

JRC GUIDANCE ON MINERAL OILS

In follow up to the Recommendation from the Commission (EU) 2017/84 to the Member States to monitor the presence of mineral oils in food and in materials and articles intended to come into contact with food (Ref update mail 20/01 2017)

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.012.01.0095.01.ENG&toc=OJ:L:2017:012:TOC

there are in between test results available in several countries.

So far missing was the precise guidance from the Joint Research Centre.

Earlier this month the JRC Technical Report “Guidance on sampling, analysis and data reporting for the monitoring of mineral oil hydrocarbons in food and food contact materials” was published.

http://publications.jrc.ec.europa.eu/repository/bitstream/JRC115694/kjna29666enn_2.pdf

The Member States are expected to report for the following fractions of MOSH and MOAH (page 15):

MOSH:	MOAH:
total MOSH	Total MOAH
MOSH $\geq n-C_{10}$ to $\leq n-C_{16}$	MOAH $\geq n-C_{10}$ to $\leq n-C_{16}$
MOSH $> n-C_{16}$ to $\leq n-C_{20}$	MOAH $> n-C_{16}$ to $\leq n-C_{25}$
MOSH $> n-C_{20}$ to $\leq n-C_{25}$	MOAH $> n-C_{25}$ to $\leq n-C_{35}$
MOSH $> n-C_{25}$ to $\leq n-C_{35}$	MOAH $> n-C_{35}$ to $\leq n-C_{50}$
MOSH $> n-C_{35}$ to $\leq n-C_{40}$	
MOSH $> n-C_{40}$ to $\leq n-C_{50}$	

The table on page 18 specifies the required maximum limit of quantification (LOQ) for each C-fraction, the target LOQ (LOQt) for each C-fraction, the acceptable ranges of mineral oil recovery and the required precision of the analytical results.

Categories	Associated foods [#]	LOQ - max [mg/kg]	LOQ - t [mg/kg]	R_{rec} [%]	intermediate precision [%]
Dry, low-fat content (< 4% fat/oil)	bread and rolls; breakfast cereals; grains for human consumption; pasta, products derived from cereals	0.5	0.1	80 - 110	15
Higher fat/oil content (> 4% fat/oil)	fine bakery ware; confectionery (incl. chocolate) and cocoa; fish meat, fish products (canned fish); oilseeds; pulses; sausages; tree nuts	1	0.2	70 - 120	20
Fat/oils	animal fat (e.g. butter); vegetable oils	2	0.5	70 - 120	20
Paper and Board	Reporting only up to C ₃₅ (extraction optimised up to C ₃₅)	10	5	80 - 110	10



EVALUATION FCM LEGISLATION

As reported the Commission is in the food safety context currently focussing on the evaluation of the existing food contact legislation and involved an external consultant to draft an evaluation report. Ecorys is currently gathering information through interviews with stakeholders and also via a public consultation and will probably present the report in September.

The ECMA Technical Committee is involved in giving appropriate input, but also national associations and companies can contribute to this consultation:

https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-5809429/public-consultation_en

Part one is addressed to citizens, the second part is for experts or those with a prior knowledge of the FCM legislation and working in this field.

This public consultation is open until the 6/05.

TNO FIBER CLEANING

For the contaminants which may be present in paper and board packaging in recent years several approaches have been developed, the use of substrates, inks and adhesives with a low contamination/ low migration level, the introduction of barriers at the reverse side of the board or as a separate packaging layer and the introduction of an adsorbent in the substrate in order to fix the contaminants in the material.

So far the fibre cleaning has not yet been considered as a feasible option due to the assumed unavoidable high fibre loss in the cleaning process.

A new development is the more promising report from the Dutch research institute TNO "Investigation into the potential of several technologies to eliminate mineral oil from the used paper and board chain."

The study was ordered by The Netherlands Institute for Sustainable Packaging (KIDV) and the Top Institute Food and Nutrition (TiFN). A summary and a presentation both in Dutch can be downloaded from the KIDV website :

<https://www.kidv.nl/wetenschappelijk-onderzoeksprogramma/mitigatiemaatregelen-minerale-olien-bij-oud-papier-en-karton/8415/samenvatting-van-het-onderzoek.html?ch=EN>

<https://www.kidv.nl/wetenschappelijk-onderzoeksprogramma/mitigatiemaatregelen-minerale-olien-bij-oud-papier-en-karton/samenvatting-van-het-onderzoek/8413/presentatie-sustainable-packaging-januari.pdf?ch=EN>

On demand we can share the entire study in Dutch (Report 74 pages, including all annexes 182 pages). Annexed you will find the summary in English.

The study made an assessment of 6 different technologies for the elimination or fixation of mineral oils:

MB 12 with active carbon as an adsorbent, Flotation to deink, Cleaning with Super critical CO₂, Heat Treatment, Anionic Trash Catchers (ATCs) and Functionalized clay.

Two technologies are currently in use (MB12 and Flotation), two are in development (sCO₂ and Heat treatment) and two are just available as a conceptual idea (ATCs and Functionalized clay).

Food safety, sustainability and feasibility/costs were taken in account as criteria to make the evaluation.

For the elimination/fixation approach, the TNO report expresses the opinion the MB12 technology seems to be in an integrated assessment the preferred option.

SAFETY FEATURES ON PHARMACEUTICAL PACKAGING

The EU Falsified Medicines Directive (2011/62/EU) and the Commission Delegated Regulation (EU) 2016/161 with details on the characteristics of the safety features, are since the 9/02 fully enforced. This means the outer packaging of medicine must contain safety features that allow, to verify the authenticity of a medicine, to identify individual packs and must have a device that allows to verify if the outer packaging hasn't been manipulated (tampered).

10,5 billion packs will receive an individual code throughout Europe per year!

To give guidance on the tamper verification an EN standard was adopted in 2014 "Packaging - Tamper verification features for medicinal product packaging" and in 2018 this CEN standard formed the basis for the ISO standard 21976.



ALTERNATIVE COATINGS

At the ECMA Technical Committee meeting the 20/02 a number of suggestions were made in the context of the Single Use Plastics Directive, requiring further internal discussion. For companies looking into more advanced coatings for containing liquids and fatty foods, it may be useful to attend the

[Biobased Coatings Europe conference \(19-20/06 Dusseldorf\).](#)

https://hubs4f6giw47be8628xpls10-wpengine.netdna-ssl.com/aci/wp-content/uploads/sites/2/2019/03/CRCe2_Agenda_MKG.pdf

<http://archive.wplgroup.net/csb/Public/show/ftheo-z62yc--jttr7-9hnxgsb3>

14th March 2019

