

Phospholipid composition of crude oils – effect of seed pretreatment steps

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Seed crushing conditions have a basic influence on the non-hydratable phosphatide (NHP) content of crude vegetable oils and consequently on the oil refinability, lecithin yield and quality.

In a regular processing plant the NHP formation can be limited by adjusting a correct temperature profile during seed preheating and conditioning. An other approach is the inactivation of enzymes at the beginning of the crushing process. Such alternative process has been industrially introduced at a Bunge Europe plant.

In this presentation the influence of crushing conditions on NHP content of crude oil will be demonstrated by the results of industrial surveys. The advantageous effects of the alternative technique on NHP formation will be presented based on the first industrial experiences. Crude rapeseed oil properties as well as phospholipid composition of lecithin obtained under different crushing conditions will be compared.