

Betalains and Phenolics in Red Beetroot (*Beta vulgaris*) Peel Extracts: Extraction and Characterisation

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Z. Naturforsch. **56c**, 343–348 (2001); received January 9/February 12, 2001

Beta vulgaris, Betalains, Phenolics

The extraction of red beetroot (*Beta vulgaris*) peel betalains and phenolics was compared with two extraction methods and solvents. The content of total phenolics in the extracts was determined according to a modification of the Folin-Ciocalteu method and expressed as gallic acid equivalents (GAE). The profiles of extracts were analysed by high-performance liquid chromatography (HPLC). The compounds of beetroot peel extracted with 80% aqueous methanol were characterised from separated fractions using HPLC- diode array detection (HPLC-DAD) and HPLC- electrospray ionisation-mass spectrometry (HPLC-ESI-MS) techniques. The extraction methods and the choice of solvent affected noticeably the content of individual compounds in the extract. The betalains found in beetroot peel extract were vulgaxanthin I, vulgaxanthin II, indicaxanthin, betanin, prebetanin, isobetanin and neobetanin. Also cyclodopa glucoside, *N*-formylcyclodopa glucoside, glucoside of dihydroxyindol-carboxylic acid, betalamic acid, L-tryptophan, *p*-coumaric acid, ferulic acid and traces of unidentified flavonoids were detected.