



## Major and Trace Elements Contents in Crude Drug and Infusions of Two South American species of *Achyrocline* (Asteraceae) named “Marcelas”

Luis A. DEL VITTO <sup>1\*</sup>, Elisa M. PETENATTI <sup>1</sup>, Marta E. PETENATTI <sup>1</sup>,  
Silvia M. MAZZA <sup>2</sup> & Eduardo J. MARCHEVSKY <sup>3,4</sup>

<sup>1</sup> *Dpt. of Pharmacy, Herbarium and Project 22/Q616 SPU-MECyT, Universidad Nacional de San Luis, Ej. de los Andes 950, D5700HHW San Luis, Argentina.*

<sup>2</sup> *Faculty of Agricultural Sciences, Universidad Nacional del Nordeste, Sargento Cabral 2131, 3400 Corrientes, Argentina.*

<sup>3</sup> *Dpt. of Analytical Chemistry, Univ. Nac. San Luis, Chacabuco y Pedernera, 5700 San Luis, Argentina.*

<sup>4</sup> *CONICET, Argentina.*

**SUMMARY.** Multielement analysis of crude drug and infusions from *Achyrocline satureioides* and *A. tomentosa* (Asteraceae), “marcelas”, were carried out by ICP-OES, to know both mineral composition and safety. These plants are used as herbal remedies and extracts for bitter beverages in southern South America. Twenty seven major and trace elements were determined. Crude drugs contained valuable amounts of K, Ca, Mg, and P and essential trace elements (Fe, Mn, Zn, and Cu). Variability in the passage of minerals towards infusions was observed, too, and concentrations of K, Ca, P, and Mg were higher than those of Na, Mn, Zn, Cu, Al, Fe, Ni, Li, Hg and Mo, while other minerals were not detected. The infusions would be safe for human consumption because remain within the limits of the recommended daily intake or tolerable upper intake, and contribute to the daily intake in the case of some essential minerals.

**KEY WORDS:** *Achyrocline*, Argentina, Asteraceae, Crude drug, Folk medicine, Herbal infusions, ICP-OES, Major elements, Mineral composition, Trace elements.

\* Author to whom correspondence should be addressed. *E-mail:* lvitto@unsl.edu.ar