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Research

ANTIOXIDANT, CHELATING AND ENZYME INHIBITORY ACTIVITIES OF *VICIA SATIVA* (COMMON VETCH) SEED POLYPHENOLS.

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CONFLICTS OF INTEREST
There are no conflicts of interest for any of the authors.

ABSTRACT:
Antioxidant, metal chelating, and enzyme inhibitory activities have been determined in polyphenol extracts from the seeds of three *V. sativa* populations from southwestern Spain in order to identify potential health-promoting properties. These activities have been compared with those of a *V. faba* seed extract. The polyphenol composition of the *V. sativa* extracts was analyzed by HPLC/MS. Reducing power, total antioxidant activity, and metal chelating activity were higher in *V. sativa* extracts than in *V. faba* extracts. Radical scavenging activity was however higher in the extract from *V. faba*. Cholinesterase and tyrosinase inhibitory activities were higher in the extracts from *V. faba*, while inhibition of □-amylase was higher in *V. sativa* extracts. The □-glucosidase inhibitory activity was similar in all extracts. The content in total polyphenols was higher in *V. sativa* than *V. faba*. Analysis of the polyphenol composition revealed variability among *V. sativa* populations, but all populations had in common the presence of catechin and hydroxybenzoic aldehyde. Two populations were characterized by the presence of glycosides of apigenin and quercetin, while a third one had more phenolic acids. Results demonstrate that *V. sativa* seeds have a number of health-promoting properties related with antioxidant activity and inhibition of enzymatic activities that are comparable or even higher than those observed in *V. faba*.

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