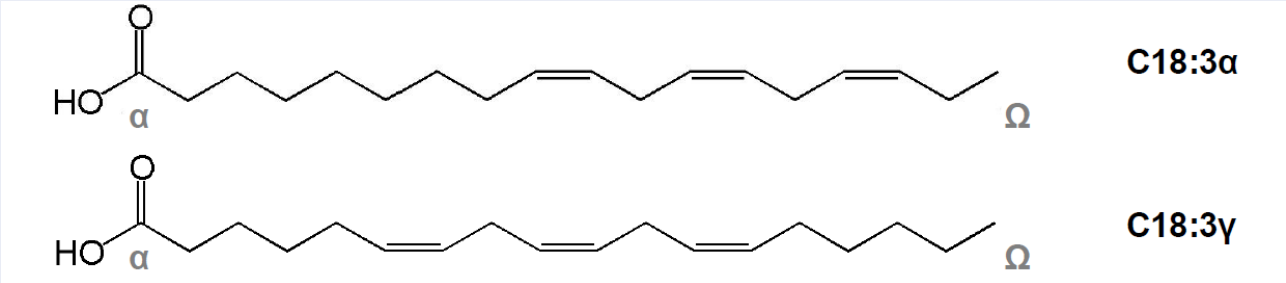
Omega Fatty Acid Isomers	Separation of Native and Unsaturated Fatty Acids	Author: AB Date: i-Mail-No.

Omega-3- and Omega-6- fatty acids have an important impact on health with positive effects on heart diseases and arteriosclerosis being reported. These fatty acids are essential, as they cannot be synthesised by humans. For this reason an adequate supply via nutrition is mandatory. Often they are applied as dietary supplements or added to conventional food products. An appropriate ratio of Omega-3 and Omega-6 is recommended.

Therefore, a reproducible and simple analysis of fatty acids in the field of food industry is fundamental. The shown application enables the successful separation of structurally very similar compounds – **without derivatisation of fatty acids!**

Well known omega fatty acids are α-linolenic acid (C18:3 α, Omega-3) and γ-linolenic acid (C18:3, Omega-6). They differ only in their position of the double bonds.



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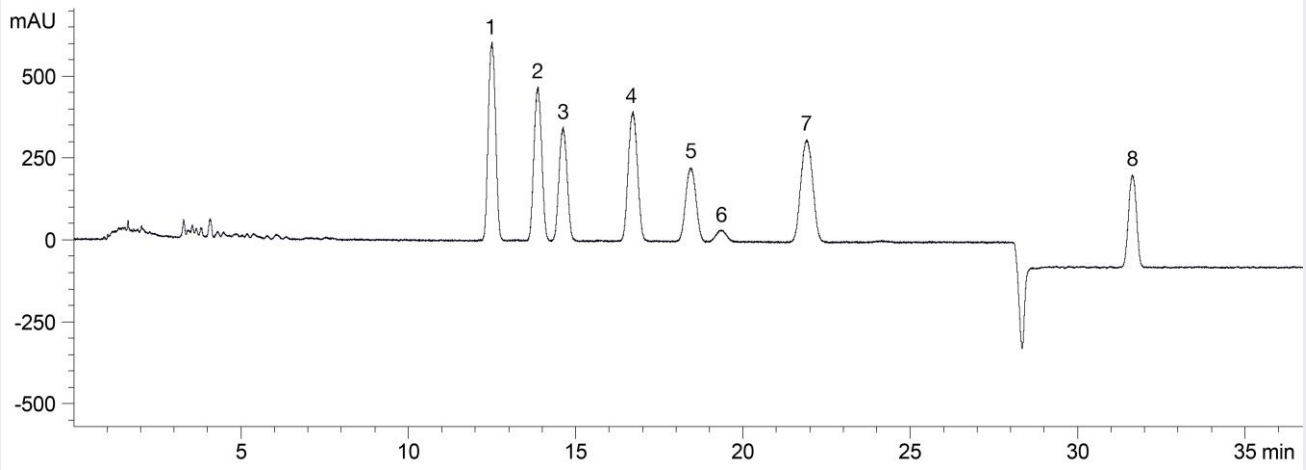

Column	YMC-Triart C18 ExRS TAR08S03-1546PTH 3 µm particle size 8 nm pore size 150 × 4.6 mm ID	
Mobile Phase	A: H_2O + 0.5 % H_3CCOOH B: ACN + 0.5 % H_3CCOOH	
Gradient	Time [min]	% B
	0	76.5
	22	78.5
	27	78.5
	27.1	90
	35	90
Flow rate	1 mL/min	
Detection	205 nm	
Temperature	30 °C	
Substances	1: Eicosapentaenoic acid (C20:5; 0.5 mM) 2: Alpha-Linolenic acid (C18:3 α; 0.5 mM) 3: Gamma-Linolenic acid (C18:3 γ; 0.5 mM) 4: Docosahexaenoic acid (C22:6; 0.5 mM) 5: Palmitoleic acid (C16:1; 3 mM) 6: Arachidonic acid (C20:4; 0.5 mM) 7: Linoleic acid (C18:2; 0.5 mM) 8: Oleic acid (C18:1; 3 mM)	
Injection	20 µL	

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With YMC-Triart C18 ExRS you achieve a separation of fatty acids:

- Scalable from U(HPLC) to HPLC
- Without derivatisation of the analytes
- Suitable for structurally similar compounds

Ask for your YMC-Triart C18 ExRS free trial column now!

For further information please contact:

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