

# Recuperation some Horticultural Processing Secondary Products (Tomato Seeds and Green Pepper) into Monitored Structured Functional Lipids

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## Abstract

In this paper we present the results of the work by the team of Agro-alimentary preservation techniques within integrated and integral valorising of lipid fractions isolated by solid/liquid extraction with extraction gasoline (*b.p.* 40-60°C) from tomato seeds (*Solanum lycopersicum* L.) and green pepper (*Capsicum annuum*) purified (saponifiable fraction) through repeated liquid/liquid in the biphasic system ethylic ether/water and/or petroleum ether (*b.p.* 40-60°C)/water later characterised chemically and physically and chemically (acidity, esterification, saponification, unsaturated index).

Fatty acids obtained through total acid hydrolysis (*HCl*), isolated and specifically purified through repeated liquid/liquid extractions were processed after gas-chromatographic characterisation into monitored structured functional lipids.

Experimental trials benefited from the by-products from horticultural and/or agroalimentary processing (preservation) of the tomato species (*Solanum lycopersicum* L.) and green pepper (*Capsicum annuum*) cultivated in the soil and climate conditions specific to the *Didactic Station of the University of Agricultural Science and Veterinary Medicine of the Banat*.

Insignificant differences in composition between geographical areas had in common a high degree of unsaturation of the superior acids as such or directed by the  $\omega_3$  and/or  $\omega_6$  systems.

The present research also ensures a true direction of integrated ecological valorising of the by-products mentioned above in full agreement with environmental European and world treaties.

Key words: tomato seeds, green pepper, vegetable oils, polyunsaturated lipids

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