Foods 2024 Conference

The 5th International Electronic Conference on Foods

28–30 October 2024 | Online

MDPI

Sweet potato industry waste is an interesting by-product from which to obtain polyphenols with antioxidant properties

Grimaut Denise A (1), Lingua Mariana S (1), Blajman Jesica E (1), Páez Roxana B (1), Wunderlin Daniel A (2,3), Baroni M. Verónica (2,3)

(1) Instituto de Investigación de la Cadena Láctea (IDICAL)- INTA/ CONICET, Ruta Nacional 34 Km 227, Rafaela, Santa Fe, Argentina

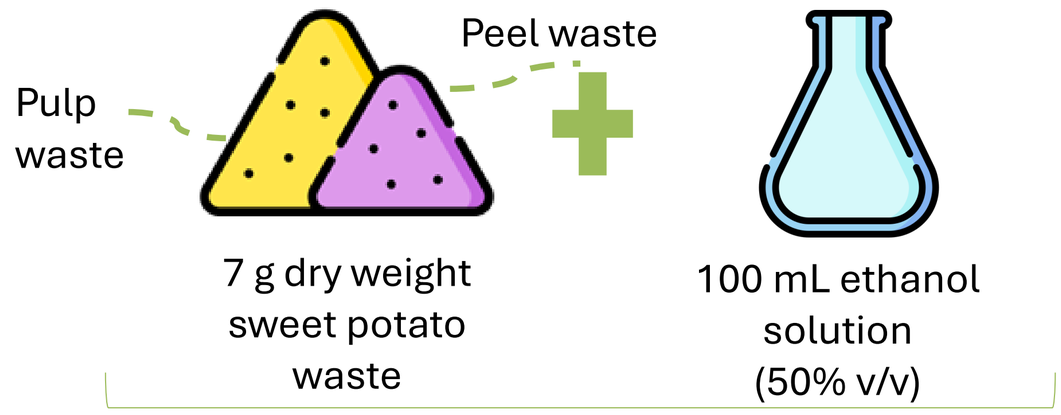
(2) Instituto de Ciencia y Tecnología de Alimentos Córdoba (ICYTAC)- UNC/ CONICET, Juan Filloy S/N, Ciudad Universitaria, Córdoba, Argentina.

(3) Dpto. Química Orgánica, Facultad de Ciencias Químicas, Universidad Nacional de Córdoba, Medina Allende y Haya de la Torre, Ciudad Universitaria, Córdoba, Argentina.

INTRODUCTION & AIM

Sweet potato, (*Ipomoea batatas* (L.) Lam.), is one of the most important crops in the world, characterized for being a relevant source of antioxidant polyphenols with health-promoting biological activities. Its industrialization generates waste considered an alternative and inexpensive source for obtaining phenolic compounds with potential application in the food industry to the development of functional foods with antioxidant properties. The aim of this work was to investigate *the in vitro* antioxidant characteristics of two sweet potato wastes (1- peel from peeler and 2-pulp from sieve) to identify which one is the better source of antioxidant properties.

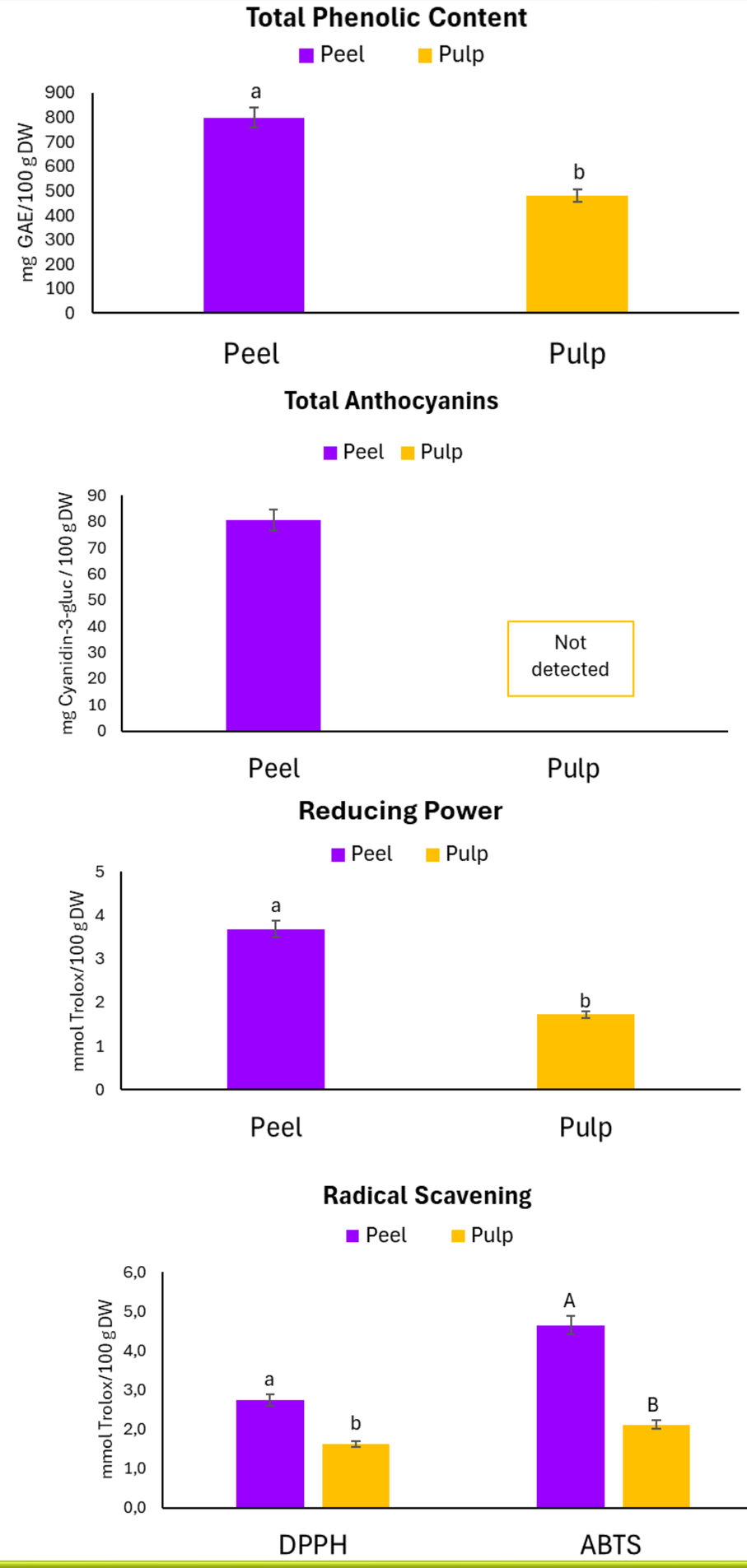
METHOD



Antioxidant characteristics

Total Phenolic Content	Total Anthocyanins	Antioxidant Capacity
Folin-Ciocalteu	pH differential method	Reducing power (FRAP) Radical scavenging capacity (ABTS y DPPH)

RESULTS & DISCUSSION



CONCLUSION

The results showed that the peel´s waste has greater antioxidant properties than the pulp , therefore is a promising source of natural antioxidants to our health, while its recovery helps to reduce pollution and adds value to the residue.

FUTURE WORK / REFERENCES

Based on the results obtained, we propose as future work to identify the phenolic profile in peel waste by UPLC-ESI-QqQ MS.

Benzie, I. F. F., & Strain, J. J. (1996). The ferric reducing ability of plasma (FRAP) as a measure of antioxidant power: The FRAP assay. Analytical Biochemistry, 239,70-76; Brand-Williams, W., Cuvelier, M. E., & Berset, C. (1995). Use of a Free Radical Method to Evaluate Antioxidant Activity. LWT-Food Science and Technology, 28,25-30 ; Singleton, V. L., & Rossi J. A. J. (1965). Colorimetry of total phenolics with phosphomolybdic-phosphotungstic acid reagent. American Journal of Enology *and Viticulture,* 16, 144.