

**Rumex induratus leaves: phytochemical profiling and antioxidant activity**

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Several species of the *Rumex* (Polygonaceae) genus have been used in traditional medicine, although their high oxalic acid content has been implicated in oxalic intoxication, mainly in children. *Rumex induratus* Boiss. & Reuter is an endemic Iberian herb that prefers rocky habitats of the thermo Mediterranean region. It grows spontaneously in Northeast Portugal, where its leaves are highly consumed in salads. Phenolic compounds and organic acids, known to influence the organoleptic properties of plant foods, have been successfully used in their quality control. On the other hand, antioxidants present in fruits and vegetables, including those belonging to these two phytochemical classes, are associated with oxidative damage prevention. The chemical composition of aqueous extracts of *R. induratus* leaves, in terms of phenolic compounds and organic acids, and its antioxidant activity against the DPPH radical, a Reactive Oxygen Species, hypochlorous acid, and a Reactive Nitrogen Species, nitric oxide, were studied. The samples were collected in several locations, seasons and in different stages of development. The phenolic compounds identified by HPLC/DAD were: caffeoyl-hexoside, *p*-coumaroyl-hexoside, feruloyl-hexoside, sinapoyl-hexoside, 6-C-hexosyl-quercetin, 8-C-hexosyl-luteolin, 6-C-hexosyl-luteolin, 6-C-hexosyl-apigenin, 3-O-hexosyl-quercetin, 3-O-rutinosyl-quercetin, 7-O-hexosyl-diosmetin and 3-O-rutinosyl-isorhamnetin. Oxalic, citric, malic, ascorbic and shikimic acid were identified using HPLC-UV. Total amount of phenolic compounds and organic acids were affected by growing conditions and developmental phase. The aqueous extract exhibits a dose related activity against all tested radicals. **Acknowledgements:** Fundação para a Ciência e a Tecnologia (POCI/AGR/57399/2004), Luís Guerra, Fundação Calouste Gulbenkian, Patrícia Valentão.