BLOG_260929_TMP_ Homogenization affects us ALL—EVERY DAY

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Homogenization affects us ALL—EVERY DAY.

We are all familiar with UHT milk (often labeled "H-Milch" in German). The "H" stands for "homogenized" or ultra-high-temperature." However, homogenizers are also used in the production of juices and nectars, fruit creams, soy products, syrups, baby food, pet food, honey, and more.

Collectively, these fall under the broad category of "dairy products" (in terms of regulatory classification).

It is therefore clear that the machinery used in the production chain must strictly comply with mandatory food safety regulations. What does this mean for the technology inside a homogenizer?

For the manufacturer Bertoli/Interpump, everything falls under the umbrella of compliance with so-called "MOCA regulations". The corresponding label is the widely recognized "glass and fork" symbol.

But what exactly does that mean?

And how is the technology adapted to meet these requirements?

In any case, it is mandatory that materials coming into contact with the product be "food-grade." There are specific regulations governing this as well:

- Framework Regulation (EC) No. 1935/2004 – this explicitly covers "food-grade" requirements.

- GMP Regulation (EC) No. 2023/2006: Good Manufacturing Practice. This regulation governs the assessment of the machine's manufacturing processes.

- Specific material regulations: For example, Regulation (EU) No. 10/2011 regarding plastics.

This establishes the scope of the materials for the time being, but it says nothing about the key design features.

As the name of the regulations suggests, they are aimed at the broader European region or market. This inevitably raises the question of whether the guidelines change when non-European markets are involved.

The answer is yes; naturally, other markets—particularly North America—have different regulations. The very broad comparison can be summarized as follows.

Regulation (EC) No 1935/2004 (the framework regulation on materials) roughly corresponds to FDA 21 CFR compliance (Food and Drug Administration).

The EHEDG certificate (European Hygienic Engineering & Design Group) has its equivalent in the American 3-A Sanitary Standard.

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Further broad distinctions arise based on the various industries, which impose different requirements regarding the level of hygienic design.

Simply put, standards in the food and beverage industry (including dairy products) are not quite as stringent as the "gold standard" applied in the pharmaceutical, biotechnology, or cosmetics sectors.

Both the EHEDG and the American ASME BPE—which is relevant to the pharmaceutical industry—define not only the materials used but also their surface quality (roughness), design features such as "fully self-draining" capabilities, cleanability (CIP/Clean-in-Place), and more.

In the next article, we will explain the relationship between these guidelines and design.

The image provides a summary of the regulations with which the manufacturer Bertoli/Inter Pump complies in this area. Further information is available upon request.

Design according to MACHINE DIRECTIVES and the HARMONIZED EUROPEAN STANDARD in force

#Homogenisatoren #Diary #Regulations #Standards

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