The isolation and identification of two compounds... [Food Chem. 201... http://www.ncbi.nlm.nih.gov/pubmed/23107724
The isolation and identification of two compounds with predominant radical scavenging activity in hempseed (seed of Cannabis sativa L.).

Chen T, He J, Zhang J, Li X, Zhang H, Hao J, Li L.

Abstract
Forty samples were extracted from defatted kernels and hulls of two varieties of hempseed (Bama and Yunma No. 1) using 10 different polar solvent systems. The radical scavenging capacity of the extracts was evaluated using 2,2-diphenyl-1-pikrylhydrazyl (DPPH) and 2,2'-azino-bis(3-ethylbenzothiazoline-6-sulphonic acid) (ABTS) assays and the total phenolic content was determined by Folin-Ciocatelu's phenol reagent. The correlation analysis indicated that the antioxidants in hempseed belonged to phenolic and DPPH() assay was suitable for evaluating the radical scavenging activity. Two compounds, with predominant antiradical activity, were isolated in 60% ethanol extract of hempseed hull using macroporous resin absorption, LH-20 gel chromatography, and high performance liquid chromatography methods, which were identified as N-trans-caffeoyltyramine and cannabisin B by high-resolution mass spectra, nuclear magnetic resonance spectra, and ultraviolet data. The two compounds exhibited significant high DPPH() scavenging activity and protective effect against in vitro oxidation of human low-density lipoprotein compared with extracts from flaxseed, grape seed, and soybean. This suggests that hempseed hull extract is a potential source of natural antioxidants, which could be added to dietary supplements to help prevent oxidative stress.

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