

Cristina Dizeo de Strittmatter*; Marcelo Luis Wagner**; Mariana Kade*; Alfredo Angel Gurni**.

* Centro de Ecofisiología Vegetal. Serrano 665. 1414 Buenos Aires. Argentina.

** Cátedra y Museo de Botánica "Juan A. Domínguez" Facultad de Farmacia y Bioquímica. Universidad de Buenos Aires.

THE IDENTIFICATION OF Lotus tenuis FLAVONOIDS

The genus Lotus (Leguminosae) is composed by a relatively large number of species, many of them used as pasture crops in agriculture (1). Previously, the presence of kaempferol and ferulic acid (2,3) in leaves of L. tenuis was reported.

This work outlines the identification of kaempferol glycosides obtained from aerial vegetative parts.

Important concentration of 3 glycosyl-7-rhamnosyl kaempferol and free kaempferol were obtained from methanolic extractes.

The material was collected from a naturalized ecotype of L. tenuis.

Leaves and stems were oven dried, grounded in a mill and extracted in boiling water.

The extract was evaporated under reduced pressure and redissolved in methanol (MeOH). An aliquot was chromatographed in 15% Acetic acid (HOAc) on 3 MM Whatman paper. Flavonoids were eluted in MeOH and chromatographed:

- a) The kaempferol in BAW (n Butanol-HOAc-H₂O, 4:1:5 upper by layer) and Forestal (HCl-HOAc-H₂O, 3:30:10) on Whatman N°1 paper. RF values were 0.83 and 0.55 respectively.
- b) Kaempferol glicosed in BAW, 15% HOAc and water on Whatman N°1 paper. RF values were 0.54, 0.67 and 0.41 respectively.

The glicosed was hydrolyzed with 2 N HCl at 100°C for 1 hour. The sugars were analyzed through descending chromatography in BuPy (n Butanol-Pyridina-H₂O, 2:2:1) with respect to the control. The aglicon was chromatographed with the same solvents as Kaempferol.

The structures identification was confirmed by spectroscopic measurements with the respective shifts (4).

Another aliquot from the methanolic solution was treated with 2 N HCl at 100°C for 1 hour. The amylic fraction gave negative presence of leucoderivates.

Bibliografía

- 1.- Larsen, K. (1958). Cyto-taxonomical studies in Lotus IV. Some cases of polyploidy. Bot. Tidsskr. 54: 44-56.
- 2.- Harney, P.M. and Grant W.F. (1964). A chromatographic study of the Phenolics of species of Lotus closely related to L. corniculatus and their taxonomic significance. Amer. Jour. Bot. 51 (6): 621-627.
- 3.- _____ (1965). A polygonal presentation of

chromatographic investigations on the phenolic content of certain species of Lotus. *Can. J. Genet. Cytol.* 7: 40-51.

4.- Mabry T.J., Markham, K.R. and Thomas, M.B. (1970). *The systematic Identification of Flavonoides*. Springer, Berlin.