

# ASSESSING COMPARATIVELY THE BIOACTIVE COMPOUNDS COMPOSITION OF APPLE POMACE OBTAINED FROM THREE APPLE CULTIVARS AFTER JUICE EXTRACTION

I. Taranu<sup>1</sup>, M. Filip<sup>2</sup>, M.C. Vlassa<sup>2</sup>, D. Marin<sup>1</sup>,  
A. Untea<sup>1</sup>, A. Oancea<sup>1</sup>, A.M. Pertea<sup>1</sup>

<sup>1</sup>National Institute for Research and Development for Biology and Animal Nutrition,  
Balotesti, Romania

<sup>2</sup>Raluca Ripan Institute for Research in Chemistry, Babes, -Bolyai University,  
Cluj-Napoca, Romania  
e-mail: ionelia.taranu@ibna.ro

## Abstract

*The nutrients composition of dried apple pomace derived from three different apple cultivars (Granny Smith, Golden and Red delicious) were compared in the present study. The pomace was obtained by lyophilisation from fresh apples after juice extraction. Weende method was used to determine the proximate composition. Total polyphenols were determined by Folin-Ciocalteu method, individual polyphenols, carbohydrates and organic acids by HPLC while minerals were measured by atomic absorption spectrometry. The cultivar had no effect on protein and lipid percentage, but influences the concentration of different active molecules. Thus, Granny Smith pomace contained higher amount of dietary fiber (23.46%) compared to Golden (22.42%) and Red delicious (19.85%) as well as a higher level of natrium and iron. By contrast, Red delicious pomace had a larger amount of total polyphenols and epicatechin and a higher concentration of magnesium, potassium and zinc. No influence of apple cultivar on vitamin C level was notice. The introduction of this by-product into the feed chain have taken into account the variations in the chemical composition due to the apple variety.*

**Key words:** *apple cultivar, apple pomace, composition, bioactive compounds*