ISOLATION OF CRYSTALLINE GLUCOSINOLATES FROM CRUCIFEROUS SEEDS

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Pure glucosinolates are necessary for calibration and identification purposes as well as for studies of their chemical and pharmacological properties. Moreover, expecially sinigrin and glucotropaeolin are commonly used as internal standard substances for the quantitative determination of rapeseed glucosinolates by GLC and HPLC.

A very detailed procedure is presented which allows the isolation of these compounds with > 99% purity from Brassica nigra and Lepidium sativum seeds in ecomonically and reproducible ways. For example, a percolation technique is proposed for the extraction of the defatted seed meals and a displacement chromatography on relatively small ion exchange columns (1.79 g Sephadex DEAE/g glucosinolate) combined with fractional elutions is described for the fast and simple enrichment of the above mentioned glucosinolates.