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EFECTO DE LA COCCIÓN SOBRE LA COMPOSICIÓN QUÍMICA Y CAPACIDAD ANTIOXIDANTE DE PAPAS NATIVAS *(Solanum tuberosum)* DEL ECUADOR

Moreno - Guerrero, Carlota[a] ; Andrade - Cuvi, María José[a] ; Oña - Pillajo, Gabriela[a] ; Llumiquinga - Hernández, Tatiana[a] ; Concellón, Analía[bc]

[a]Universidad Tecnológica Equinoccial, Centro de Investigación Facultad de Ciencias de la Ingeniería, Laboratorio de Química Analítica y Microbiología de Alimentos. Av. Occidental y Mariana de Jesús, Quito-Ecuador.
[b]Centro de investigación y Desarrollo en Criotecnología de Alimentos (CIDCA). CCT La Plata, CONICET-UNLP. Calle 47 esq. 116. CP 1900. La Plata, Argentina. [c]Comisión de Investigaciones Científicas de la Provincia de Buenos Aires (CIC-PBA).

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EFFECT OF COOKING ON THE CHEMICAL COMPOSITION AND ANTIOXIDANT CAPACITY OF NATIVE POTATOES *(Solanum tuberosum)* OF ECUADOR

Abstract
In Ecuador there are about 400 cultivated varieties of native potatoes. These products have antioxidants with a fundamental roll in the natural prevention of cardiovascular diseases besides being rich in nutrients. The aim of this work was to evaluate the effect of cooking on proximate composition and antioxidant capacity of five varieties of native potatoes (Yana Shungo, Puca Shungo, Leona Negra, Tushpa and Uvilla). Tubers were harvested in the central Andean ecuatorian region (Ambato-Tunguragua; Saquisilí-Cotopaxi and Guaranda-Bolivar) and were divided in two groups: fresh and cooked (20 min – 91°C). Proximate composition (moisture, protein, fat, fiber, ash and carbohydrates) and antioxidant capacity (using the ABTS·+ radical by spectrophotometry) were determined. Yana Shungo, Puca Shungo and Leona Negra varieties have more ash, protein and carbohydrates content than Uvilla and Tushpa varieties. In general, cooking process decreased ash, fat, carbohydrates content. Protein content in varieties Yana Shungo, Puca Shungo and Leona Negra was higher after cooking, while fiber content increased in all varieties. Cooked native potatoes had higher antioxidant capacity than fresh ones; this change could be related with the fact that heat treatment would produce the release of enzymatic and non-enzymatic antioxidant compounds. It is necessary to develop subsequent researches in order to elucidate the effect of the tuber matrix on antioxidants content during the cooking process.

Keywords: andean tubers, antioxidants, native potatoes, termic treatment, proximate composition.

* Correspondencia a: María José Andrade Cuvi. Universidad Tecnológica Equinoccial, Centro de Investigación Facultad de Ciencias de la Ingeniería, Laboratorio de Química Analítica y Microbiología de Alimentos. Av. Occidental y Mariana de Jesús, Quito-Ecuador. Teléfono:(593) 2 299-0800 Ext: 2193 Correo electrónico: maria.andradec@ute.edu.ec).