

# Lubricants in the food and pharmaceutical industry: clarification urgently required!

Selecting lubricants for your production plant, where do you start?

**Andre Adam** provides some insight

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## Introduction

Readers of this magazine will have a great interest in limiting risks and improving overall quality. It would help to have clear rules about food grade lubricants that need to be used to lubricate production machines. The lubricant producing and marketing industry should take more time in bringing a clear and transparent message to the market. If we do this properly, lawmakers can possibly see this as a good initiative and even bring this thinking into national rules or law.

The key focus for all parties involved in the supply of foodstuffs to the market is to avoid negative attention from the market as a result of a contamination incident resulting in loss of brand value or claims and legal action against the producer.

## The mumbo jumbo from the industry

The HACCP manager is exposed to many abbreviations that generally have a link with the products he intends to use in his facility and, again, may have importance to the selection process. The following small selection gives a flavour of the many acronyms we use: ISO 9001; ISO 21469; ISO 22000; GMP; HACCP; GHS; REACH; kosher; halal; H1; H2; H3; 3H; HT1; USDA; FDA; EHEDG; GRAS; AQUIS, CFIA, 21CFR - and there are many more related to national organisations and laws. What is important for the buyer and the technical manager to know beyond good quality and lubricant performances?

## The user

The user of H1 lubricants needs to meet a growing number of

demands and expectations varying from management systems (HACCP) to operational performance (reduced maintenance cost and reduced inventory of lubricants), while increased output of the production equipment is also desired (less down time and more severe run equipment).

The use of safe lubricants is becoming common for more companies although there continues to be geographical differences in the level of acceptance. Lubricant selection is more difficult for the responsible user; how do you differentiate between marketing slogans and what is really needed? It has also to be “food safe”, but what is “food safe”, because this is undefined and unprotected terminology.



## The lubricant

Most widely accepted lubricant is “H1”; this is made of controlled components registered by NSF or INS, and is marked on the packs and documentation. H1 means “Lubricant for incidental food contact”, where contamination levels are limited and set by the FDA.



There are also registered “H2” lubricants and there the confusion really starts. These lubricants are not for contact with food - similar to any other lubricant not registered H1. It would be good if the source of confusion would disappear from the market through the initiative of the lubricant industry itself. In many markets this is wrongly seen as the cheap food lubricant alternative. This is something from the past that has out served its use.

A major point of interest in the food and pharmaceutical industry is contamination limitation and cleanliness. The lubricant industry has taken this seriously and has developed an ISO standard to reflect this. Putting aside the details, I believe the easiest way to describe this standard, ISO 21469, is as an HACCP for H1 lubricant production. To obtain ISO 21469 a company must have ISO 9001 and the lubricant must be H1. This standard differentiates from those producers that still make



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H1 lubricants in the normal industrial production area.

Recently some attention has been drawn to the registration of ISO 22000 by lubricant producers. I feel that this is not a help in bringing a clear message to the market. H1 food lubricants are not part of the food production and should not be allowed to enter into the foodstuff. As such, if they become part of the foodstuff at a level above the allowed (10 ppm for mineral or PAO-based oils), then the foodstuff must be disposed of. The foodstuff producer should warn its production chain under their ISO 22000 agreed system.

**Your lubricants partner**

The modern times have brought many new challenges for the decision takers in the food-producing industry. In the past we had the big players dominating the market, but recent times have shown great changes through companies withdrawing from the market or sales of complete segments to other parties. On top of that there are many companies with a very smooth internet presentation where it is not possible for the ill-informed to know if this is a one man operation or a professional player in the market. Especially in the H1 food lubricant market it is very important to have knowledge on

the formulation and the effect chemicals have on each other to create a good lubricant. The amount of additives in volume is restricted and as such the right chemistry is more important than volume. New types of base oils have become available and several additives that used to be available have been withdrawn from the market as a result of REACH (the European Community Regulation on chemicals and their safe use) (EC 1907/2006), resulting in the need for new lubricant design but also making many approvals obsolete.

**Conclusion**

HACCP does not demand H1 lubricants, but any responsible plant manager will be able to determine many areas of concern where the ultimate decision will lead to the use of good performing H1 lubricants. To select the right lubricant and lubrication partner the following list can help the HACCP and the technical manager:-

1. H1 registered lubricant by NSF or INS.
2. ISO 21469 by accredited organisation.
3. Lubricant that meets performance requirements.
4. Support from its lubricant partner or service organisation both logistically and technically.
5. Commercial balanced offering.

Other arguments are of lesser importance, but marketing could confuse the decision maker in their decision about lubricants and HACCP. The less we confuse the customer/user on rules and regulation the better the lubricant industry can compete on quality and service, the core of our business and this will benefit the food and pharmaceutical industry.

Note: The opinion by the author does not necessarily reflect that of the organisations mentioned in this article.

**Data point**

[www.fstjournal.org/features/26-4/food-grade-lubricants](http://www.fstjournal.org/features/26-4/food-grade-lubricants)

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