

# Civil Dialogue Group HOS - Olives sector

10th June 2022  
Mineral Oil

# Food safety first



**REGULATION (EC) No 178/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL  
of 28 January 2002**

**laying down the general principles and requirements of food law, establishing the European Food  
Safety Authority and laying down procedures in matters of food safety**



# MOAH: State of play



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CIRCABC Link: [https://ec.europa.eu/food/system/files/2022-05/reg-com\\_toxic\\_20220421\\_sum.pdf](https://ec.europa.eu/food/system/files/2022-05/reg-com_toxic_20220421_sum.pdf)

A.01 Mineral oil aromatic hydrocarbons (MOAH) report.

## Draft joint statement of the Member States regarding the presence of Mineral Oil Aromatic Hydrocarbons (MOAH) in food, including food for infants and young children<sup>2</sup>

Following recent findings of the presence of mineral oil aromatic hydrocarbons (MOAH) in certain foods, the Commission services requested the relevant competent authorities and food business operators to follow-up on the findings and to sample and to analyse the products (stock cubes and other products) which have been found to contain MOAH, to perform investigations on the source of contamination (ingredients, food additives, food contact materials, lubricants and others) and to report on the outcome of the investigations. It is appropriate that Member States and food business operators perform controls on the presence of MOAH in microcrystalline wax (petroleum wax, synthetic paraffin) and its potential migration to food, to confirm whether the use of microcrystalline wax in food contact materials is a source of the contamination of food by MOAH and take, if necessary, measures to prevent the occurrence of MOAH in food. It should also be checked whether microcrystalline wax, used in food contact materials is claimed to be E905 (microcrystalline wax authorised for specific food additive uses) and, if this is the case, whether it complies with the specifications of E905, in particular as regards the presence of benzo[a]pyrene.

For the sampling and analysis, the JRC has published a "Guidance on sampling methods, on the performance criteria for the analytical methods and on the reporting of the analytical results" (<https://publications.jrc.ec.europa.eu/repository/handle/JRC115694>).

If the quantified presence of MOAH, which are possible genotoxic carcinogens, in food including food for infants and young children is confirmed by an official control, the products concerned should be withdrawn and, if necessary, recalled from the market on the basis of Article 14 of the General Food Law (Regulation (EC) No 178/2002), to ensure a high level of human health protection. In this regard the Member States also stress the responsibilities of food business operators in accordance with Article 10 of the General Food Law.

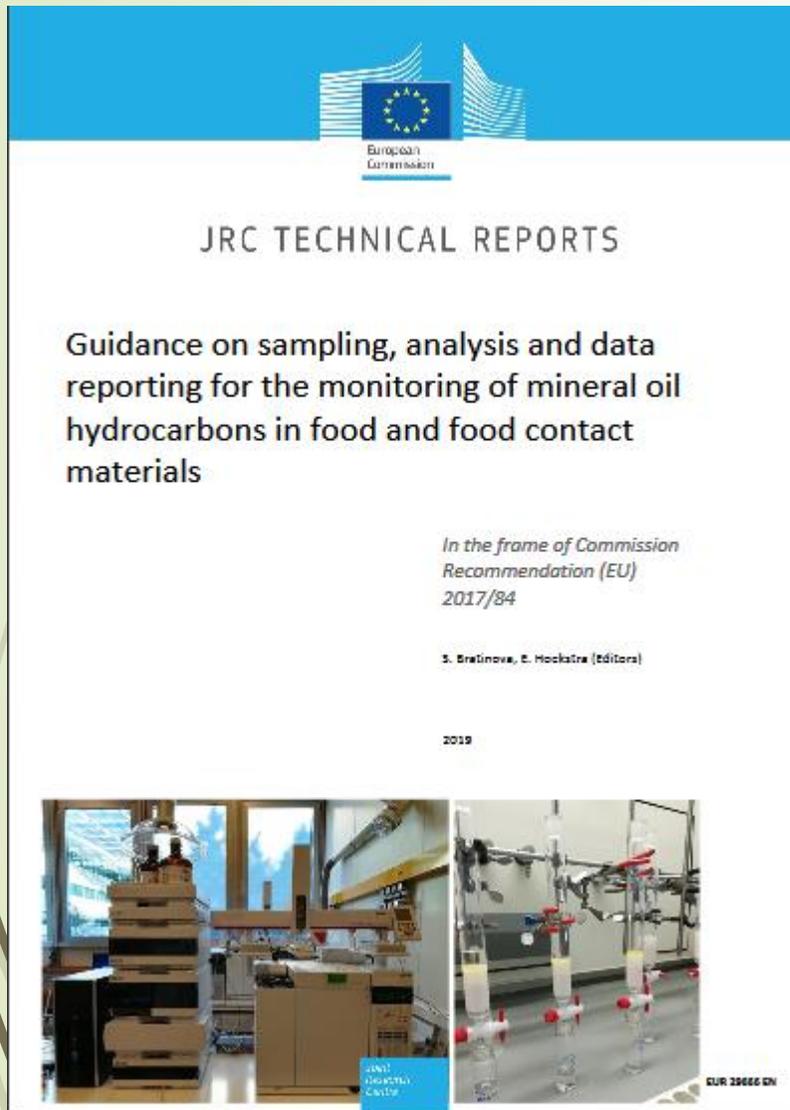
In order to ensure a uniform enforcement approach throughout the EU, the Member States agreed to withdraw and, if necessary, to recall products from the market, when the sum of the concentrations of MOAH in food are at or above the following maximum LOQs:

- 0.5 mg/kg for dry foods with a low fat/oil content ( $\leq 4\%$  fat/oil)
- 1 mg/kg for foods with a higher fat/oil content ( $> 4\%$  fat/oil)
- 2 mg/kg for fats/oils

Analysis and sampling should be done according to the provisions of Regulation (EC) No 333/2007.

[https://ec.europa.eu/food/system/files/2022-05/reg-com\\_toxic\\_20220421\\_sum.pdf](https://ec.europa.eu/food/system/files/2022-05/reg-com_toxic_20220421_sum.pdf)

# MOAH: State of play



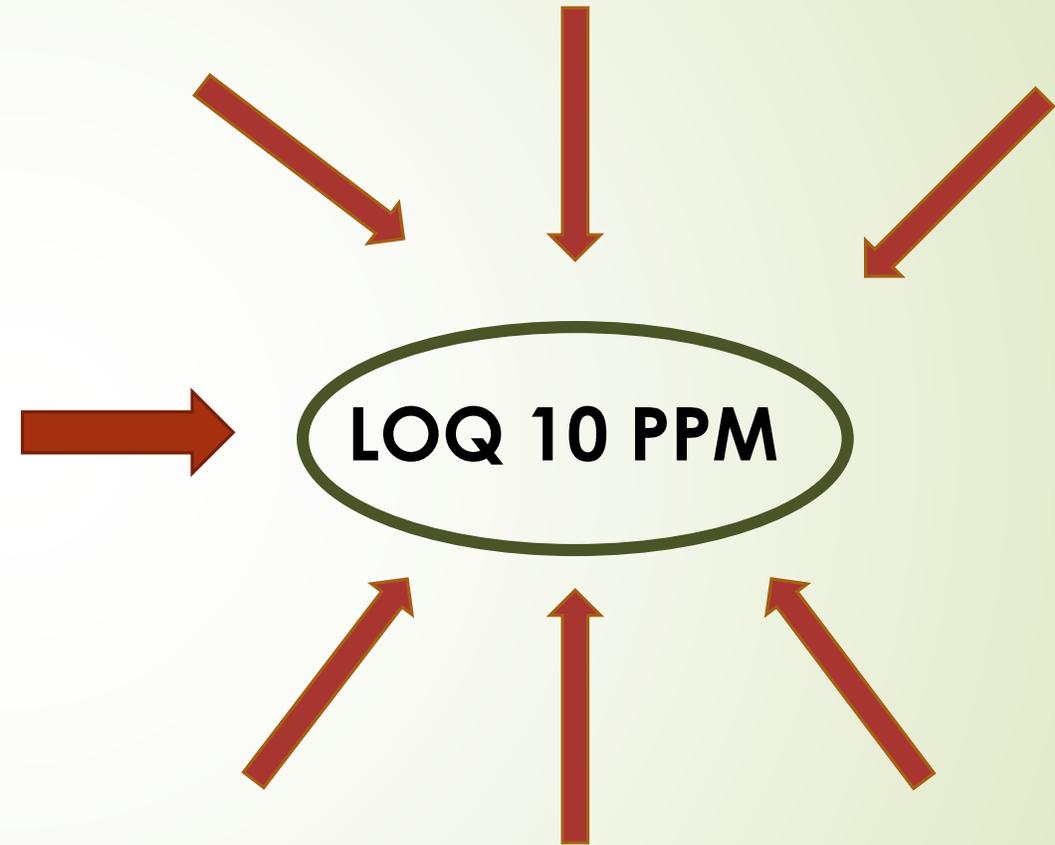
On **February 23, 2019**, the “Task Force on Mineral Oil established by the European Union Reference Laboratory for Food Contact Materials (EURL-FCM),” of the European Commission’s (EC) Joint Research Centre (JRC), published a guidance **on “sampling and analysis of mineral oil saturated hydrocarbons (MOSH) and mineral oil aromatic hydrocarbons (MOAH)”**

**Amount of MOAH (“sum” vs “integration method”)**

# MOAH: State of play

## EN 16995:2017

Foodstuffs - Vegetable Oils And Foodstuff On Basis Of Vegetable Oils - Determination Of Mineral Oil Saturated Hydrocarbons (Mosh) And Mineral Oil Aromatic Hydrocarbons (Moah) With On-Line Hplc-Gc-Fid Analysis



## CONCLUSIONS

In conclusions, in light of the above, for some fat matrices the analytical result is influenced by the presence of endogenous interferents (e.g. terpenes, carotenoids). The result is an inaccurate and overestimated analytical evaluation. The experts have shared that:

- there is the need of a fully validated analytical method with specificity and reproducibility satisfying;
- the results are affected by high uncertainty with low MOAH concentration and complex matrices;
- a confirmatory method with GCxGC FID-MS validation is missing and the analysis is characterized by a difficult integration and guidelines for chromatogram interpretation are needed;
- new standard of mineral oils commercially available need to obtain a wider range of certified reference contaminated foods at different concentration level;
- actually the method EN16995 used for MOH determination in vegetable oils and fats is not reliable below 10 mg/kg. This value is not considered LOQ value but the value under the which the interlaboratory reproducibility has not acceptable values. There is also a need of a confirmatory methods that provide a detailed characterization of the unresolved complex mixture observed from one-dimensional chromatographic methods;
- the exposure estimation is impossible due to the limited knowledge of the real content of MOAH in food;
- further informations are needed to clarify the complex distribution of MOH in the human body and to establish a relationship between the levels of external exposure and absorption in the organism;
- a clear definition on how report the results and indicate LOQs is required.

The chemical experts GL18 group are always open to be involved in future collaborative study to improve analytical aspects about this important topic.

*The UNI GL18 experts*



- Non-

- Anal

- No C

- Amount

# MOAH: State of play



**Opinion on MOH by the end of 2022**

# MOAH: State of play

Principle of legality

Preliminary scientific assessment

Principle of proportionality (recitals 3 and 4 of EC Regulation 1881/2006 and Judgment of the European Court of Justice in case T-257/07 of 9 September 2011)



# Our proposal



Waiting for EFSA Opinion  
following its scientific assessment



**Thanks for your attention**

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