



CHEMICAL VARIABILITY OF THE GENUS *Croton* AND ITS EFFECT ON THE ANTIOXIDANT CAPACITY

Coy Barrera Carlos Andrés¹, Gómez Gutiérrez Diana Constanza¹, Coy Barrera Ericsson David¹.

¹Facultad de Ciencias Universidad Militar Nueva Granada, AA 49300, Cajicá, Colombia. E-mail: carlos.coy@unimilitar.edu.co.

Abstract:

Were evaluated thirty one leaf samples corresponding to four species belonging of the genus *Croton*, the samples was collected in several places in a region near to Bogotá, searching an antioxidant capacity by conventional methods (2,2-diphenyl-1-picrílhidrazilo (DPPH), and by Folin-Ciocalteu method the total phenolic content [1]. The results showed a great variability in all the samples, for antioxidant activity[2] according to the index values inhibition, IC₅₀ obtained in a range of 5.8 to CB₄ (*Croton bogotanus* 4) and 185.6 for CB₁₂ (*Croton bogotanus* 12). The total phenol content value was obtained in a range between 43,6 mg EAG / G for CF2 (*Croton funcianus* 2) and 3.5 EAG / G for CB₁₅ sample (*Croton bogotanus* 15). The samples had a higher content of polyphenolic and flavonoid compounds according to HPLC chromatographic profiles. In the present study, we showed that there are a clear relationship between phenolic content and antioxidant capacity of the *Croton* extracts, reinforce the phytochemical studies of these genera in Colombia, seeking new therapeutic agents from natural products research. We thanks to UMNG by financial support by Project CIAS 1784.

References:

- [1] Méndez, A., Molina, A., Aristizabal, S., Yamaguchi, L., Katto M., Muñoz, A. 2014. Análisis por HPLC/DAD/ESI/MS/TOF y estimación de las capacidades antioxidantes y citotóxicas de los extractos etanólicos de hojas de *Croton niveus* jacq., *Piper marginatum* jacq. e *Hyptis suaveolens*. Rev. Prod. Nat. 4 (1): 59-62.
- [2] Gülçin, Ý., Oktay, M., Kireççi, E., Küfreviođlu, Ö. 2003. Screening of antioxidant and antimicrobial activities of anise (*Pimpinella anisum*. L) seed extracts. Rev. Food Chemistry. 83 (3): 371 – 382.