

Common Sense Cleaning & Sanitation Practices

October 2019

Hank Sweeney

Classic Mix For over 20 years I have had the opportunity to work with small and medium sized Ice Cream / Frozen Dessert manufacturers and shops from across the United States and around the world.

Through my travels I have been invited into ice cream plants, production facilities, clean rooms and kitchens to assist in the making of one of the most loved desserts in the world, Ice Cream. As with any food product, strict adherence to GMP's (Good Manufacturing Practices) is essential. Good cleaning and sanitation procedures are a cornerstone of any ice cream manufacturer's GMP and must be followed in the manufacture of the highest quality ice cream.

Cleaning and Sanitizing

Let's start with a definition of each. Cleaning is the removal of food or dirt from the surfaces being cleaned. There are four factors that can affect the efficiency of cleaning.

1. The type of dirt or food we are trying to remove
2. The temperature and hardness of the water we use for cleaning
3. The type of cleaning agent we use
4. The amount of pressure and duration of cleaning we use

There are several types of cleaning agents that are designed for specific cleaning tasks.

-Detergents come in various degrees of strength, mild detergents are designed for cleaning fresh food spills, light dirt and most ice cream equipment. High alkaline detergents are useful in removing waxes, dried or baked on food or dirt and some greases.

-Solvents or degreasers are designed for grease built up around ovens, stoves and other areas of heat.

-Abrasive cleaners are designed to scrub and breakup dried on or baked on food.

-Acid cleaners are very strong and used on mineral deposits such as rust, scale or milk stone.

After cleaning is completed, Sanitizing is the act of removing or reducing the growth of harmful micro-organisms. The two principle methods to sanitize are heat and chemical.

Chemical sanitizers include Chlorine, Iodine and Quats.

- Chlorine kills a wide range of microorganisms without leaving a film but it quickly deactivates when it contacts dirt, it is corrosive to metal, and it can be affected by temperatures over 115 degrees.

- Iodine is effective in low concentrations and stays active in dirt but is less effective than chlorine and does become corrosive at 120 degrees.

- Quats (quaternary ammonia) remain active for only a short period of time but are non-corrosive and non-irritating, however they do leave a film and may not kill certain microorganisms.

Environment

Ideally you will have a “Clean” room for preparation, production and packaging which should be separated from customer and serving areas.

Having the capability to scrub down, clean, and sanitize the room cannot be understated. The key is to start with a clean sanitary environment in your production area. Note the following:

- Materials used in the construction of your production area should be impervious to moisture and easily cleaned. These materials include sealed tile, dairyboard, and of course stainless steel. Avoid wood, painted or absorbent surfaces in the production area, this includes acoustic ceiling tiles! Porous surfaces can harbor micro-organisms and pathogens and they are difficult if not impossible to clean and sanitize.
- Lighting is essential for proper cleaning. Make sure your production area is well lit; if you can't see it, you can't clean it!
- If possible, everything in your clean room will be on wheels to facilitate cleaning and sanitizing under and around every square inch of the production area.
- Limiting direct outside access and entry/pass thru prior to and during manufacturing is important in making that production area completely clean.

Employees or delivery personal should not have access during production.

- You must have a designated hand wash sink with the proper supplies immediately adjacent to your production area.
- Small wares, buckets and cutting boards should be inspected before use and should be replaced when worn, cracked or no longer maintaining a smooth surface.
- Drying racks are essential for drying buckets, machine parts and small ware items and all racks/shelves should be stainless or food grade, impervious, seamless surfaces.
- All work surfaces, including tables and carts should be stainless steel.

Daily cleaning and sanitizing schedules should be adhered too religiously.

- Having separate buckets and brushes for cleaning and sanitizing of food surface vs. non- food surfaces is often overlooked.
- A three-compartment sink that can accommodate most machine parts or what is used in production and a commercial dishwasher are great aids to assist with cleaning tasks that may be tedious.
- Tiled or sealed / epoxy concrete floors with drains are a must.

Floors should be sloped toward floor drains and free from depressions that may pool water or finished product.

- Proper ventilation with clean air circulation. A dirty or poorly filtered HVAC system can be the source of airborne contaminants such as dust and bacteria. - Pest control must be maintained at all times. Do not give rodents, insects or birds a place to hide or feed. If you do have a pest problem use a licensed pest control company that works with restaurants or food manufacturing facilities

- Hair nets, Beard nets and food service gloves are a must, as is the use of designated production clothing and footwear.

- Verify daily that your Ice cream equipment is in good working order.

Check blades, springs, O-rings and gaskets. Replace immediately any cracked blades, cracked or sliced gaskets or O-rings. Check for cuts or crazing in plastic buckets and utensils and replace when found. These areas can be difficult to clean and sanitize and may harbor bacteria.

Validate your Cleaning and sanitizing procedures as well as chemical strengths. Cleaning isn't sanitizing and sanitizing isn't cleaning. Remember you can't sanitize a dirty surface.

Make sure you are using the correct cleaners and sanitizers for your particular application as well as the proper quantities. The care you take now to ensure your environment is clean and sanitized minimizes the risk of food born illness for your customers and the success of your business.

For additional resources visit www.Safeicream.org