applications of 1 and 2 µl for the standard and 2 µl for samples.

After linearisation, the concentration of fraxin was estimated by measurement of different standards and samples mean areas.
We are testing several commercial batches to establish the mean content of fraxin in *Fraxinus* leaves.
The accuracy, precision and good linearity were confirmed by validation of the method.

References

(1) M. Arens-Corell, S.N. Okpanyi, Planta Med. 56, 656 (1990)
(2) K. Yoshiyuki, O. Hiromichi, A. Shigeru, B. Kimiye, K. Mitsugi, Biochim. Biophys. Acta 834, 224 (1985)