

Production Technologies and Quality Evaluation of Alpha Linolenic Acid Rich Oils

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The growing interest for highly unsaturated high iodine value oils for nutrition purposes will probably result in a growing demand of these product in the European market during the next years. This new request of linseed, walnut, rapeseed, etc. vegetable oils comes from the consideration that European population is short in alpha linolenic acid, since during the last 40 years all efforts have been done towards the minimization of linolenic acid content of different oils and food, because of its strong oxidation tendency.

The production, conservation and distribution of these highly unsaturated oils poses several problems connected to the oxidation stability. In this poster we are going to show the results obtained during the screw pressing of both rapeseed and linseed in terms of yield and oil quality. A recently developed modern technique for the evaluation based on the HPLC evaluation was used and the results are here shown.

A portion of obtained crude oil was processed in laboratory scale in order to simulate a complete refining process. The obtained refined oil were completely evaluated in order to try to answer at the old question “*crude or refined oils: which is better ?*”. The main conclusion is that processing the oils using the actual knowledge and the available technologies there are no dramatic differences in quality between the two products. This work demonstrated that the most critical step is storing the oil after production and preserving it since the moment when the final container is opened until the complete use of the product.