Identification of Plumbagin and Quercetin in *Drosera* genus

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**SUMMARY**

Recent researches revealed the therapeutically potential of natural pigments, such as quinones derivates (antitumoural, antibiotic, antimalaria, anti-inflammatory) and flavonoids (antibiotic, antioxidant, anticancer), (Didry *et al.*, 1998). Quinones contain a benzoquinone, naphthoquinone, anthraquinone or phentanthrene nucleus. Flavonoids are C15 compounds having the structure C6-C3-C6 and may be grouped into three classes based on their general structure. In each case, two benzene rings are linked together by a group of three carbons. *Drosera sp.* contains two major groups of secondary metabolites, which are considered to be important pharmaceutical substances, naphthoquinones (NQ) and flavonoids (FLAV)—mainly quercetin and myricetin, as well as their glycosides (Juniper *et al.*, 1989). *Drosera*s’s plants raised in controlled environment were rinsed with ultrapure water in order to remove all residues before NQ and FLAV extraction. After the performance of this operation, the wet material was ground and treated with methanol or chloroform. Vegetal samples were sonicated in Ultrasonic bath for homogenization, filtered and then the solvent was evaporated. The resulting precipitate was dissolved in methanol or chloroform and the mixture was refluxed at 100°C. Next, the sample was extracted three times with diethyl ether, then the ether being evaporated and the solid dissolved in methanol. NQ and FLAV identification was based on comparison of retention times and spectra of peaks on chromatograms of the extracts to those of standards (capacity factors are: 0.58 for plumbagin and 8.45 for quercetin).

The concentration was determined using the external standard method based on peak areas at 254 nm.

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**REFERENCES**