

Public Health Emergency Response For Seafood Processing Plants During COVID-19

Background

In 2019, a new strain of the coronavirus was discovered. The disease associated with this new strain is known as COVID-19, and symptoms of the illness can range from fever and cough to more serious symptoms, such as pneumonia, which could be fatal (WHO.int).

To prevent infection from spreading, experts from the Centers for Disease Control and Prevention recommend frequent handwashing; avoid touching your eyes, nose, and mouth; cover coughs and sneezes; avoid close contact with those who are sick; and put distance between yourself and others. (CDC.gov)

What are the risks for processing plants during COVID-19?

The proven transmission routes are direct or indirect person-to-person contact. Therefore, there is a need for strict measures to minimize the risk of infection transmission among workers at the processing facility.

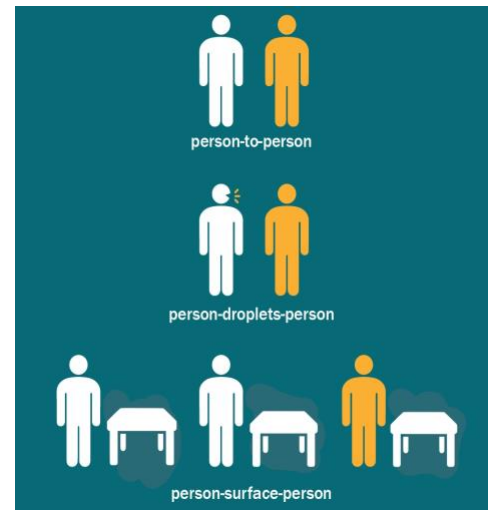


Fig. 1 The transmission routes of COVID-19.

Identify the high-risk areas in your processing plant

According to the known transmission mode, the areas with a denser population are at higher risk compared to lower traffic areas. The employee gathering areas such as dressing room, break room, or processing floor may be the high-risk areas. High risk areas are plant specific. Thus, it is critical to identify the high-risk areas in your plant and design a cleaning and disinfection plan accordingly.

Items that are frequently touched by employees are at higher risk. This include handles for coolers/freezers, dressing rooms, handwashing stations and supplies, tables and chairs in the break room, containers/tools stacking areas, as well as processing tables.

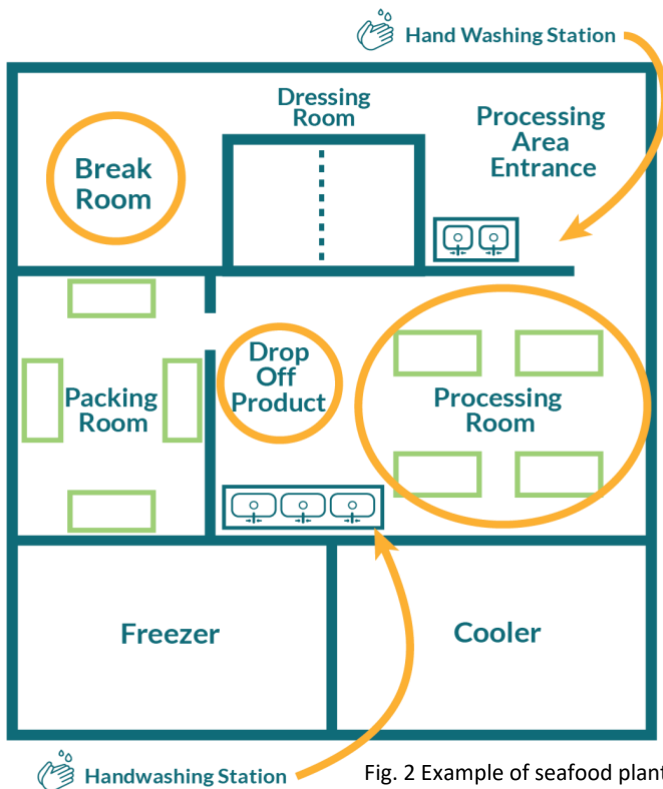


Fig. 2 Example of seafood plant map and circled high-risk areas.

Employee health

It cannot be stressed enough that Good Manufacturing Practices (GMPs) employee health practices need to be practiced more than ever. Employees must report before each shift whether they have COVID-19 typical symptoms such as fever, cough, or shortness of breath. To prevent the spread of COVID-19 among workers, employees with suspected symptoms must be excluded from facility immediately. Since it relies on self-reporting, it is critical to educate employee about the importance of honest reporting.

According to the Centers of Disease Control and Prevention (CDC) a person is considered having a fever when he or she has a measured temperature of at least 100.4 °F [38 °C]. In addition, fever may be considered to be present if a person has not had a temperature measurement but feels warm to the touch or gives a history of feeling feverish.

How to disinfect during COVID-19?

A seafood processing plant normally has a higher load of protein residues on the frequently touched surfaces. Cleaning before disinfecting is important since the organic load will reduce the efficacy of the disinfectants.

For FOOD CONTACT surfaces, follow the existing Standard Sanitation Operational Procedures (SSOP). Do not use disinfectants with a concentration higher than the recommendation (Table 1) because it will lead to a chemical hazard. If a higher concentration than approved for food contact surfaces is used, allow contact time recommended by the manufacturer and then rinse with plenty of water to get rid of potentially unsafe residue.

For NON-FOOD CONTACT surfaces (frequently touched surfaces), the American Chemistry Council's (ACC) Center for Biocide Chemistries (CBC) has compiled a list of products that have been pre-approved by the U.S. Environmental Protection Agency (EPA) for use against emerging enveloped viral pathogens and can be used during the 2019 novel coronavirus (COVID-19) outbreak. This product list is not exhaustive but can be used by business owners, health professionals, and the public to identify products suitable for use during the COVID-19. To access the complete list of disinfectants approved visit American chemistry website (Americanchemistry.com).

Table 1. Recommended concentrations to disinfect NON-FOOD CONTACT surfaces for COVID-19 (CDC.gov)

Disinfectant	Recommended Concentration	Volume to prepare 1 gallon
Chlorine (assuming 5.25% sodium hypochlorite in chlorine bleach)	800 ppm*	1/3 cup
Alcohol (assuming using 95% proof to prepare)	70%	3 quarts
Quats	800 ppm*	According to manufacturer instruction

*ppm = parts per million

Recommended preparation (Table 1) is based on the most common concentration found in disinfectant products. Base your calculation on the actual concentration in the product at hand.

How frequently should you disinfect employee common areas?

Depending on your employee count and how frequently they gather, each area needs to be considered separately. Higher risk (higher traffic) areas must be disinfected more often than the lower risk ones. You may want to disinfect the high-risk areas every 2 hours or more frequently. For low risk areas, you need to disinfect before and after operations.

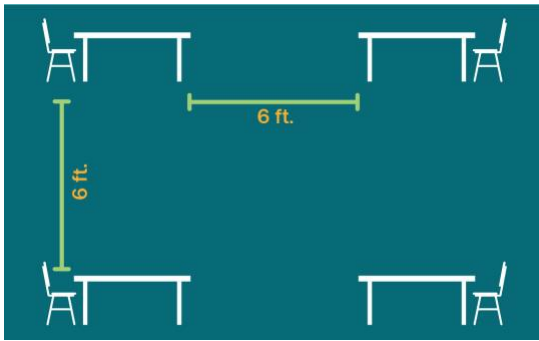


Fig 3. Example of sitting area with a safe distance

How to prepare employee common areas?

The recommended safe distance between people is 6 feet (CDC). If you have a sitting area in your processing plant such as an employee break room, make sure you take out some of the chairs to allow 6 feet between each seat. If possible, leave one chair per table to minimize person-to-person contact. Post signs at the sitting area to remind employees to keep a 6-foot distance while sitting. Temporary dividers can also be used if the seats cannot be taken out.

How to minimize person-to-person contact in the plant?

Control employee flow. Allowing a certain number of employees to enter at a time can effectively reduce traffic within the plant and employee gathering areas. You might want to consider creating additional shifts to allow fewer workers at a set time within the plant.

Post signs at high risk areas to remind employees to keep a distance of 6 feet between one another when changing, taking a break, or in the processing room. Depending on the size of the different areas and size of tables in the processing floor, limit the number of people to allow the 6 feet recommended safety distance. If employees need to make a line to bring product to the packing room, limit the number of workers in line.

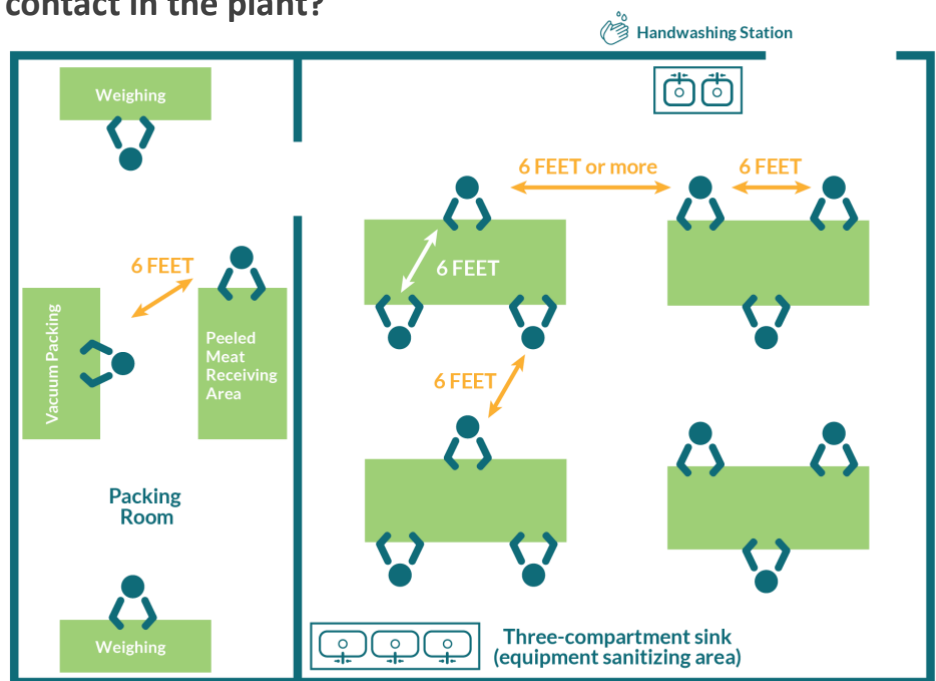


Fig. 4 Example of processing floor with a safe distance.

What to do when a food employee is in same household as someone under quarantine for exposure to a positive individual?

According to the FDA, employees who have been in close contact with a person known to have COVID-19 or a person under quarantine for exposure to a positive individual should stay home. CDC recommends that employers should maintain flexible policies that permit employees to stay home to care for a sick family member due to COVID-19. Businesses are recommended to review [CDC's interim guidance for business and employers for planning and responding to coronavirus disease \(afdo.org\)](https://www.cdc.gov/media/releases/2020/s1119-covid-19-business.html)

Authors

Evelyn Watts, Ph.D. Assistant Professor, School of Nutrition and Food Sciences
Wenqing Xu, Ph.D. Assistant Professor, School of Nutrition and Food Sciences