

Review of the Oils and Fats methods in Stan 234

Delegation of The Netherlands

Yannick Weesepeel – Wageningen Food Safety Research

Paul Bontenbal - The Netherlands food and consumer product safety authority



2021 – 2022 activities

- Questions raised by CCMAS, answered by CCFO
- Review of Vitamin A and D methods for fish oils
- Review of relevant methods for Olive Oils and Olive Pomace Oils
 - Methods not proposed for change in review of CXS33

Example – Synthetic antioxidants

Commodity	Provision	Method	Principle	Type
Fats and oils	Butylhydroxyanisole, butylhydroxytoluene, tert-butylhydroquinone, & propylgallate	AOAC 983.15; or AOCS Ce 6-86	Liquid chromatography	II
Fats and oils	Synthetic antioxidants	AOCS Ce 6-86	Liquid chromatography	II
Fats and oils	Synthetic antioxidants	AOAC 983.15	Liquid chromatography	III

Example – Fish Oil – FA composition

Fish oils	Fatty acid composition	AOCS Ce 1a-13	Capillary GLC	III
Fish oils	Fatty acid composition	AOCS Ce 2-66	Preparation of methyl esters by fatty acids	III
Fish oils	Fatty acid composition	AOCS Ce 1b-89	GLC	III
Fish oils	Fatty acid composition	AOCS Ce 2b-11	Alkali hydrolysis	III
Fish oils	Fatty acid composition	AOCS Ce 2b-11 and AOCS Ce 1j-07	Gas Chromatography of methyl esters	III
Fish oils	Fatty acid composition	AOCS Ce 1i-07	Capillary GLC	III
Fish oils	Fatty acid composition	ISO 12966-2	Gas chromatography	III
Fish oils	Fatty acid composition	ISO 5508	Gas chromatography	III
Fish oils	Fatty acid composition	AOCS Ce 2-66 and AOCS Ce 1i-07	Gas Chromatography of methyl esters	II
Fish oils	Fatty acid composition	AOCS Ce 2-66 and AOCS Ce 1a-13	Gas Chromatography of methyl esters	Re- mov e
Fish oils	Fatty acid composition	AOCS Ce 2b-11 and AOCS Ce 1i-07 or AOCS Ce 1j-07	Gas Chromatography of methyl esters	III
Fish oils	Fatty acid composition	ISO 12966-2 and ISO 12966-4	Gas Chromatography of methyl esters	III
Fish oils	Fatty acid composition	AOCS Ce 1b 89	Gas Chromatography of methyl esters	III

Example – Fish Oil – Vitamin A and D

Commodity	Provision	Method	Principle	Type
Fish Oil	Vitamin A	European Pharmacopeia Monograph on Cod Liver Oil (Type A), monograph 01/2005:1192, with LC end-point 2.2.29	LC	III
Fish Oil	Vitamin A	EN 12823-1 (Determination of vitamin A by high performance liquid chromatography – Part 1: Measurement of all-E-retinol and 13-Z-retinol)	LC	III
Fish Oil	Vitamin A ^a	EN 12823-1	Liquid Chromatography	II
Fish Oil	Vitamin A ^a	European Pharmacopeia Monograph on Cod Liver Oil (Type A), monograph 01/2020:1192, with LC end-point 2.2.29	Liquid Chromatography	III
Fish oil	Vitamin D	EN 12821 (Determination of vitamin D by high performance liquid chromatography – Measurement of cholecalciferol (D3) or ergocalciferol (D2))	LC	III
Fish oil	Vitamin D	NMKL 167 (Cholecalciferol (vitamin D3) and Ergocalciferol (vitamin D2)- Determination by HPLC in food-stuffs)	LC	III
Fish oil	Vitamin D	EN 12821	Liquid Chromatography	II
Fish oil	Vitamin D	NMKL 167	Liquid Chromatography	III

^a **Suggested footnote:** The respective standard on fish oils CXS 329-2017 states that Vitamin A is expressed as 'Retinol equivalents'(RE) where RE takes into account the fact that different vitamers of vitamin A differ in activity. ISO/TR 23304:2021 "Food products – Guidance on how to express vitamins and their vitamers" may give clarity on this matter, for example for the relevant activities of the all-E-retinol levels and 13-Z-retinol levels.

Live QA

