

Aqueous Enzymatic Extraction of Oilseed Rape Resulting in High Quality Products without Hulls and Glucosinolate Degradation Products

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Abstract:

A procedure for oilseed rape processing and extraction without use of organic solvents has been developed. Myrosinases (thio-glucoside glucohydrolase E.C. 3.2.3.1.) are initially inactivated. The seeds are crushed, suspended in water and treated with cell wall destructive enzymes. Separations of the suspension are based on centrifugations resulting in four fractions : hulls, oil, syrup and meal.

It is a gentle processing procedure, only a limited degradation of glucosinolates occurs and the intact glucosinolates are concentrated in the syrup

fraction. The meal has a high content of protein, a relatively high content of fat and very low levels of glucosinolates.

Analytical results and feeding trials have revealed, that the nutritive value and quality of the meal are high. The meal can be used to animal feed where the requirements to low content of glucosinolates and especially degradation products thereof are very high. The products obtained have thus potentialities as high quality plant oil and plant protein sources.