

WHITE PAPER

SOME **TIPS** TO **PREVENT** **CONTAMINATION**

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Europe-specific
content



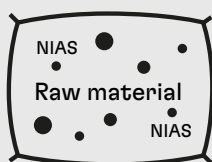
Contamination Prevention

Contamination of food is an important issue for consumers. To avoid contamination and to protect our food against this risk, most food is packaged. The food regulation (EC) No. 178/2002 demands: “Food shall not be placed on the market if it is unsafe”.

A contamination of the food can be caused not only by influences from the environment but also by its packaging.

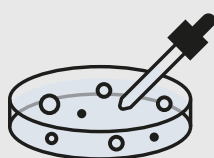
To avoid any contamination from the packaging, the different packaging materials need to be controlled at each production stage. All stages of the supply chain for food packaging, as well as all stages of the supply chain for processing food, must be evaluated and risk assessed for possible contamination sources. This is the demand of the regulation (EC) No. 2023/2006 on good manufacturing practice (GMP).

1



Separate chemical materials

2



Select the right preservative

3



Control processes clean and strictly

The Three Different Kinds of Contamination

Chemical contamination

A chemical contamination may take place if raw materials of unsuitable purity are chosen for food contact applications. These raw materials may contain impurities known as NIAS (non-intentionally added substances), which may not be safe to come into contact with food. If such raw materials are used, it will be impossible to control the safety of the final packed foodstuff.

Chemical contamination may be caused not only by the selection of incorrect raw materials but also by cross contamination. Producing different products with the same equipment can cause spreading of materials from one batch to the following batch. In this way, products can be contaminated by substances which are not part of the original formulation. Even if these are substances which normally do not cause a risk for human health, they should not be present according to GMP rules as they are not intentionally added and therefore not controlled in the following stages of the production process.

Biological contamination

A biological contamination is caused by the attack of bacteria or fungi. It can occur when raw materials are used which are

not of suitable quality or the production or filling equipment is not sufficiently cleaned. The products showing the highest risk are water-based products. Selecting the right preservative against biological contamination at a sufficient level is very important to protect the finished product.

Contamination by foreign bodies

The contamination by foreign bodies such as pieces of glass or wood may present a high risk for the consumer of the final foodstuff. The consumption of foreign bodies is always a high risk for human health. To avoid such a contamination, a clean production environment with strictly controlled processes and well-trained personnel is essential. This is a main requirement of the GMP regulation.

In order to avoid any contamination, all potential contamination sources have to be identified. This can be achieved by applying the Hazard Analysis and Critical Control Points (HACCP) concept. Identifying the possible hazards of each individual production stage of the supply chain and managing the critical points strongly contributes to producing safe food packaging.

Key take aways

- Contamination of food is an important issue. In line with the food regulation (EC) No.178/2002, food shall not be placed on the market if it is unsafe.
- There are three different kinds of contamination: chemical contamination, biological contamination and contamination by foreign bodies.
- Chemical contamination may be caused not only by the selection of incorrect raw materials but also by cross contamination.
- Selecting the right preservative against biological contamination at a sufficient level is essential to protect the finished product.
- To avoid any contamination, all potential contamination sources have to be identified, e.g. by applying the Hazard Analysis and Critical Control Points (HACCP) concept.

Literature and Useful Links

Regulation on good manufacturing practice (EC) No.2023/2006

<http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=uriserv%3A112076>

FEICA guidance for Good Manufacturing Practice

https://www.feica.eu/information-center/all-information-centre/preview/1214/feica-guidance-paper-2015-guideline-good-manufacturing-practice-food-packaging-adhesives-fr?id=7696aad7-667d-4fd0-a227-5d1306ddeb78&filename=2017-0123214252-FR_GUP-EX-E03-011_L_FEICA_GMP_Guideline.pdf

About Henkel

With its brands, innovations and technologies, Henkel holds leading market positions worldwide in the industrial and consumer businesses. The business unit Adhesive Technologies is the global leader in the market for adhesives, sealants and functional coatings. With Consumer Brands, the company holds leading positions especially in laundry & home care and hair in many markets and categories around the world. The company's three strongest brands are Loctite, Persil and Schwarzkopf. In fiscal 2024, Henkel reported sales of more than 21.6 billion euros and adjusted operating profit of around 3.1 billion euros. Henkel's preferred shares are listed in the German stock index DAX. Sustainability has a long tradition at Henkel, and the company has a clear sustainability strategy with specific targets. Henkel was founded in 1876 and today employs a diverse team of about 47,000 people worldwide – united by a strong corporate culture, shared values and a common purpose: “Pioneers at heart for the good of generations.” More information at www.henkel.com.



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Thank you.

Contact

An expert team at Henkel is always available to answer your questions.

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