

**MINERAL OILS STATE-OF-ART**  
**Update June 2012**

### **EFSA Report**

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The report names known sources of mineral oil in food and describes effects on laboratory animals and humans. The report mentions that there is no validated method for the determination of mineral oils in food so far. Consequently, in the recommendation at the end of the report, the provision of reference materials, the development of methods and their validation in inter-laboratory tests are suggested.

The EFSA report is a comprehensive collection of literature publications and test results. It emphasizes that mineral oils are common in our world and that they find access into food from different sources.

The EFSA report describes the variety of sources that can lead to the migration of mineral oils in foodstuff and underlines the lack of knowledge about these substances.

### **Analysis Methods**

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In May 2012, the German Federal Institute for Risk Assessment (BfR) published two method descriptions for the measurement of mineral oils: for the “measurement of mineral oil hydrocarbons in foodstuff and packaging materials” as well as “determination of hydrocarbons of mineral oil (MOSH and MOAH) or plastics (POSH, PAO) in packaging materials and dry foodstuff through solid-phase extraction and GC –FID”.

According to BfR, the first named publication is a “compendium, which has been compiled exclusively for the development and establishment of analysis methods for the determination of mineral oil hydrocarbons in the range of food contact materials”. The second publication with the analysis method has been developed and established in cooperation with the regional laboratory Zurich. Both publications are no anticipation of planned legal regulations to mineral oil in packaging materials and foodstuff.

Furthermore, BfR developed a “mineral oil methods development KIT” for the food inspection. It serves exclusively as method development and establishment for inter-laboratory tests.

However, a validated method for analytics of mineral oil components is still not available. Moreover, the current available analysis methods for the measurement of mineral oil substances provide a huge range of measured results.

### **Sources of mineral oils in food**

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There are indications about the origin of mineral oil contamination or of its transition, but distinct determination causes and influencing factors are still missing.

Potential sources of mineral oils are:

- mineral oil based packaging printing inks
- mineral oil based newspaper inks which get into the paper recycling loop
- mineral oil based processing and auxiliary materials
- miscellaneous sources (ubiquitous mineral oil components)

It should be added that food often has an already existing environmental “basic load” of mineral oil substances. However, with the available analysis methods one cannot distinctly assess in a single case from which source the mineral oil substances come.

On these grounds, the manufacturers cannot confirm that paper and board food contact materials and packaging is “free of mineral oil”.

#### **Solution process virgin fibres or barrier**

A general change to packaging with a functional barrier or packaging based on virgin fibres is not feasible, neither technologically nor quantitatively.

#### **Change to mineral oil free newspaper printing inks**

Although corresponding tests in Switzerland showed that the mineral oil free printing of newspapers is technically possible, newspaper publishers and newspaper printers are still not prepared for the substitution of mineral oil based printing inks by mineral oil free printing inks.

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#### **Joint activities FEFCO & CEPI: High-Level Issue Group on Mineral Oils**

- CITPA<sup>1</sup> and CEPI have signed a Self-commitment

Last meeting of the HLIG was held on June 6<sup>th</sup> the day of the EFSA report publication. The external position paper was revised accordingly to the results published by EFSA.

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#### **PIJTF: Subgroup Paper & Board Joint action of the Food Industry and paper and board producers and converters.**

Last meeting May 29<sup>th</sup>: Food Drink Europe, CITPA and CEPI agreed on some common messages to answer questions on MO, based on a reactive approach.

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#### **FSA UK position**

The British Food Standards Agency (FSA) Survey was released in December 2011. The summary stated that they did “*not identify any specific food safety concerns*” and that “*there is no need for consumers to change their eating habits*” After the publication of the EFSA report on June 6<sup>th</sup>, FSA UK maintains its position and will not make any recommendation to consumers to change their consumer behavior.

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#### **European Commission position**

After the publication of the EFSA report, the EC has decided not to take any further action, as far as legislation is concerned, before 2014.

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<sup>1</sup> The following CITPA members have signed the self-commitment: FEFCO, ECTA, ECMA, EUROSAC, CEPI Eurokraft and the German national association – WPV.

## **The German draft Ordinance: Activities at National level**

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The whole packaging and food chain is closely connected with the authorities and scientists regarding the issue of mineral oil.

Since the mineral oil problems became known, the paper and board companies and supply chain reacted and took the following steps:

- Reduction of the application of recycling paper grades with high newspaper content
- Reduction of mineral oil based process materials
- Reduction of mineral oil based packaging printing inks.

Above all, the self-commitment of the German trade associations of paper and board packaging (WPV) and its members to the reduction and prevention of mineral oil transfer of paper and board packaging on foodstuff from August 2010 has already been successful. Therefore, the application of mineral oil based printing inks for packaging printing has notably declined.

## **Initiative Clean Paper Recycling**

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To expand these successes and generally eliminate unwanted substances from the paper loop the WPV started, together with the Association of German Paper Manufacturers (VDP), the “Initiative Clean Paper Recycling for the prevention of entry of unwanted substances into the paper recycling loop”.

Core elements of the initiative are:

1. Common self-commitment
2. Contribution of all stakeholders involved in the paper recycling loop
3. RAL quality label “mineral oil reduced printing products”
4. Monitoring
5. Expansion of the initiative in Europe

This initiative has received good support from the German authorities but could not be seen as an alternative to the potential regulation.

*(Information based on WPV summary “Aktueller Sachstandsbericht- Mineralölmigration“ Author: T. Pfeiffer)*

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Brussels, June 2012