

# #151

## “Native” rape seed protein product

ADDRESS

*Steffen Hruschka*

GEA Westfalia Separator  
Group GmbH, Oelde,  
Germany

Since centuries rape seed and nowadays also canola are used as a source for edible oil. One of the mega trends of the last years is the application of plant proteins in food instead of using animal proteins. The recovery of vegetable proteins in general improves not only on the water foot print but also the energy demand of processing.

New sources of proteins like pea, lupine, algae etc. are more and more available in the market. Also rape seed is used as a source for proteins. And protein products thereof are sold as a protein enriched food claimed with an excellent protein profile.

Considering that one third of the oil plants are rape seed/canola, the commercial use of rapeseed proteins for food is quite limited so far. There are some disturbing minor components like glucosinolates, lignin, sinapin, cholin and its derivatives as well as phytic acid. Those composites influence not only the digestibility, but also the taste and furthermore the existing regulations limits (e.g. for glucosinolates). In addition to that the technological behavior of those proteins becomes more important if these are used as an intermediate product for food and/or for special feed products.

Together with partners GEA developed a process to recover a protein product with good technological behaviors, meaning a “native” protein with a good water and oil solubility and with a good functionality as an emulsifier. The focus was also to achieve an acceptable taste without off flavors. Starting with a hexan free press cake, the press cake still containing some oil and polar lipids - is used as a raw material for the patented process. The aim is to achieve a functional protein product with a low content of glucosinolates, phytic acid and sinapin cholin and almost lignin free, too. The dry matter yield and the protein yield are very important in order to get an attractive economical assessment. Not only the composition (e.g. proteins, vitamins, lecithin), but also the cold processing and the achieved particle distribution in the globulin powder are responsible for the attractive behavior of the final product.

PLENARY TALKS

ORALS

POSTERS

WORKSHOPS