

Reducing MOSH/MOAH risks with the right lubrication partner



Background

In the food industry, ensuring hygienic lubrication is critical to avoid contamination risks. Mineral oil hydrocarbons (MOH), including MOSH (saturated) and MOAH (aromatic), are potential contaminants. MOSH consist of linear and branched alkanes and cycloalkenes, while MOAH include alkyl-substituted polyaromatic hydrocarbons – both of which can enter food through the lubrication points and pose safety concerns. As H1 lubricants are designed for incidental food contact, most of them are formulated without MOH. Yet their synthetic components can mimic MOSH/MOAH in tests, leading to false positives and complicating contamination assessments.

Sources of contamination

Contamination can occur at various stages:



in farming



during processing



during packaging

Additives in lubricants such as anti-foaming agents and corrosion inhibitors may contain – or mimic – MOSH/MOAH.

Key challenges

- Diverse production environments require tailored lubrication solutions involving various base oils and additives.
- There is no global requirement for H1 lubricants – regulations differ by country, so manufacturers must take responsibility for selecting safe and compliant solutions.
- Analytical limitations in distinguishing synthetic hydrocarbons from MOSH/MOAH.

Opportunities with a reliable partner

At Klüber Lubrication, we go beyond supplying lubricants – we partner with you to improve safety, efficiency, and compliance across your production. Our tailored solutions are built on a deep understanding of your operations, and we work closely with leading labs to refine testing methods like GCxGC-TOF-MS, helping you clearly distinguish true MOH from synthetic substances. With seven ISO 21469-certified production sites and a global team of food industry specialists, we ensure reliable supply, local support, and reduced risk – so you can focus on what matters most: safe and smooth production.

Conclusion

Choosing the right lubrication partner is essential for food safety, operational reliability, and sustainability. Klüber Lubrication provides a holistic, expert-driven approach to managing MOSH/MOAH risks while enhancing performance and compliance.

How can we support you

- We conduct audits to identify any lubrication points posing a risk of contamination and to recommend suitable lubricants to improve quality and production efficiency.
- We provide technical recommendations to ensure the right lubricant is used for the right application, at the right time, and in the right quantity.
- We offer training to increase knowledge around lubrication and lubrication management for your engineering and quality experts.
- We continuously monitor and improve your lubrication management to optimise your production with our technical support and lubricant analysis.