

Master Brewers

Food Safety Bite

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Current Good Manufacturing Practices—Sanitary Operations

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The Food Safety Modernization Act (FSMA) requires that all food facilities, including beer manufacturing, comply with current Good Manufacturing Practices (cGMPs). After all, beer is food, and it must be treated as such. When referring to food safety in the brewing industry, GMPs are often called Good Brewing Practices (GBPs).

The July *Food Safety Bite* covered facility design and the grounds surrounding a food manufacturing site. This month's *Food Safety Bite* covers sanitary operations per 21 CFR § 117.35 (U.S. FDA, 2020). Building maintenance, proper chemical usage, pest control, and CIP and sanitation fall under this section.

What You Need to Do

General Brewery Maintenance and Equipment

The brewery and its associated facilities must be in good repair, and proper efforts must be taken to keep it that way. For example, roof leaks should be addressed quickly, and repairs should be made to prevent future leaks. Additionally, brewery equipment must be maintained properly to prevent product contamination. Preventative maintenance programs are great ways to ensure equipment and facilities are working properly and safely.

Cleaning and Sanitation Chemicals and Storage

Ineffective cleaning and sanitation practices can lead to significant food safety risks to the consumer, and a clean and sanitary brewery helps in the manufacture of quality beer by preventing contamination. Cleaning and sanitation practices should be effective in removing debris and contaminants, and they should be monitored to ensure their effectiveness. Toxic chemicals, including cleaners and sanitizers, must be properly labeled and stored to protect beer, ingredients, and packaging materials from contamination. Auditors may require access to locked chemical storage areas during an inspection.

In general, toxic chemicals must be prohibited from brewery facilities unless they are needed for the following:

- Cleaning and sanitation
- Laboratory testing
- Facility and equipment maintenance
- Brewery operations

Pest Control

Breweries are particularly susceptible to pests. Malt, adjuncts, water, beer, and shelter are very attractive to pests, including rodents and insects, and proper measures must be put in place to prohibit infestation and product contamination. It is common practice for breweries to utilize an expert third-party pest control service, but such services cannot be treated as an all-encompassing solution. Ingredients and finished products must be stored and handled to control pests. More information on pest control can be found in *Insect Management for Food Storage and Processing* (Heaps, 2006).

Sanitation of Product-Contact Surfaces

All brewery equipment that is in contact with product (e.g., hoses, fermentation vessels, fillers, etc.) must be cleaned and sanitized properly and as often as needed to prevent product contamination. Equipment and product-contact utensils must be stored in a way that protects them from contamination after cleaning as well. Cleaning of non-product-contact surfaces and other surrounding areas must be conducted in a way that protects products from contamination. Additionally, single-use items like towels and gloves must be used properly and discarded after use because they can lead to product contamination. Measures to prevent contamination are especially critical on the cold side of beer production and packaging because beer is vulnerable to microbiological contamination after it leaves the brewhouse.

Equipment manufacturers, industry experts, and scientific studies can be used to determine appropriate cleaning and sanitation programs. For more information on brewery cleaning and sanitation, refer to *Brewery Cleaning: Equipment, Procedures, and Troubleshooting* (Rench, 2019).

Resources

Heaps, J. W., ed. 2006. *Insect Management for Food Storage and Processing, Second Edition*.

Rench, R. J. 2019. *Brewery Cleaning: Equipment, Procedures, and Troubleshooting*.

U.S. Food and Drug Administration. 2020. 21 CFR, Subchapter B, Part 117, § 117.35: Sanitary Operations.

Ask the Food Safety Team

Ever have a food safety question you don't know the answer to or for which you would like a second opinion? The Food Safety team is there to help! Just post your question in the "Ask the Brewmasters" section of the community site, and the Master Brewers Food Safety Committee will weigh in or get another expert's answer for you!