

COVID-19 & Fresh Produce

Sanitation in the food industry



Under the Australia New Zealand Food Standards Code, food businesses must maintain clean and sanitised facilities and food contact surfaces. This is especially important for ensuring food safety, and meeting consumer expectations at a time when there are concerns about food safety and the transmission of the virus responsible for COVID-19 in the workplace.

Cleaning and sanitation

The achievement of hygienic conditions in the production, handling, and processing of food is based on the development, documentation, application, and validation of effective cleaning and sanitation programs. These programs should cover food processing equipment and utensils, the food processing environment, transport vehicles, and storage facilities.

A wide selection of food-grade detergents and sanitisers are in use by Australian and New Zealand food businesses. Food-grade implies that a chemical is safe for food contact surfaces and compels the food business to use these substances in a manner that will not contaminate food.

When documenting a cleaning and sanitation program it is important to retain material safety data sheets (MSDS) which outline recommended usage, dilution rates, and handling precautions for all cleaning and sanitation products.

What sanitisers are approved for food businesses?

Unfortunately, there are no lists of approved sanitisers for the food industry in Australia and New Zealand. Food businesses should contact trustworthy suppliers of cleaning products and seek technical advice on the types of food-grade cleaning and sanitation products appropriate for their operations. Examples of sanitisers typically used in the food industry include:

Class	Form	Concentration	Notes
Chlorine-based sanitisers	Sodium hypochlorite (12%) or household bleach (4%)	100 ppm chlorine generally recommended in cold water for 10–30 seconds	<ul style="list-style-type: none">• Commonly used chemical sanitiser – forms hypochlorous acid (HClO) when added to water.• Effective against a wide range of organisms• Inexpensive• Does not handle organic matter
Quaternary ammonium compounds (QATS)	Benzalkonium chloride, Alkyl dimethyl benzyl ammonium chlorides, Dioctyldimethylammonium chloride, etc	150–200 ppm	<ul style="list-style-type: none">• Efficient and effective sanitiser• Odourless• Noncorrosive• Expensive
Organic acids	Peracetic acid or peroxyacetic acid	100–250 ppm	<ul style="list-style-type: none">• Effective against a broad spectrum of organisms• Effective against biofilms• Fast-acting• pH tolerant• Strong odour• Expensive

In the United States, the Environmental Protection Agency publishes a [list of sanitisers](#) that meet their criteria for use against the SARS-CoV-2 virus. Sanitisers on the list have either been effective against harder-to-kill viruses or have demonstrated efficacy against other human coronaviruses similar to SARS-CoV-2. This includes sodium hypochlorite (chlorine-based sanitisers, quaternary ammonium compounds, hydrogen peroxide, and peroxyacetic acid which when used at recommended concentrations and contact times are considered effective against coronaviruses.

Human coronaviruses such as the SARS coronavirus, MERS coronavirus or other human coronaviruses (HCoV) are efficiently inactivated by surface disinfection e.g. 62–71% ethanol, 0.1% sodium hypochlorite. or 0.5% hydrogen peroxide within 60 seconds.

There is no evidence to suggest that the SARS-CoV-2 virus is any more resistant to sanitisers.

Supplies of cleaning and sanitation chemicals

Increased demand has seen the challenge for food packers and processors obtaining regular supplies of sanitisers. If you need to change suppliers or substitute chemicals, check the material safety data sheets for the active ingredients and dosage rates.

Going to the hardware store for pool chlorine/stabilised chlorine (chlorinated cyanurates) is not acceptable – pool or spa chlorine is not food grade, and often contains cyanuric acid. Likewise, sanitisers recommended for use on floors and toilets are generally not suitable for food contact surfaces.

Try and substitute like with like when changing sanitisers and update your Food safety program/Cleaning and sanitation pre-requisite program to reflect the new compounds being used.

Alternative sanitisers

Hot water and steam are effective sanitisers in the food industry and yield no residues. Their use is influenced by cost, practicality, and occupational health considerations.

If you propose using alternative chemicals, their effectiveness will require validation and verification (plus documentation of concentration, pH, temperature, and contact time). Alternative sanitisers such as vinegar, lemon juice, and methylated spirits are not recommended.

Considerations when using sanitisers

Know your sanitiser and ensure it is prepared and used as recommended. This includes:

- Using the correct dilution rate
- Ensuring the recommended contact time on the surface of equipment
- Check if there are restrictions regarding its use on particular surfaces such as stainless steel, and determine if rinsing is necessary after application
- Always check the concentrated sanitiser is within its recommended use-by-date

CHECKLIST

- 🌱 Always use food grade cleaning and sanitation products
- 🌱 Seek technical advice from reliable chemical supply companies on cleaning and sanitation products and conditions of use
- 🌱 Develop, document, validate, and monitor the efficiency of your cleaning and sanitation program
- 🌱 In the event of supply restrictions, always try and substitute like with like and update your food safety program documentation