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LICHENS

USNEACEAE

USNIC, NORSTICTIC AND SALAZINIC ACIDS FROM *USNEA DENSIROSTRA* AND *U ANGULATA**

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Plant Usnea densirostra Taylor, collected in Sierra de Achala, Córdoba Province, Argentina [1] *Trivial name* Barba de Piedra [2] *Uses* Medicinal [2,3] *Previous work* On sister species [4–6]

Lichen Extracted in Soxhlet with benzene and acetone in succession Concentration of the benzene extract afforded (+)-Usnic acid,[5] (1·16% of lichen) identified by direct comparison with authentic material by mixed m p , co-chromatography (three solvents, TLC), and UV and IR analysis The acetone extract was concentrated, followed by chromatography on silicic acid Norstictic acid[5] (0 14% of lichen) and salazinic acid[5] (0 06% of lichen) were isolated and identified by spectra and physical comparisons with authentic samples

Plant U angulata Ach subsp *alata* Mot , collected in Cataratas del Iguazú, Misiones Province, Argentina.[1]

Lichen Extracted as described above (+)-Usnic acid (2·9% of lichen) from benzene extract and norstictic acid (0 77% of lichen) from acetone extract, confirmed as described above

Plant U campestris Sant , collected in Bariloche, Rio Negro Province, Argentina [1]

Lichen Extracted as described above (+)-Usnic acid (3 8% of lichen) from benzene and acetone extract, confirmed as above

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