

1. Record Nr.	EJ21001579
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Titolo	Polyphenolic content and antioxidant activity in agri-food wastes and by-products using different extraction methods [Articolo]
Editore	Department of Health, Animal Science and Food Safety (VESPA), 2017-05-29
ISSN	2283-3927
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Lingua di pubblicazione	Inglese
Formato	Articoli digitali
Livello bibliografico	Seriale
Note	Diritti: Copyright (c) 2017 International Journal of Health, Animal Science and Food Safety In relazione con: https://riviste.unimi.it/index.php/haf/article/view/8382/8057 Sorgente: International Journal of Health, Animal Science and Food Safety; V. 4 N. 1s (2017) Sorgente: International Journal of Health, Animal Science and Food Safety; Vol 4 No 1s (2017) Sorgente: 2283-3927
Sommario	Agri-food wastes (AFW) and by-products chain still have the potential to be reprocessed into other production systems. AFW and by-products may contain components that could be valorised for their bioactivity, such as polyphenols and antioxidant molecules that can be used as a source of functional ingredients for feed industries. However the bioaccessibility of these products are highly variable and dependent on a range of factors, one of the most important being food matrix characteristic. The aim of this study was to determine the total phenolic content and the antioxidant capacity of several AFW

(fruit and vegetable waste (FVW), citrus pulp, strawberry and orange dried) and by-products (grape marc, Camilina sativa cake, olive pomace and whey) using different extraction protocols. A total of 24 samples were processed using two different extraction methods: chemical extraction and in vitro physiological extraction. Afterwards, the polyphenolic content was assessed by Folin–Ciocalteu assay while antioxidant capacity was determined by 2, 2-Azino-bis-3 ethylbenzothiazoline-6-sulfonic Acid (ABTS) assay. Soy and wheat samples were included as controls in all the experiments. Results obtained showed that the chemical extracts of by-products and AFW contain different amount of polyphenols; in particular, as expected, the grape marc showed the highest polyphenolic content with a value of 4.5% w/w, followed by Camilina sativa cake, olive pomace, FVW, orange and strawberry dried showed a polyphenolic content of 1.3, 0.7, 1.3, 1.6 and 1.3 %w/w, respectively. Considering the antioxidant capacity, grape marc exhibited a significant ($P < 0.05$) value of 573.6 mol Trolox equivalent/g after chemical extraction compared to the other samples considered. The physiological extraction yielded high polyphenolic content and antioxidant capacity, suggesting that during the digestion the bioaccessibility of phenolic and antioxidant compounds was improved. The results obtained in this study indicate that AFW and by-products could be considered a promising source of antioxidants and phenolic compounds.

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