

## Cleaning, disinfection and hygiene

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In the food industry, the procedures for cleaning and disinfection assure the quality and safety of the products and consumers. The proper design of the equipment is mandatory to enable a good cleaning process and avoid microbiological growing into uncontrolled levels. There are many guidelines and standards recognized around the world to support a proper construction in food industry. Besides that, the control of utilities (water, steam, and air) is highly important to have a safety cleaning and a better control of microorganism in the environment and the product. Another important control into the industry is the construction material of the equipment. A good construction material will support good cleaning and disinfection, but in the other hand if the material is not properly used, biofilm could be formed in long-term. The risks and controls should be different in each industry, depending on the material that they handle. Raw materials that have a higher microbiological activity should have a critical cleaning and disinfection procedure to assure and control growing of microorganisms into an acceptable level. The risk must be properly evaluated and the cleaning and disinfection must be designed to each process and each risk. In some process, the CIP (cleaning in place) is the most recommended way to enable a proper cleaning and disinfection. The CIP provides a better control of time, temperature and concentration of the sanitizer resulting in a most controlled process. Some industries require an aseptic design and cleaning due to the characteristics of the product and process. The aseptic cleaning and disinfection have a higher control and costs, but result in safest products to the consumer.

### Biography

Barbara Moreira has completed her MBA in Food Safety at the age of 26 years from SENAI and is also quality system specialist and food engineer, both from UNICAMP. She is the Quality Assurance specialist at Heineken. She had led more than 1000 hours in Quality Assurance trainings over her career in the industry.

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