



ANNUAL MEETING + FOOD EXPO®

**JUNE 21–24, 2014**

New Orleans Morial Convention Center

**New Orleans, LA USA**

## Program & Exhibit Directory

### IN THIS DIRECTORY

- Schedule at a Glance
- Resources & Logistics
- Events & Activities
- Learn: A listing of onsite education options
- Exhibitors by Company
- Exhibitors by Category



### Event App

Scan this with your smartphone's QR code reader to download the event mobile app.



## **Chemical composition and antioxidant activity of phenolic extracts from peanut skins obtained by different industrial process**

Larrauri M (1\*), Asensio CM (1), Quiroga PR (1), Martin MP (1), Zunino MP(2),  
Zygadlo JA(2), Grosso NR(1), Nepote V(2)

(1) FCA – UNC, IMBIV-CONICET, Córdoba, Argentina

(2) FCEFyN-UNC. ICTA, IMBIV-CONICET, Córdoba, Argentina

\*[mlarrauri@agro.unc.edu.ar](mailto:mlarrauri@agro.unc.edu.ar)

**Keywords:** antioxidant, phenolic, peanut, processing

Peanut skins present phenolic compounds with antioxidant properties which are excellent as a source of natural antioxidants. In food products, the antioxidants have the function of neutralizing the action of free radicals produced by oxidation reactions. The objective of this study was to determine the chemical composition and antioxidant activity of extracts rich in phenolic compounds from peanut skins obtained by two industrial processes: blanching (B) and roasting (R). Peanut skins were obtained from Argentinean high oleic peanuts (Argentina) cultivar "Granoleico". Crude extract (B-Cr and R-Cr) were obtained by solid-liquid extraction from peanut skins using ethanol 70% (E). B-Cr and R-Cr were partitioned in four fractions with ethyl acetate (B-E and R-E) and water (B-W and R-W). Chemical composition of peanut skins was determined: fat, protein, moisture, and ash contents. Total phenolic content and free-radical scavenging activity (DPPH) were analyzed in all fractions. Statistical analysis was performed on the data (ANOVA and Fisher-LSD test). Roasting peanut skins exhibited higher fat and ash (23.66% and 3.34%, respectively) compared with blanching peanut skins (17.04% and 2.41%, respectively). Peanut skins from blanching process had highest total phenols content than roasting process (12.11% and 7.67%, respectively). B-Cr, B-E, and R-E exhibited higher phenolic content (674.8, 701.24, and 681.05 mg phenol/g dry matter; respectively). B-W and R-W showed the lowest total phenols content (528.68 and 283.52 mg phenol/g dry matter; respectively). The highest antioxidant activity (DPPH) was exhibited by B-E (IC<sub>50</sub> = 1.51) followed by B-Cr, R-Cr, and R-E (IC<sub>50</sub>=2.01, IC<sub>50</sub>=2.33, and IC<sub>50</sub>=2.08, respectively). The lowest DPPH activity was shown by B-W and R-W (IC<sub>50</sub>=3.03 and IC<sub>50</sub>=5.2, respectively). Peanut skin extracts obtained from blanching process show higher total phenolic content and higher antioxidant properties measured with respect to those extract obtained by roasting process.

### *Industry Relevant Information:*

Peanut skins are considered a residue from the peanut industry. Peanut skin extracts have high total phenolic content with high antioxidant activity. These compounds can be used as natural antioxidant for the food industry to substitute synthetic ones.