



Recommendations and preventive measures in response to COVID-19:

Guidance for the industrial sector



من الشعب الياباني
From the People of Japan



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Disclaimer

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO. This document may be freely quoted or reprinted but acknowledgement is requested.

Copyright © 2020 United Nations Industrial Development Organization

Interim guidance

17 April 2020

Acknowledgment

This guideline has been developed based on the request of the Lebanese Ministry of Industry to support the industrial sector cope with COVID-19 and to respond directly to the public health in general and in particular to the safety of workers at the factories.

Projects contributing

The guideline is funded by Italy and Japan under the following projects:

- Strengthening job creation and creativity in the agro-food sector in Lebanon through technology transfer and skills training, funded by the government of Italy.
- Market-based construction skills training for all, funded by the government of Japan.

Disclaimer

The publication was realized with the contribution of the Governments of Italy and Japan. The contents of the publication are exclusively under the responsibility of the United Nations Industrial Development Organization (UNIDO) and do not represent necessarily the point of view of the Governments of Italy and Japan.

Contents

PREFACE	03
INTRODUCTION AND BACKGROUND	03
OBJECTIVES	04
HOW TO USE THIS GUIDANCE	04
INDUSTRIAL PREVENTIVE MEASURES	05
MEASURE 1: SCREENING INDUSTRY EMPLOYEES AND VISITORS FOR COVID-19 SYMPTOMS AND EXPOSURE	05
Passive Screening	05
Active Screening	05
Employee Self-Monitoring for Symptoms and Exposure	05
MEASURE 2: PHYSICAL DISTANCING IN THE INDUSTRIAL WORK ENVIRONMENT	07
Entrances, Hallways, Common Spaces and Personnel Movement in the Facility	07
Employee Clocking In/Out Practices	07
Production Environment	07
Shift Changes	08
Office/Administrative Work	08
Auditing, Quality Control and Monitoring Activities	08
Additional Considerations	08
MEASURE 3: HAND HYGIENE GUIDANCE	11
MEASURE 4: PROPER USAGE OF DISPOSABLE GLOVES	13
MEASURE 5: RESPIRATORY HYGIENE GUIDANCE & PROPER USAGE OF FACE MASKS/COVERINGS	15
General Guidance	15
The Dos and Don'ts When Wearing a Face Mask/Covering	15
Reusable Cloth Face Coverings	16
MEASURE 6: CLEANING AND DISINFECTION IN INDUSTRIES FOR COVID-19	18
Routine Cleaning and Disinfection	18
High-Risk Locations and Frequently Touched Surfaces	19
Disinfectants for Use Against COVID-19	19

MEASURE 7: COVID-19 ILLNESS IN THE INDUSTRIAL ENVIRONMENT	22
Employee Suspected or Confirmed for COVID-19	22
Employee Exposed to a Person Suspected or Confirmed for COVID-19	23
MEASURE 8: RECEIVING, TRANSPORT AND DELIVERY OF PRODUCTS	24
MEASURE 9: STAFF CANTEENS AND REST AREAS	26
MEASURE 10: LAUNDRY CLEANING AND WASTE DISPOSAL	27
MEASURE 11: REGULAR AND REFRESHER TRAINING AND COMMUNICATION WITH STAFF	28
MEASURE 12: ORGANIZATIONAL MEASURES FOR INDUSTRIES	29
<i>Appendix 1: Example of Employee/Visitor Screening Questionnaire</i>	30
<i>Appendix 2: Example of COVID-19 Symptoms Checklist for Employees</i>	31
<i>Appendix 3: List of High- Risk Locations/Frequently Touched Surfaces</i>	32
<i>Appendix 4: COVID-19 Decision Tree for the Industry</i>	33
<i>Appendix 5: Example of SOP “Action When Worker is Tested, and/or Tests Positive or Develops Symptoms of COVID-19”</i>	34
REFERENCES	37

Preface

This guidance is intended for industries across all sectors to help in the implementation of preventive measures against COVID-19. This document is only a guide and any given company is strongly encouraged to adapt it to fit their situation and circumstances. It is based on the current knowledge about the COVID-19 virus. Guidance documents, including this guidance, do not establish legally enforceable responsibilities. Instead, they should be viewed as recommendations, unless specific regulatory or statutory requirements are cited. The use of the word “should” in this document means that something is suggested or recommended. This interim guidance will be updated as more information about COVID-19 becomes available.

Introduction & background

What started as an epidemic in China, has now become a global pandemic. The world is currently facing the pandemic caused by the SARS-CoV-2 virus responsible for COVID-19 disease [1]. The Lebanese government adopted strict measures and imposed complete closure of most businesses and institutions to reduce the transmission of the virus. However, some industrial sectors such as food production facilities, supply chains, distributors, retailers, wholesalers, cleaning and disinfectant suppliers are part of the country’s “critical infrastructure” and must remain operational to provide food, key supplies and fulfill societal needs. Keeping the workers in those industries healthy and safe is critical to protect the public health and survive the current pandemic. The current challenges for industries are on one hand, to meet the high market demand for supplies and food and on the other hand, to protect their employees from disease. All this along with the responsibility to maintain high levels of quality standards, food safety, consumer confidence and trust.

According to the World Health Organization (WHO) [2], the primary transmission route of the virus is from person to person during close contact through respiratory droplets (formed by coughing, exhaling or sneezing) and by fomites. Alternatively, these droplets land on objects and surfaces surrounding the infected person. It is possible that other people catch COVID-19 by touching these objects or surfaces, or the hand of an infected person, and then touching their eyes, nose or mouth. Such contaminated objects/surfaces include, for instance, frequently touched surfaces in an industrial environment (door knobs, light switches, restrooms, breakrooms...), packaging, equipment, etc.

Recent research evaluated the survival of the COVID-19 virus on different surfaces and reported that the virus can remain viable for up to 72 hours on plastic and stainless steel, up to four hours on copper, up to 24 hours on cardboard and up to three hours in aerosols [3]. This research was conducted under laboratory conditions (controlled relative humidity and temperature) and should be interpreted with caution in the real-industrial environment. Previously studied human coronaviruses such as Severe Acute Respiratory Syndrome (SARS) coronavirus, Middle East Respiratory Syndrome (MERS) coronavirus or endemic

human coronaviruses (HCoV) can persist on inanimate surfaces like metal, glass or plastic for up to 9 days [4]. Currently, there is no evidence of food or food packaging being associated with transmission of COVID-19, as reported by the WHO [2], the U.S. Food and Drug Administration (FDA) [5], and the European Food Safety Agency (EFSA) [6]. However, COVID-19 genetic material (RNA) has been isolated from stool samples of infected patients [7] and fecal-oral transmission can thus be possible. Although there are no reports or evidence of this transmission, handwashing after using the toilet is always an essential practice especially when working with food [2]. In addition, the French Agency for Food, Environmental and Occupational Health & Safety (ANSES), assessed that the possibility of the respiratory tract becoming infected during chewing a contaminated food cannot be completely ruled out [8].

Therefore, while COVID-19 continues to spread, and the science and understanding of the virus continues to evolve, the need for enhanced handwashing, cleaning and sanitation are essential for both COVID-19 prevention and provision of safe supplies. Whereas those practices were important (all the time) for food industries, they have become increasingly critical for all types of industries during the COVID-19 pandemic and they should be combined with additional WHO recommended measures such as physical distancing, proper usage of Personal Protective Equipment (PPE), masks, gloves, etc. Food businesses should continue to deliver the highest hygiene standards and strengthen their food safety practices in line with established Food Safety Management Systems (FSMS). They should evaluate, as well, if food safety risks could arise from additional measures related to COVID-19. There is now an urgent requirement for all industries to implement and ensure compliance with preventive measures to address COVID-19.

Objectives

Inconsistent approaches to address COVID-19, have the potential to jeopardize the industrial sector. Therefore, the objectives of these guidelines are to:

- 1** PROVIDE A CONSISTENT APPROACH FOR IMPLEMENTING THE RECOMMENDED PREVENTIVE MEASURES.
- 2** HIGHLIGHT THESE ADDITIONAL MEASURES NEEDED TO MAINTAIN THE INTEGRITY OF THE INDUSTRIAL SECTOR AND TO PROVIDE ADEQUATE AND SAFE SUPPLIES.
- 3** HELP INDUSTRIES AMEND THEIR OWN POLICIES TAILORED TO THEIR SPECIFIC FACILITIES AND RISKS.
- 4** PROTECT EMPLOYEES FROM COVID-19.
- 5** REDUCE WORKING DAYS LOST DUE TO ILLNESS.

How to use this guidance

- 1** REVIEW THE ENTIRE DOCUMENT THOROUGHLY.
- 2** DETERMINE WHICH GUIDELINES OR PROCEDURES APPLY TO YOUR INDUSTRY, IN WHOLE OR IN PART.
- 3** ADAPT THE MEASURES AND PROCEDURES ACCORDING TO YOUR INDUSTRY NEEDS/CONTEXT.
- 4** IMPLEMENT THE PREVENTIVE MEASURES AND REVISED/NEW PROCEDURES.
- 5** MAINTAIN PROPER DOCUMENTATION OF THE ADOPTED MEASURES AND PROCEDURES.

12 Industrial preventive measures

This guidance document is designed for use in all industrial segments from receiving of raw material, to handling, manufacturing, and distribution. Recommendations have also been provided on the organizational and managerial levels to help industries boost their resilience to COVID-19.

The following 12 industrial preventive measures were developed based on the current knowledge about the COVID-19 virus:

- 1** SCREENING INDUSTRY EMPLOYEES AND VISITORS FOR COVID-19 SYMPTOMS OR EXPOSURE.
- 2** PHYSICAL DISTANCING IN THE INDUSTRIAL WORK ENVIRONMENT.
- 3** HAND HYGIENE GUIDANCE.
- 4** PROPER USAGE OF DISPOSABLE GLOVES.
- 5** RESPIRATORY HYGIENE GUIDANCE AND PROPER USAGE OF FACE MASKS/COVERINGS.
- 6** CLEANING AND DISINFECTION IN INDUSTRIES FOR COVID-19.
- 7** COVID-19 ILLNESS IN THE INDUSTRIAL ENVIRONMENT.
- 8** RECEIVING, TRANSPORT AND DELIVERY OF PRODUCTS.
- 9** STAFF CANTEENS AND REST AREAS.
- 10** LAUNDRY CLEANING AND WASTE DISPOSAL.
- 11** REGULAR AND REFRESHER TRAINING AND COMMUNICATION WITH STAFF.
- 12** ORGANIZATIONAL MEASURES FOR INDUSTRIES.

MEASURE 1

Screening industry employees and visitors for covid-19 symptoms and exposure

Consider using both passive (e.g. signage) and active (e.g. asking questions) screening measures for staff and visitors and instruct employees to self-monitor for symptoms. The level of employee screening that is appropriate and practical will differ by situation (such as contact with many other employees, high rates of community transmission of the virus, employee confirmed positive for the virus...).

Passive Screening

- Existing signage should be clear and visible and warn individuals to not enter the facility if experiencing COVID-19 symptoms, to practice hand hygiene, and to follow proper respiratory etiquette.
- Government hotline numbers, and contact details of healthcare screening centers should also be posted.

Active Screening

Consider conducting active screening of employees and visitors at facility entrance(s) and ensure the following conditions are in place:

- Disinfection of hands and shoes at the entrance gates is recommended.
- Consider temperature checks to monitor for fever (38°C or more), using a non-contact thermometer.
- Fill out an employee/visitor screening questionnaire and/or a COVID-19 Symptoms Checklist for Employees (Examples in Appendices 1 & 2).
- Screening tables should be located in an area away from others and away from any high traffic areas with an appropriate supply of hand sanitizer.
- Companies should consider training the individual conducting the screening, and verify the reliability and accuracy of measuring devices.
- Companies should also consider how to keep the individual who is conducting the screening safe, including physical barrier such as a plexiglass barrier or appropriate personal protective equipment (facial mask, gloves...).
- Disinfect thermometers or other devices between users.
- Symptomatic individuals should be instructed to immediately leave the facility and self-isolate. Additional guidance is provided in “Measure 7” section.
- Ensure the privacy of screening participants and avoid any potential stigma for employees who may show symptoms.

Employee Self-Monitoring for Symptoms and Exposure

Employers should ask employees who work on-site to self-monitor their exposure, symptoms and remain alert for cough or difficulty breathing.

- 1 Primary symptoms: cough, fever, shortness of breath [2]
- 2 Secondary symptoms: loss of smell or taste (anosmia), headache, tiredness or fatigue, sore throat, gastrointestinal illness (diarrhea)[9].

Employees who have symptoms would be advised to self-isolate, limit contact with others, contact their employer and seek advice by telephone from a healthcare provider or Ministry of Public Health to determine whether medical evaluation is needed (Additional guidance is provided in “Measure 7” section). Additionally, assigned persons or supervisors will be responsible to visually track employees for any symptoms or exposure.



COVID-19: Symptoms & prevention

SYMPTOMS:

SYMPTOMS MAY APPEAR 2-14 DAYS AFTER EXPOSURE.
SEEK MEDICAL ADVICE IF YOU DEVELOP SYMPTOMS OR YOU HAVE BEEN
IN CLOSE CONTACT WITH A PERSON KNOWN TO HAVE COVID-19



Fever



Cough



Shortness of breath



Tiredness/ Muscle pains



Sore throat



New loss of
taste or smell



Headache



Gastrointestinal prob-
lems (diarrhea)

PREVENTION:



WEAR A MASK



WASH HANDS with
soap and water for at
least 20 seconds



PHYSICAL DISTANCE
maintain at least 1 meter
apart from others



STAY HOME when you
are sick



COVER YOUR MOUTH
AND NOSE with a tissue
or sleeve when you
sneeze and cough and
discard used tissue



DO NOT TRAVEL
to areas with high
transmission rate



CLEAN AND DISINFECT
frequently touched
objects and surfaces



AVOID TOUCHING your
eyes, mouth and nose

MEASURE 2

Physical distancing in the industrial work environment

Physical distancing is very important to help prevent the spread of COVID-19. This is achieved by minimizing contact between individuals. All industries should follow physical distancing guidance as far as reasonably possible. WHO guidelines are to maintain at least 1 meter (3 feet) between fellow workers [2]. The distance recommended by the U.S. Centers for Disease Control and Prevention (CDC) is approximately 2 meters (6 feet) [5]. Where the industrial environment makes it difficult to do so, employers need to consider what measures to put in place to protect employees.

Below are some examples of practical measures to adhere to physical distancing guidance in the industrial environment [2,10,11]:

Entrances, Hallways, Common Spaces and Personnel Movement in the Facility

- Depending on the area of a hallway or entryway, limit the number of persons to maintain physical distances as employees wait to come in or exit or move from one room to another.
- Instruct staff to avoid personal contact: shaking hands, etc.
- Find ways to minimize common surfaces employees need to touch:
 - Use auto open doors or encourage bumping doors with hip or using foot on kick plate or foot pulls for doors with frequent traffic.
 - Keep doors open where possible to allow employees to move between doorways without touching knobs where it does not impact food safety zoning (not recommended for food industries).
- Minimize hallway conversations and interactions.

Employee Clocking In/Out Practices

- Many timeclocks have web-based features that can be operated through phone applications.
- Alternatively, consider other inexpensive phone applications that employees could use to track time and submit to supervisors.
- Alternatively, provide additional sanitizer near the timeclock.
- Consider if a supervisor can use a camera from another room to clock employees in/out.
- Consider if clocking in/out can be handled by journal entry afterwards.

Production Environment

- Stagger workstations on either side of processing lines so that workers are not facing one another.
- Use physical barriers, such as strip curtains, plexiglass or similar materials, or other dividers or partitions, to separate workers from each other, if feasible.
- Consider using markings and signs to remind workers to maintain their location at their station away from each other.
- Provide PPE such as face masks, hair nets, disposable gloves, clean overalls, cover/slip reduction work shoes for staff. The use of PPE is generally used in high-risk areas of food premises that produce ready-to-eat and cooked foods.
- Space out workstations, which may require reduction in the speed of production lines.
- Organize staff into small working groups or teams to facilitate reduced interaction between workers.
- Add production shifts or downsize operations, if possible.
- Limit the number of staff in production area at any one time.
- Discourage non-essential communication between employees on the production floor due to the noise level to reduce the occurrences of close contact and adopt alternate communication practices like phone and email for essential communication.
- Consider the use of electronic communication devices such as wireless headphones, for loud/noisy areas, and walkie-talkies for less noisy areas; these may help employees communicate in production areas, but still maintain safe distancing. These can also be useful for cross-training and training of new employees.

- Stop the line (reducing the noise level) to properly communicate a critical issue and eliminate the need for "close contact communication" in loud environment (anticipated to be infrequent).
- Develop a protocol for exchange of product samples using common bin receptacles for transfer.
- Further restrict access to certain areas in the plant to employees by adjusting sanitation/maintenance schedules and installing, for example, an in/out box outside the quality assurance office for exchanging documentation.

Shift Changes

- Stagger shifts, shift changes, to avoid grouping.
- Identify individuals that do not need to be using the same resources as the larger number of employees (production restrooms...).
- With some employees working remotely, determine if any office spaces can be re-purposed for segregated break/changing areas.
- Use video or phone calls to prevent face-to-face contact during shift change.
- Use texting, free conference calling to bring teams together remotely.
- Develop a protocol for any physical sign-off requirements to avoid close contact, limiting common use of writing instruments.

Office/Administrative Work

- Limit exchange of files and paperwork to a minimum and avoid close contact.
- One person could be designated to get documents and scan these documents when possible. Take precautions with gloves, washing hands, and sanitizing surfaces.
- Create walk-up/plexiglass barriers at counters and tills, as an additional element of protection for workers/customers/visitors.
- If on-site presence is required, separate and segregate office staff, ideally limiting offices to only one person per office space and/or follow at least 1 meter distancing practice.
- Consider precautions such as gloves and/or sanitizers for those persons who handle money or go to the post office or bank. Encourage the use of contactless payments where possible.
- Keep interior doors of offices open, whenever possible, to improve air turnover in the building and decrease touching of knobs/handles.
- When videoconferencing or teleconferencing is not possible, hold meetings in open, well-ventilated spaces and keep physical distancing.
- If work items need to be delivered to quarantined employee homes, set up a system and train to avoid inadvertent contact (e.g., leaving on a doorstep...).

Auditing, Quality Control and Monitoring Activities

- Consider if staffed areas can be handled via camera monitoring.
- Adjust on-site inspection practices and frequencies to increase the distance between inspectors and plant staff, coupled with adjusting travel patterns through the plant to avoid people-congested areas.
- For food industries, consider whether there is a food safety risk versus a quality issue when dealing with monitoring activities that involve human to human interaction.
- If there are checks that will bring someone in close contact with another employee or there are resource constraints, consider if those checks can be done less frequently, e.g. every 4 hours instead of hourly or if other variables can be monitored remotely. For food industries, this should be discussed and approved by the food safety team or a consultant.
- For quality checks: know what data is nice to have collected versus what is truly necessary/required. Streamline and minimize where historical data supports the decision, especially for quality metrics.
- Determine if scheduled audits can be postponed or carried out remotely.

Additional Considerations

- Instruct employees not to share food or drinks, cigarettes, or any other sharing activities that could increase risk through respiratory or salivary droplets.
- Separate smoking areas.
- Evaluate ventilation and consider increasing ventilation rates.
- Consider using floor markings or tape/stickers, where necessary, to facilitate physical distancing and identify areas on the floor where employees can move while they are at their work-station.
- Stop all non-essential visitors until the end of the pandemic. This includes internal visitors or employees from the company that work in different departments (for example production, purchasing, sales, truck drivers...). Essential visitors may include: maintenance of equipment, pest control, inspector etc....
- Companies are encouraged to distribute an email, or other communication, to regular visitors, suppliers, and delivery companies explaining their COVID-19 management policy and asking that no persons enter their building unless their visit is "essential."
- Train essential visitors on the new COVID-19 related procedures.
- Assign an individual to monitor the social distancing efforts in different spaces (e.g., break rooms, cafeterias, locker rooms, production area...).
- Instruct employees to avoid gatherings in private and public places, such a friend's house, parks, restaurants, shops, or any other place and to avoid using shared or public transportation.



*Physical distancing means staying
at least 1 meter apart from others*



9 tips for implementing physical distancing in industries



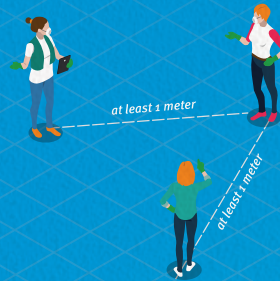
✧ *Educate and instruct staff*



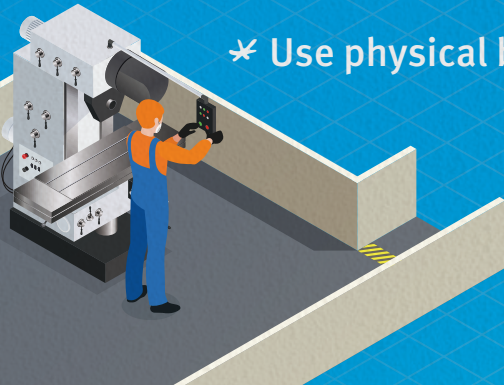
✧ *Stagger break/ luncheon times*



✧ *Apply factory zoning*



✧ *Organize staff into small groups*



✧ *Use physical barriers*



✧ *Work from home for admin work*



✧ *Represent the procedures visually*

- 1 Educate staff on the importance of physical distancing.
- 2 Instruct staff to avoid physical contact, shaking hands, minimize non-essential interactions and gathering in common spaces.
- 3 Apply factory zoning to ensure workers remain in their essential work areas and reduce non-essential contact between staff.
- 4 Work from home for administrative tasks.
- 5 Use physical segregation barriers where at least 1 meter distancing isn't an option.
- 6 Stagger break/luncheon times, shifts and shift changes to avoid non-essential staff interaction.
- 7 Stagger workstations on either side of processing lines so that workers are not facing one and other.
- 8 Organize staff into small groups or teams to facilitate reduced interaction between groups.
- 9 Ensure procedures are visually represented in all workplaces.

Please maintain your physical distance



Physical distancing means staying
at least 1 meter apart from others



MEASURE 3

Hand hygiene guidance

Hand hygiene is extremely important. Industries need to ensure that adequate sanitary facilities are provided (taking into consideration the number of employees in the premises) and that workers thoroughly and frequently wash their hands. Promote regular and thorough hand-washing among employees, contractors, and customers [12,13]:

- Make sure that staff, contractors, and customers have access to places where they can wash their hands.
- Assess all operational areas for adequate handwash stations, supplies, sanitizer dispensers including entrances, exits, storage, delivery, transition and support areas such as maintenance workshop, parts room etc....
- Install sinks, soap dispensers, sanitizer dispensers, paper towel dispensers, and trash bins – make everything as touch free as possible.
- Ensure that adequate supplies (soap, hand sanitizer, paper towels) are maintained, and regularly refilled.
- Verify the virucidal effects of hand sanitizers.
- Retrain employees on proper hand washing with soap and water for at least 20 seconds, by also washing wrists, between fingers, thumbs, underneath nails and back of the hands.
- Display posters promoting hand-washing in relevant places.
- Make regular announcements or reminders such as alarms for employees to wash their hands.
- Instruct employees to increase the frequency of handwashing as following [14]:
 - Before and after eating
 - After sneezing, coughing, or nose blowing
 - After touching face
 - After touching hair, cellphone and/or clothing
 - After using the restroom
 - Before, during and after handling food
 - After touching or cleaning surfaces that may be contaminated
 - After using shared equipment and surfaces
 - After being out in public areas
 - Before putting on and after taking off masks.
 - Before putting on, when changing and after removing gloves
 - After handling money
 - After using the toilet
 - After cleaning duties
 - After handling waste
 - After handling animals or animal waste
 - When hands are visibly soiled
 - Before changing into work clothes

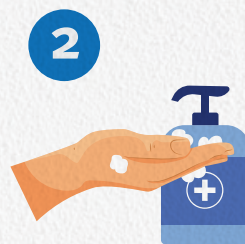
Note: Use hand sanitizer gel if soap and water are not available – hand sanitizer with 70% ethyl alcohol is recommended [15]. However, hand sanitizers may not be as effective when hands are visibly dirty or greasy [16]. If an alcohol-based hand rub and soap are not available, then using chlorinated water (0.05%) for handwashing is an option, but it is not ideal because frequent use may lead to dermatitis, which could increase the risk of infection and asthma and because prepared dilutions might be inaccurate [15].

How to handwash?

Wash hands when visibly soiled! Otherwise, use handrub



1
Wet hands with water



2
Apply enough soap to cover all hand surfaces



3
Rub hands palm to palm



4
Right palm over left dorsum with interlaced fingers and vice versa



5
Palm to palm with fingers interlaced



6
Back of fingers to opposing palms with fingers interlocked



7
Rotational rubbing of left thumb clasped in right palm and vice versa



8
Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa



9
Rinse hands with water



10
Dry hands thoroughly with a single use towel



11
Use towel to turn off faucet



12
Your hands are now safe

MEASURE 4

Proper usage of disposable gloves

Gloves can be effective in reducing the spread of viruses and diseases when used properly [2]:

- Disposable gloves should not be used as a substitute for handwashing.
- The COVID-19 virus can contaminate disposable gloves in the same way it gets onto workers' hands.
- Workers should avoid touching their mouth and eyes when wearing gloves.
- Wearing disposable gloves can give a false sense of security and may result in staff not washing hands as frequently as required.
- Handwashing is a greater protective barrier to infection than wearing disposable gloves.
- Removal of disposable gloves should be properly done to avoid contamination of hands.
- Hands must be washed before donning gloves, between glove changes and when gloves are removed.
- For food workers, gloves must be changed frequently and after carrying out non-food related activities, such as opening/closing doors by hand, and emptying bins.
- Food workers should be aware that wearing gloves can allow bacteria to build up on the surface of the hands, so handwashing is extremely important when gloves are removed to avoid subsequent contamination of food.

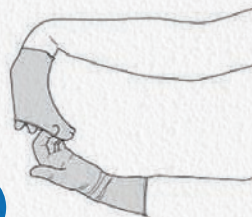


How to safely remove gloves?



1.

Hold the outside of one glove at the wrist. Do not touch bare skin.



2.

Peel off the first glove, pulling it inside out.



3.

Hold the glove you just removed in the other gloved hand.



4.

Peel off the second glove, placing fingers inside the glove at the top of the wrist.



5.

Turn the second glove inside-out while pulling it away from the body, leaving the first glove inside the second.



6.

Dispose the gloves in a closed bin. **Do not re-use.**

7.

Clean your hands immediately after removing gloves.



MEASURE 5

Respiratory hygiene guidance & proper usage of face masks/coverings

It is important that personnel cover their mouths or noses with a tissue when coughing or sneezing and dispose of the tissue appropriately (the virus spreads via droplets). If no tissue is available, the inside of the elbow should be used to cover the mouth or nose. Always perform hand hygiene after sneezing, coughing and handling dirty tissues or other soiled material. Face Masks/Coverings, can be effective in reducing the spread of viruses and disease within the industry, but only if used properly. They are highly recommended especially in production area. Their use **MUST NOT** take the place of proper hand hygiene and other critical measures but should be used in combination with other good practices.

General Guidance

- Display posters promoting respiratory hygiene and proper usage of face masks/coverings.
- Ensure that face masks/coverings and paper tissues are available at your workplaces, along with closed bins for hygienically disposing of them [12].
- For any type of mask, appropriate use and disposal are essential to ensure that they are effective and to avoid any increase in transmission. The following information on the correct use of masks is derived from practices in health care settings [17]:
 - Before putting on a mask, clean hands with soap and water.
 - Place the mask carefully, ensuring it covers the mouth and nose, and tie it securely to minimize any gaps between the face and the mask.
 - Avoid touching the mask while wearing it.
 - Replace masks as soon as they become damp with a new clean, dry mask.
 - Remove the mask using the appropriate technique: do not touch the front of the mask but untie it from behind.
 - Do not re-use single-use masks.
 - Discard single-use masks after each use and dispose of them immediately upon removal.
 - Dispose of single-use mask in a closed bin. Avoid shaking or other activity that may increase the possibility of dispersing droplets in the air.
 - After removal or whenever a used mask is inadvertently touched, clean hands using an alcohol-based hand rub or soap and water if hands are visibly dirty.

The Dos and Don'ts When Wearing a Face Mask/Covering

Individuals who are not accustomed to wearing a face mask might find the mask uncomfortable or distracting. An important component of a disease-prevention strategy is to limit touching the face. An uncomfortable or poorly fitted mask could encourage touching the face, which is counter to the goal of wearing a face covering. It is critical that wearers do not inadvertently increase their exposure by continually adjusting the mask/covering and touching the face [10].

Do

- ✔ Wash hands before and after putting on mask.
- ✔ Make sure the mask is fully functional (i.e. no tears, torn straps etc.)
- ✔ Secure mask around head and neck or ears.
- ✔ Ensure mask is covering nose, mouth, and chin at all times.
- ✔ Only touch straps/bands when removing and disposing a mask.

Do not

- ✘ Do not wear if wet or soiled.
- ✘ Do not leave mask off one ear, hanging around neck, or on top of the head.
- ✘ Do not place mask on surfaces (e.g. countertops) to store for reuse.
- ✘ Do not re-use a single-use mask, dispose after one use.
- ✘ Do not touch the front or back sides of the mask, as it could be contaminated after use.

Reusable Cloth Face Coverings

It's important to note that surgical masks and N-95 respirators are critical supplies that must be reserved for healthcare workers. Due to the high demand and shortage of supplies, companies should evaluate whether they can provide disposable face masks; and in their absence consider using reusable cloth face coverings, as recommended by CDC [18]. Companies may need to implement standard operating procedures (SOPs) for the use of face coverings or masks [10]:

- It is recommended that these coverings are provided to employees and laundered like other PPE (e.g. fabric gloves, frocks/smocks, lab coats, etc.) by the facility.
- They should not be used if they become wet, soiled or contaminated and should be replaced with clean face coverings (or otherwise, it is recommended to change them every 4 hours).
- For cloth coverings, washing with common laundry detergents, highest temperature setting and complete drying at a hot temperature is recommended.
- Ensure that a clearly defined disposable or washable hamper/cart is identified for collecting used face coverings.

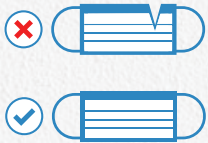
NOTE: Dirty laundry that has been in contact with an unwell person can be washed with items that have not been in contact with a sick individual.

Proper usage of face mask/covering in industries

DO



✓ Wash hands before and after putting on mask.



✓ Make sure the mask is fully functional (i.e. no tears, torn straps etc.)



✓ Secure mask around head and neck or ears.

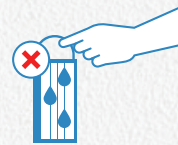


✓ Ensure mask is covering nose, mouth, and chin at all times.



✓ Only touch straps/bands when removing and disposing a mask.

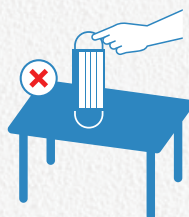
DO NOT



✗ Do not wear if wet or soiled.



✗ Do not leave mask off one ear, hanging around neck, or on top of the head.



✗ Do not place mask on surfaces (e.g. counter-tops) to store for reuse.



✗ Do not re-use a single-use mask, dispose after one use.



✗ Do not touch the front or back sides of the mask, as it could be contaminated after use.

MEASURE 6

Cleaning and disinfection in industries for covid-19

Review the existing hygiene policy and SSOPs (Sanitation Standard Operating Procedure), update them, and reinforce the rules of hygienic practices and requirements. Circulate the rules so that all employees (top and middle management, staff, operators) read it, sign it again, and discuss it all over again.

Routine Cleaning and Disinfection

All facilities should continue performing and consider increasing the frequency of routine cleaning and disinfection of their facilities. Effective sanitation includes the below main basic steps [14]:

Step 1: Cleaning

Always clean surfaces prior to use of disinfectants in order to reduce soil, dirt, impurities and remove germs. Dirt and other materials on surfaces can reduce the effectiveness of disinfectants. Clean surfaces using water and soap or detergent. For combination products that can both clean and disinfect, always follow the instructions on the specific product label to ensure effective use.

Step 2: Disinfection

Cleaning of soiled areas must be completed prior to disinfection to ensure the effectiveness of the disinfectant product. Disinfecting kills germs on surfaces or objects. Use approved disinfectants effective against COVID-19 and target pathogens (especially in the food industry). Label directions must be followed when using disinfectants to ensure the target microorganisms are effectively killed. This includes adequate contact times (i.e., the amount of time a disinfectant should remain on surfaces to be effective). Disinfectants that come in a wipe form will also list

effective contact times on their label. For disinfectants that come in concentrated forms, it is important to carefully follow label instructions for making the diluted concentration needed to effectively kill the target virus.

Step 3: Worker protection

Individuals should use protective equipment (e.g. gloves) as recommended on product labels. Carefully read and follow all label instructions for safe and effective use. Place all used gloves and other disposable items in a bag that can be tied closed before disposing of them with other waste. Wash hands with soap and water for at least 20 seconds immediately after removing gloves or use an alcohol-based hand sanitizer, if soap and water are not available. Soap and water should be used if hands are visibly soiled.

High-Risk Locations and Frequently Touched Surfaces



Additionally, identify the high-risk locations/surfaces and develop SSOP to assure that these locations are cleaned and sanitized on a regular schedule (with enhanced frequency) [10, 13,14]:

- Conduct a traffic mapping of employees working inside the plant to identify all contact/touch surfaces and limit manual intervention to the maximum possible.
- Disinfect all touch surfaces in plant using approved sanitizer (Refer section below “Disinfectants for Use Against COVID-19”) and define frequency to do so (Suggestion: daily or once per shift for items touched by only one person; more frequently for items used by multiple people during the shift).
- Dedicate or assign personal pens, knives, clipboards, utensils, hand tools to individuals (minimize multiple person contact), alternatively sanitize them at least once per shift or after each use (especially between users).
- Discourage workers from using other workers’ phones, desks, offices, or other work tools and equipment, when possible.
- Provide hand sanitizers/disposable wipes so that commonly used surfaces (for example, doorknobs, keyboards, remote controls, desks, other work tools and equipment) can be wiped down by employees before each use.
- Increased cleaning of touch screens in maintenance or receiving that are not on the same GMP (Good Manufacturing Practices) schedule as the ones in production.
- Identify areas where employees frequently interact so intra-person sanitation procedures can be developed.
- Consider removing decorative objects, papers, and other unneeded materials from counters to allow for thorough sanitization of unobstructed surfaces.

Examples of high-risk locations/surfaces are listed below [10,13,14] and in the Appendix 3:

First Aid Station / Health Office:

- Clean and disinfect health cots regularly (after each use).
- Cover treatment tables and use pillow protectors.
- Discard or launder coverings after each use.

Dining Areas/Breakrooms

- Clean and disinfect counters, tables, and chairs regularly (at least daily/once per shift).

Locker rooms

- Clean and disinfect surfaces, tables, chairs and lockers regularly (at least daily/once per shift).

Restrooms

- Clean and disinfect all restroom surfaces, fixtures, door knobs, push plates, and switches (at least daily/once per shift).

Other Frequently Touched Surfaces or Equipment or Areas

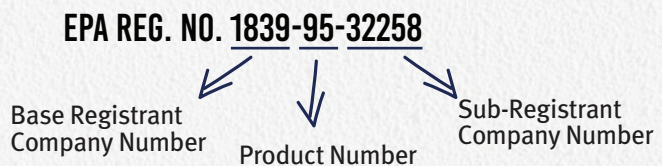
- Clean and disinfect frequently touched surfaces (Appendix 3) on a periodic schedule as operational considerations allow, at least daily/once per shift.

Disinfectants for Use Against COVID-19

The following recommendations are reported in reliable sources:

- According to WHO, alcohol-based sanitizers/surface disinfectants should be used for cleaning purposes. In general, alcohol-based disinfectants (ethanol, propan-2-ol, propan-1-ol) have been shown to significantly reduce infectivity of enveloped viruses like COVID-19 virus, in concentrations of 70-80% [2]. Chlorine-based disinfectants such as sodium hypochlorite at 0.5% (that is equivalent to 5000 ppm or 1-part household bleach with 5% sodium hypochlorite to 9 parts water) would also be recommended for disinfecting surfaces [15]. Prepare the bleach solution daily or as needed.
- A recent review [4], analyzed 22 studies and revealed that previously known human coronaviruses can persist on inanimate surfaces like metal, glass or plastic for up to 9 days, but can be efficiently inactivated by surface disinfection procedures with 62–71% ethanol, 0.5% hydrogen peroxide or 0.1% sodium hypochlorite within 1 minute. A similar effect is expected against the SARS-CoV-2 (COVID-19 illness).
- The EPA (United States Environmental Protection Agency) has a list N of registered sanitizers labeled for use against the novel coronavirus [19]. The products on this list meet EPA’s criteria and are expected to be effective against SARS-CoV-2. They must have an EPA registration number and should be used according to the label directions for safe and effective use.

How to know if disinfectants are approved for use against novel coronavirus



EPA REG. NO. 1839-95-32258

Find the EPA Registration Number on the product label

Note: Not all products have a three-part EPA Registration Number.

List N was last updated on April 30, 2020.

EPA Registration Number

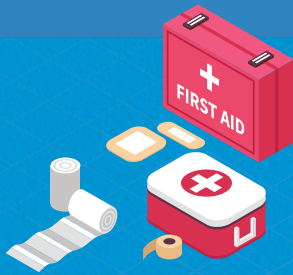
Show entries

To verify your product is on the list of EPA registered antimicrobial products for use against novel coronavirus match the first two parts of the EPA Registration Number

Note: Searching by product or company name will not yield full approved list.

EPA Registration Number	Active Ingredient(s)	Product Name	Follow the disinfection directions and preparation for the following virus	Contact Time (in minutes)
1043-127	Phenolic	LpH® Illse Phenolic Disinfectant	Adenovirus	10

Clean and disinfect high-risk frequently-touched surfaces



First Aid Station /
Health Office



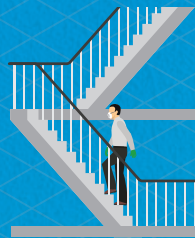
Locker rooms



Counters, tables
and chairs



Door handles
and push plates



Handrails



Restrooms



Equipment buttons



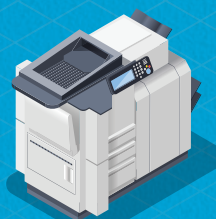
Light switches



Shared phones



Shared computers,
keyboards and mice



Printers and
copy machines



Forklifts hand
contact surfaces

A DETAILED LIST IS FOUND IN THE GUIDELINES REPORT.

MEASURE 7

Covid-19 illness in the industrial environment

Employee Suspected or Confirmed for COVID-19

A specific response/action plan should be implemented when an employee has symptoms associated with COVID-19 or has tested positive for COVID-19. In food industries, employee health policies and Prerequisite Programs prohibit sick workers from working in food establishments and include instructions for reporting staff sickness and returning to work when staff recover from illness.

WHO recommends the following [2]:

- If the employee is at home, do not permit the employee to come to work. A procedure to allow staff to report illness by phone (or email) should be established.
- If the employee is onsite at the facility, send the employee home immediately.
- Staff must be trained to comply with these guidelines and to report illness at the earliest opportunity to prevent the transmission of COVID-19 to fellow workers.
- **In the event that a worker becomes unwell in the workplace with typical symptoms of COVID-19, a plan of action should be developed to manage it (unlikely to happen with staff management practices):**
 - They should be removed to an area away from other people. If possible, find a room or area where they can be isolated behind a closed door, such as a staff office.
 - If it is possible to open a window, do so for ventilation.
 - Arrangements should be made for the unwell employee to be removed quickly from the premises.
 - The employee who is unwell should follow national guidelines for reporting cases/suspect cases of COVID-19.
- While they wait for medical advice or to be sent home, they should avoid any contact with other employees. They should avoid touching people, surfaces, and objects and be advised to cover their mouth and nose with a disposable tissue when they cough or sneeze and put the tissue in a bag or pocket and then dispose of the tissue in a bin with a lid. If they do not have any tissues available, they should cough and sneeze into the crook of their elbow. If they need to go to the bathroom while waiting for medical assistance, they should use a separate bathroom, if available.
- All surfaces that the infected employee has come into contact with must be cleaned, including all surfaces and objects visibly contaminated with body fluids/respiratory secretions, and all potentially contaminated high-contact areas such as toilets, door handles, and telephones.
- All staff should wash their hands thoroughly for 20 seconds with soap and water after any contact with someone who is unwell with symptoms consistent with coronavirus infection.
- A return to work policy for staff who have been infected and recovered from COVID-19 should be in place. WHO recommends that a confirmed case could be released from isolation once their symptoms resolve and they have two negative PCR tests at least 24 hours apart. If testing is not possible, WHO recommends that a confirmed patient can be released from isolation 14 days after symptoms resolve.

Employee Exposed to a Person Suspected or Confirmed for COVID-19

WHO recommends the following [2]:

- If an employee is confirmed to have COVID-19 it will be necessary to notify all close contacts of the infected employee so they too can take measures to minimize further risk of spread.
- Examples of contacts in the industry could include any employee who was in face-to-face or physical (i.e. touching) contact (production lines, receiving and packaging areas, sampling and quality rooms, common areas); anyone who has cleaned up any body fluids without adequate PPE (e.g. gloves, overalls, protective clothing); employees in the same working team or work group as the confirmed case, and any employee living in the same household of a confirmed case.
- Staff who have had close contact with the infected employee should be asked to stay at home for 14 days from the last time they had contact with the confirmed case and practice physical distancing. If they become unwell at any time within their 14-day isolation period and they test positive for COVID-19, they will become a confirmed case, and should be managed as such [20].
- Staff who have not had close contact with the original confirmed case should continue taking the usual precautions and attend work as usual.
- Organizing employees into small teams or workgroups will help to minimize disruption to workforce in the event of an employee reporting sick with symptoms of COVID-19.
- Closure of the workplace is not recommended.
- Consider how to maintain confidentiality, identify persons who may be at risk, and support them, without inviting stigma and discrimination.

NOTE: For critical/essential employees that cannot be replaced in the workplace and for more complex situations, contact local health authorities or check the COVID19 Decision Tree for the industry (Appendix 4).

A draft example of SOP “Actions when worker is tested, and/or tests positive or develops symptoms of COVID-19” is shown in Appendix 5.



Fever



Cough



Shortness of breath



Tiredness/ Muscle pains



Sore throat



New loss of taste or smell



Headache



Gastrointestinal problems (diarrhea)

MEASURE 8

Receiving, transport and delivery of products

The primary focus of industries is on keeping the COVID-19 virus out of their businesses. The virus will enter business premises only when an infected person enters or contaminated products or items are brought into the premises. Drivers delivering to premises should be aware of the potential risks involved in contact transmission of COVID-19. The virus can be picked up if drivers touch a contaminated surface or shake hands with an infected person with contaminated hands.

The following measures are recommended [2,10,13,21]:

- Drivers and other staff delivering to premises should not leave their vehicles during delivery, when possible.
- Drivers should be supplied with an alcohol-based hand sanitizer, a disinfectant, and paper towels.
- Drivers need to be aware of physical distancing when picking up deliveries and passing deliveries to customers and of the need to maintain a high degree of personal cleanliness and to wear clean protective clothing.
- Hand hygiene in conjunction with physical distancing, and surface cleaning are critical to avoid cross-contamination.
- Require suppliers to provide packaged materials with shrink wrap when possible – limit touching of shrink wrap to warehouse personnel, not production personnel.
- Disposable containers and packaging should be used to avoid the need for cleaning of any returns.
- In the case of reusable or returnable containers (such as plastic crates, barrels...), appropriate hygiene and sanitation protocols (additional disinfection) should be implemented.
- Simplify procedures to allow distancing (digital signatures, text acknowledgment of delivery, etc.). Limit the sharing of pens or equipment between associates. If pens are used, drivers can use their own pens or sanitize between users.
- Drivers should use a hand sanitizer before passing delivery documents to premises staff.
- Drivers also need to be aware of the need to ensure that all transport vehicles are kept clean and frequently disinfected.
- Surfaces most likely contaminated with the virus include frequent touch surfaces such as steering wheels, door handles, mobile devices, etc. and should be included in the cleaning and sanitation schedule.
- Consider separate access to restroom facilities for truck drivers or receiving teams, if needed (e.g. porta-potties with sinks...).
- Driver absenteeism or issues accessing facilities/warehouses will limit or delay trucks for the supply of products. Be resourceful in sourcing additional drivers.
- Increase security for warehouses, vehicles and stores.
- Increase the size of the replenishment orders (by placing larger orders, but avoiding unnecessary stockpiling). For example, if you double the size of your orders, you reduce the shipping frequency by half and ultimately the risk of COVID-19 spreading.
- For non-food and non-perishable food products, consider keeping materials in a separate storage area for at least 72 hours before they enter the production area.
- For food industries, if an alternate supplier is needed to source ingredients ensure that adequate food safety programs are in place and/or appropriate verification activities have been conducted before using the supplier on a temporary basis.



ITALIAN AGENCY
FOR DEVELOPMENT
COOPERATION



من الشعب الياباني
From the People of Japan



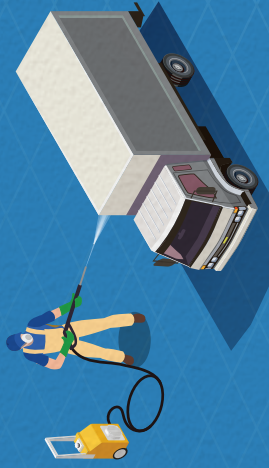
REPUBLIC OF LEBANON
MINISTRY OF INDUSTRY



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

When transporting and delivering products, what can drivers do to prevent the spread of COVID-19?

Before departure:

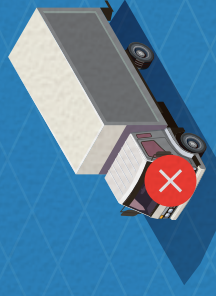


- 1 Clean and disinfect the vehicle including all frequently touched surfaces such as steering wheels, door handles, mobile devices, etc...



- 2 Equip the driver with alcohol-based hand sanitizer, disinfectant and paper towels.

When delivering:



- 1 Do not leave the vehicles during delivery.



at least 1 meter

- 2 If not possible, stay at least 1 meter away when picking up and passing deliveries.

- 3 Do not shake hands.



When returning to the factory:



- 4 Sanitize your hands before and after the delivery of goods.

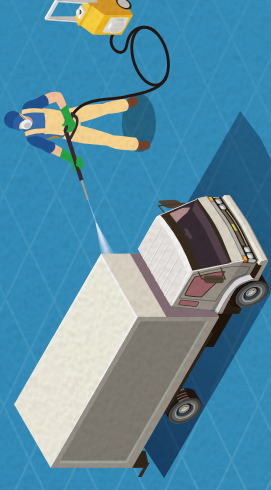


- 5 Simplify procedures to allow distancing (digital signatures, text acknowledgment of delivery, etc.).



- 6 Limit sharing of pens or equipment between associates. If pens are used, drivers can use their own pens or sanitize between users.

- 1 Use hand sanitizer before passing delivery documents to the factory staff.



- 2 Clean and disinfect the vehicle.

MEASURE 9

Staff canteens and rest areas

Workplace canteens in essential frontline services, such as food processing and supply chains, need to remain open where there are no practical alternatives for staff to obtain food [2].

Operational standards for staff canteens should include [2,10,13]:

- Maintain a physical distance of at least 1 meter between an individual and other worker, including seating arrangements.
- Reduce the number of chairs in break rooms and prepare a specific seating plan or add partitions to tables.
- Stagger staff work and break/lunchroom times to reduce staff numbers in a canteen at any one time.
- Restrict non-essential physical contact as much as possible.
- Post visible posters for staff promoting hand hygiene and physical distancing.
- Cleaning and disinfection procedures for equipment, premises, contact surfaces/high touch points as: counter tops; tongs; service utensils; self-service displays; menus; outside of condiment containers; door handles; backs of chairs; faucets; microwave handles, water dispensers, and buttons/vending machines “touch points”.
- Consider using conference rooms, offices or other separation space to distance employees.
- Shift from buffet-style meals to single-serve options is highly recommended. Alternatively, cover food and have a single trained employee serve employees in an enclosed area rather than having multiple employees taking food from a common container/with utensils being touched by multiple people.
- Consider changing to disposable rather than multiple use beverage cups/cutlery/plates.
- Ensure time, temperature and concentration of liquid soap/disinfectant for dish washers (if used) are monitored and verified on daily basis. For hand dishwashing, consider sanitizing cutlery and plates used in the canteen/cafeteria using sodium hypochlorite (bleach) after each use.
- Have hand sanitizer, sanitizing wipes and soap easily available in lunch and breakrooms and clean facilities at least daily or after each break.



MEASURE 10

Laundry cleaning and waste disposal

For clothing, uniforms, towels, linens and other items [13,15,22]:

- Launder items in the washing machine according to the manufacturer's instructions. Use the highest appropriate temperature setting (60–90°C) with laundry detergent and dry items completely.
- Wear disposable gloves when handling dirty laundry.
- Dirty laundry from a person who is sick can be washed with other people's items.
- Do not shake dirty laundry. This will minimize the possibility of dispersing virus through the air.
- Clean and disinfect anything used for transporting laundry (hampers, bags, etc.).
- Ensure time, temperature and concentration of detergent/disinfectant of washing machine (if used on site) for employee uniform laundry are monitored and verified on daily basis.
- If washing is performed by an external laundry, contact them and review the existing washing process.
- Wash hands immediately after removing gloves or after handling dirty items.
- Keep soiled uniforms separate from clean uniforms.
- Disposable protective uniforms can also be used, when possible.
- To maintain uniform cleanliness and healthy employees, as best as possible, it is important that employees enter the uniform area with clean hands.

For waste disposal, provide closed “no-touch” or foot operated trash bins with leak-proof disposable bags. Instruct employees to use gloves when removing garbage bags, handling and disposing of trash and to wash hands afterwards. Make sure that trash bins are emptied on regular basis and included in the cleaning schedule.

MEASURE 11

Regular and refresher training and communication with staff

Training is very critical for the implementation of the planned preventive measures. The WHO, CDC, and local authorities' websites have several information that can be useful for communications with the workers and management staff [22,23]:

- Staff working in premises should be educated and provided with written instructions and training on the new procedures that will be implemented to address COVID-19.
- Make sure that the workers performing cleaning, laundry, and trash pick-up are also trained on COVID-19 measures and on the hazards of the cleaning chemicals used in the workplace.
- Regularly communicate expectations, update and remind staff on COVID-19 control strategies.
- Train in small groups and maintain physical distance between people.
- Provide refresher training for employees on existing GMPs, proper hand washing, glove practices, employee illness reporting, etc.
- Promote protective behavioral measures such as avoiding to touch eyes, nose, mouth, doorknobs by hand, etc.
- Reinforce the importance of cleanliness through plant leadership observing and modeling proper hand washing practices.
- Provide simple educational materials such as posters all around the facility, in prominent places and in multiple languages according to the workers' nationalities.
- Evaluate personnel performance (objective measurements, observations...) and retrain them, if needed.
- Arrange online or remote training sessions for office staff to help with the transition to remote work.
- Remind managers to watch for employees who may be struggling in these stressful times.

MEASURE 12

Organizational measures for industries

Several arrangements are needed on the organization/management level [12,21,24,25]:

- Appoint a COVID-19 contact person within the organization to handle communication and coordination.
- Designate a crisis response team and available resources to prepare for and respond to the COVID-19 situation. Potential roles to include on this team include business operations, human resources, quality/food safety, legal counsel, communications, and scientific experts.
- Hold staff meetings on COVID-19 control strategies (online or obey physical distancing during these meetings).
- Revise and update health and sick leave policy. Non-penalizing or offering paid sick leave will help mitigate the economic impacts of missed work for your employees, while simultaneously keeping the rest of your employees and customers well. Additional flexibilities might include permission to care for a sick family member, giving advances on future sick leave and allowing employees to donate sick leave to each other.
- Monitor and verify the proper implementation of measures and maintain related documentation.
- Develop a method for confidential reporting of personal illness and close contact with individuals that test positive for COVID-19.
- Be aware that some employees may be at higher risk for serious illness, such as older adults and those with chronic medical conditions. Consider minimizing face-to-face contact between these employees or assign work tasks that allow them to maintain a distance of at least 1 meter from other workers, customers and visitors, or to telework if possible.
- Identify supplies that may be jeopardized in the current supply chain and plan allocation accordingly.
- Assess supply of cleaning materials, disinfectants, gloves and other PPE, encourage their judicious use, and re-order supplies (without over-ordering).
- Plan for backup workforce if existing employees get sick, exposed or another scenario occurs that could lead to a widespread labor shortage.
- Cross-train employees to perform essential functions so the workplace can operate even if key employees are absent.
- Evaluate overtime demands – people who are worn down are more likely to get sick.
- Consider/continue monitoring the water treatment system and the quality of water used in your premises.
- Develop a contingency and business continuity plan:
 - The plan will help prepare your organization for the possibility of an outbreak of COVID-19 in the workplace or community. It may also be valid for other health emergencies.
 - The plan should address how to keep your business running even if a significant number of employees, contractors and suppliers cannot come to your place of business, either due to local restrictions on travel or because they are ill.
 - Communicate to your employees and contractors about the plan and make sure they are aware of what they need to do, or not do, under the plan.
 - Be sure your plan addresses the mental health and social consequences of a case of COVID-19 in the workplace or in the community and offer information and support.
- For food industries:
 - Continue to verify that the food safety programs you have in place are effective and are working as intended.
 - If at any time there is a substitution or change in formulation or packaging, your food safety plan should be reviewed.
 - Temporary workers that might be hired due to increased production and staff shortages, should be properly trained on basic hygiene practices...
 - Consider partnership with other sectors experiencing a decline in demand (foodservice, mass retail, etc.) for back-up plans such as substitute workers from restaurants and other industries in addition to other workforce alternatives.

Appendix 1:

Example of Employee/Visitor Screening Questionnaire

To prevent the spread of COVID-19, we are conducting a simple screening questionnaire. Your participation is important to help us take precautionary measures to protect you and everyone in this facility. Only business critical visitors are permitted at this time.

Employee/Visitor's Name:	Visitor Personal Phone Number (mobile/home):
1	Have you traveled within the last 14 days to a high-risk area (widespread community transmission for COVID-19)? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, specify country:
2	Have you been in contact with anyone who has traveled within the last 14 days to one of the countries with high transmission rate? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, specify country:
3	Have you been in close contact with someone tested positive for COVID-19 or showing symptoms of COVID-19? <input type="checkbox"/> Yes <input type="checkbox"/> No
4	Have you experienced any COVID-19 symptoms in the last 14 days (e.g. fever, cough, sore throat, respiratory illness, difficulty breathing)? <input type="checkbox"/> Yes <input type="checkbox"/> No
5	Have you tested positive for COVID-19, or are you awaiting results of a COVID-19 test? <input type="checkbox"/> Yes <input type="checkbox"/> No
<p>If the employee/visitor answers "yes" to any of the above questions, they should ideally be excluded from entering the facility (alternatively, consult local authorities or check the decision tree in Appendix 4 for essential (critical) personnel that cannot be replaced in the workplace). For questions 1-2, consider working with local authorities and the individuals' health care providers, to take the appropriate actions. At a minimum, based on community transmission in the area, individual health factors, and other risk factors, consider monitoring symptoms (e.g., cough, sore throat, shortness of breath, fever of 38°C or more) and proper usage of personal protective equipment (face masks, gloves...).</p> <p>Signature (Employee/Visitor): _____ Date: _____</p> <p>Access to Facility: Approved <input type="checkbox"/> Denied <input type="checkbox"/></p>	

Adapted from [26]. This questionnaire needs to be adjusted according to the existing situation and transmission rate.

Appendix 2:

Example of COVID-19 Symptoms Checklist for Employees

Date:

Company:

Employee's Name:

Department:

Unit:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
SCREENER INITIALS																																		
PRESENT/ABSENT																																		
FEVER ($\geq 38^{\circ}\text{C}$)																																		
CHILLS																																		
COUGH																																		
SHORTNESS OF BREATH																																		
CHEST PAIN																																		
TIREDNESS																																		
BLUISH LIPS/FACE																																		
MUSCLE PAIN																																		
RUNNY NOSE																																		
SORE THROAT																																		
HEADACHE																																		
LOST SMELL/TASTE																																		
GASTROINTESTINAL PROBLEMS																																		
EXPOSURE:																																		

Comments:

Appendix 3 –

List of High-Risk Locations/ Frequently Touched Surfaces

A cleaning checklist should be prepared according to the traffic mapping of employees and the available equipment. Examples of frequently touched surfaces:

Production and Storage Areas

- Stainless table tops and equipment surfaces
- Handles (Long bed cart, hand jack, Handcarts)
- Outside of hand sanitizers
- Sampling tools
- Paper towel dispensers if not touchless
- Water hose handles
- Forklifts hand contact surfaces
- Metal detector standards
- Shared equipment
- Production/packaging tools
- Light switches to coolers, freezers, storage areas....
- Storage rooms, coolers & freezers pull cord, in and out
- Garbage holders
- Standard weights
- Weighing scales
- Pens used by multiple people
- Markers on white production schedule board
- Clip board for production paperwork
- Tape guns
- Equipment and Processing Control buttons
- Ingredient scoops
- Ingredients containers
- Electronic gadgets (company provided mobile phones, PLC monitors...).

Receiving and Delivery of Products

- Exit door by truck loadout, in and out
- Delivery truck back door handles
- Truck gear shift
- Driver door handle
- Controls for hot / cold dashboard of truck
- Truck keys
- Metal invoice clipboard of truck
- Steering wheels

Personnel Facilities and Offices

- Breakroom tables and chairs
- Break room door handles, in and out
- Printers and copy machines
- Cell phones
- Phone chargers
- Arms of office chair
- Office door handles, in and out
- Conference room table and chairs
- Shared Computers and Mice
- Water Dispenser
- Locker room
- Restrooms

Other

- Mouse and keyboards located in lab/ control room
- Tool box drawers
- Maintenance tools
- Stairs/crossover handrails
- Ladders
- Elevator buttons
- First-aid box
- Remote control
- Vending machines
- Key entry pads
- Handicap accessible push buttons, in and out of main door

NOTE:

Some surfaces or equipment are difficult to clean or are sensitive to liquids. When shared, they may contribute to indirect transmission.

Locations with shared-use equipment should provide posted signs regarding proper hand-hygiene before and after using such equipment to minimize disease transmission.

Also, consider using approved disinfectant wipes or removable washable covers to protect hard to clean equipment against spills and facilitate cleaning.

Appendix 4 – Covid19 decision tree for the industry

* Symptoms

- Fever (38°C or above)
- Chills/Repeated shaking with chills
- Cough
- Shortness of Breath
- Chest Pain
- Out of the ordinary tiredness
- Bluish lips or face
- Muscle pain
- Runny nose/Nasal congestion
- Sore throat
- Lost sense of smell or taste
- Gastrointestinal problems (diarrhea)

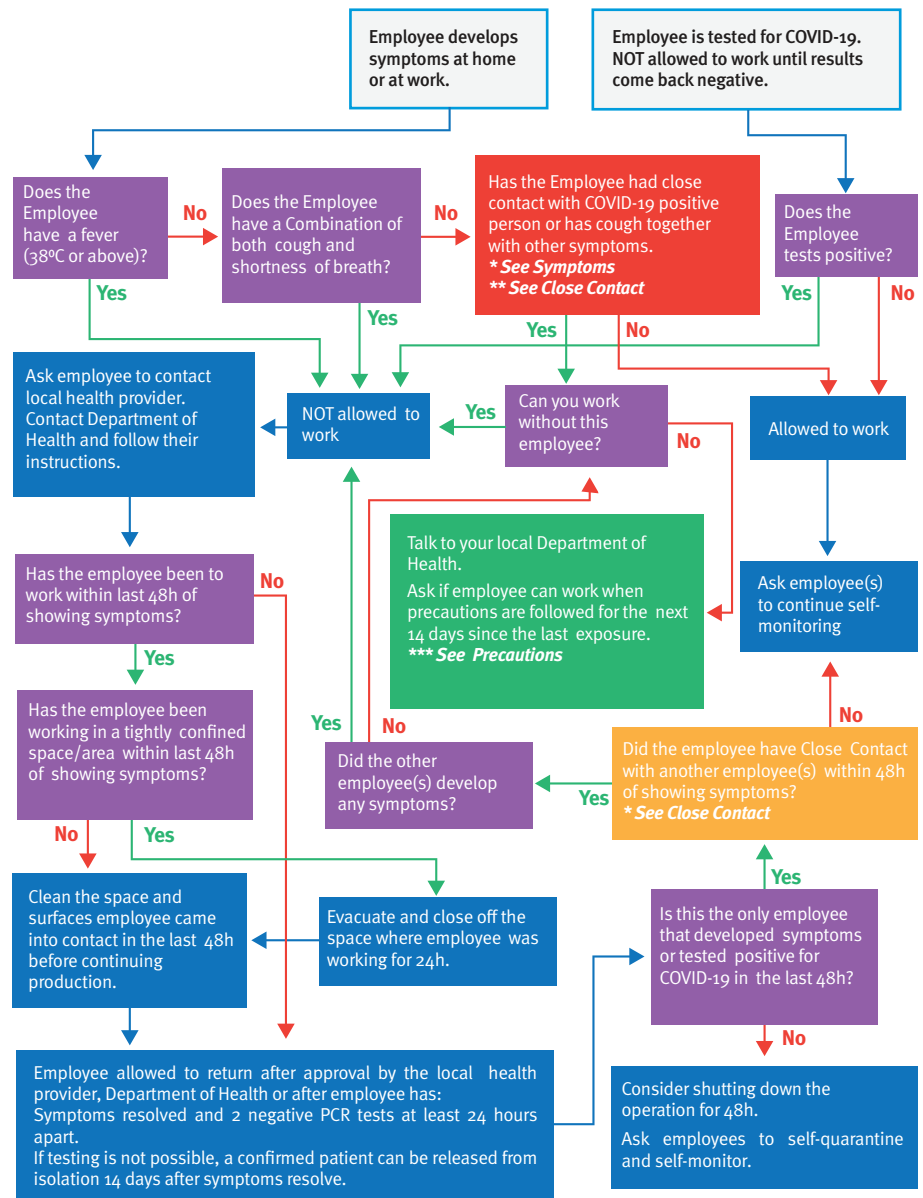
** Close Contact

What is considered Close Contact:

- Household member.
- Intimate partner.
- Individual providing care in a household without using recommended infection control precautions.
- Individual who was directly coughed on.
- Individual who spent 15 minutes or more within 1 meter of the probable or positive individual (without using proper personal protective equipment).

*** Precautions (Talk to your local Department of Health)

- Employers should measure the employee's temperature and assess symptoms before the individual enters the facility every day.
- Employee should self-monitor under the supervision of their employer's occupational health program.
- The employee should wear a face mask or employer approved cloth face covering at all times while in the workplace.



** Data are limited to define Close Contact. Factors to consider when defining close contact include proximity, the duration of exposure (e.g., longer exposure time likely increases exposure risk), whether the individual has symptoms (e.g., coughing likely increases exposure risk) and whether the individual was wearing a facemask (which can efficiently block respiratory secretions from contaminating others and the environment). Brief interactions are less likely to result in transmission; however, symptoms and the type of interaction (e.g., did the person cough directly into the face of the individual) remain important. The current recommendations will be updated as more information becomes available [27].

Appendix 5 –

Example of SOP “Actions When Worker is Tested, and/or Tests Positive or Develops Symptoms of COVID-19”

Company:	Department: Quality:	DOC#: REV:
Effective Date:	Supersedes:	Subject: Actions when worker is tested, and/or tests positive or develops symptoms of COVID-19
Issued by:	Approved by:	
Plant Number:		

1.0 Purpose

This document reviews the actions to be taken when a worker is being tested for and/or tests positive for CoVID-19 virus.

2.0 Scope

This SOP details procedures to be used when (i) an individual calls in to inform the facility that they are being tested for COVID-19 and (ii) an individual calls in to either report testing positive for COVID-19 or reports having all of the typical symptoms of COVID-19.

Currently any person that has samples taken for a CoVID-19 test will have to be isolated at home. The local health department will be involved in notifying the individual of the test results and the individual is responsible for contacting their employer of the results. Sick policies should make sure that a person is being tested for COVID-19 is NOT permitted to work until the test comes back negative (which may take more than 2 days).

3.0 Safety & environmental considerations

CoVID-19 is a new type of virus that can spread rapidly between individuals that do not take proper precautions (e.g., physical distancing).

CoVID-19 symptoms include cough, fever and shortness of breath. Symptoms can be severe, and in some cases, it can cause death.

Elderly and immunocompromised are most at risk. The virus is spreading mainly through person-to-person contact including through respiratory droplets produced when an infected person coughs or sneezes.

The primary goal of this SOP is to reduce the risk of person-to-person transmission and to reduce the risk that a large proportion of the workforce in the industry is unable to work (e.g., because they have to be quarantined).

Actions need to take priority and be implemented without delays. Cleaning and Sanitizing procedures that are in place (especially for food-contact surfaces) are sufficient to control contamination with COVID-19. Use approved sanitizer products. High-risk locations (i.e. restrooms, dining areas, and frequently touched surfaces like doorknobs) should be disinfected after cleaning. Use approved disinfectants effective against COVID-19.

If an employee is being tested for COVID-19 or has all of the typical symptoms of COVID-19 (i.e. fever, cough, shortness of breath), ALL surfaces that this employee came into contact with, including food-contact surfaces should be cleaned and disinfected.

All workers MUST notify their PIC (Person-in-Charge, i.e. Plant Manager and/or HR Manager) as soon as they are tested for CoVID-19 virus.

Workers tested for CoVID-19 virus are NOT allowed to return to work until the test confirms negative (which may take more than 2 days).

4.0 Required tools / equipment

Employee Training register which includes employee job skills and contact information of employees that are qualified to replace absent workers, Phone, and Local Health Department contact information.

5.0 Frequency

Whenever a person working in _____ facility is being tested for CoVID-19 virus.

Whenever a person working in _____ facility tests positive for COVID-19 virus or has all of the typical symptoms of COVID-19 (i.e. fever, cough, shortness of breath)..

6.0 Responsibility

Responsibility for the implementation, execution and success of this program is cross functional:

Internal Partners

- Human Resources
- Production/Manufacturing
- Food Safety/Quality Assurance
- Crisis Management Team

External Partners

- Local health department
- Ministry of Public Health
- Ministry of Industry

7.0 Procedure

1 After being notified that a worker is being tested for COVID-19

While these procedures are currently recommended, they may not be feasible if widespread COVID-19 testing of individuals is being conducted.

1. Inform other workers that an individual in the facility had a pending test for COVID-19; maintain confidentiality.
2. Clean and Disinfect all surfaces and areas that individual may have come into contact with; follow appropriate SOPs, including:
 - Use an approved disinfecting product effective against COVID-19.
 - Rinse and sanitize all surfaces after disinfecting.
3. Keep tested worker's locker locked.
4. Clean and Disinfect outside of affected worker's locker.
5. Discard all personal food that might be shared in a break room setting refrigerator. Clean and disinfect interior and exterior of breakroom refrigerator. Perform a final rinse and sanitizing of the interior part after disinfecting.
6. Identify workers who came into close contact with the tested individual in the last 48h, while maintaining the privacy of the tested individual's identity. Follow these guidelines for close contact:
 - Any Household member.
 - Intimate partner.
 - Individual providing care in a household without using recommended infection control precautions.

- Individual who was directly coughed on.
- Individual who spent 15 minutes or more within 1 meter of the probable or positive individual (without using proper personal protective equipment).

7. If feasible, send workers who came into close contact with the tested person home until the results of the test are known.
8. If not feasible to send workers home who came into close contact with the tested person the following practices should be followed:
 - Pre-Screen: Employers should measure the employee's temperature and assess symptoms prior to them starting work. Ideally, temperature checks using touchless thermometer should happen before the individual enters the facility.
 - Regular Monitoring: As long as the employee doesn't have a temperature or symptoms, they should self-monitor under the supervision of their employer's occupational health program.
 - Wear a Mask: The employee should wear a face mask at all times while in the workplace for 14 days after last exposure. Ask them to self-monitor for symptoms.
9. Prepare for the possibility that in 2 to 3 days employees who came into contact with the tested person might have to stay home; either due to (i) positive test; your local Health Department may require testing of these employees, or due to (ii) development of symptoms.
10. Review employee contact and prepare for changing shift procedures and responsibilities to account for any short staffing. Create a plan to enlist other trained workers to be available to fill any void.

2 After the test for COVID-19 comes back negative

1. Inform workers of the negative test result.
2. Inform any of the workers that were sent home of the negative test result and discuss when they can return to work.
3. No further action needed.

3 After the test for covid-19 comes back positive or the person develops all typical symptoms of COVID-19

1. Report the positive test or symptomatic worker together with a list of workers that came into close contact with this individual to your local Health Department.
 - a. Follow instructions provided by Health Department.
 - b. Obtain information if other workers will be tested.
2. Re-clean and disinfect all areas that this individual may have come into contact with; follow appropriate SOPs, including:
 - Use an approved disinfecting product effective against COVID-19.
 - Rinse and sanitize all surfaces after disinfecting.
3. Inform any of the workers that were sent home of the positive test or symptomatic individual; have them finish the 14-day quarantine or get tested for COVID-19. After the quarantine or after they test negative, they can return to work. If during quarantine they develop any of the symptoms have them inform you, local Health Department and reach out to their primary care provider.
4. Inform any of the workers that were not sent home but were in contact with the positive or symptomatic individual; verify that workers' temperature and symptoms are being assessed prior to them starting work.

5. Identify potential secondary contacts of the individuals that came into contact with confirmed positive or symptomatic individual, while maintaining the privacy of these individuals.
6. If feasible, send these workers home until the person they had contact with finishes the 14-day quarantine or until that person tests negative.
7. If not feasible to send these workers home the following practices should be followed:
 - Pre-Screen: Employers should measure the employee’s temperature and assess symptoms prior to them starting work. Ideally, temperature checks using touchless thermometer should happen before the individual enters the facility.
 - Regular Monitoring: As long as the employee doesn’t have a temperature or symptoms, they should self-monitor under the supervision of their employer’s health program.
 - Wear a Mask: The employee should wear a face mask at all times while in the workplace for 14 days after last exposure. Ask them to self-monitor for symptoms.
8. Prepare for the possibility that your local Health Department may require testing of these workers.
9. Prepare for the possibility that these workers develop symptoms in 2 to 3 days.
10. Assess risk to the business based on the information obtained from the Health Department.
 - a. If number of workers that need to be tested is low, review employee contact and prepare for changing shift procedures and responsibilities to account for any short staffing. Create a plan to enlist other trained workers to be available to fill any void.
 - b. If the number of workers that will be tested is too high to be able to maintain production: Adjust production schedules to be able to have enough product on stock until test results come back (which may take more than 2 days). Plan to be ready to resume production on the day the results come back negative.
 - c. If information on workers that will be tested is not available, act as if all will be tested.
11. Allow individuals that tested positive for COVID-19 to return to work when the following conditions are met:
 - a. Confirmed case could be released from isolation once their symptoms resolve and they have two negative PCR tests at least 24 hours apart.
 - b. If testing is not possible, a confirmed patient can be released from isolation 14 days after symptoms resolve.
 - c. Healthcare provider determines based on tests and/or evaluation that they can return to work.

8.0 Verification:

Plant Manager/HR Manager or another PIC (Person-in Charge) will perform the actions in this SOP, record information and sign off those actions were taken.

9.0 Documentation of training:

Name	ID	Signature	Date

10.0 Signatures and approvals:

Role	Name and title	Signature	Date
Plant Manager			

References

1. Naming the coronavirus disease (COVID-19) and the virus that causes it. (n.d.). Retrieved April 17, 2020, from [https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)
2. COVID-19 and Food Safety: Guidance for Food Businesses. (n.d.). Retrieved April 17, 2020, from <https://www.who.int/publications-detail/covid-19-and-food-safety-guidance-for-food-businesses>
3. Doremalen, N. V., Bushmaker, T., Morris, D. H., Holbrook, M. G., Gamble, A., Williamson, B. N., . . . Munster, V. J. (2020). Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1. *New England Journal of Medicine*, 382(16), 1564-1567. doi:10.1056/nejmc2004973
4. Home Page: *Journal of Hospital Infection*. (n.d.). Retrieved April 17, 2020, from <https://www.journalofhospitalinfection.com/>
5. Center for Food Safety and Applied Nutrition. (n.d.). Food Safety and the Coronavirus Disease 2019 (COVID-19). Retrieved April 17, 2020, from <https://www.fda.gov/food/food-safety-during-emergencies/food-safety-and-coronavirus-disease-2019-covid-19>
6. Coronavirus: No evidence that food is a source or transmission route. (2020, March 09). Retrieved April 17, 2020, from <https://www.efsa.europa.eu/en/news/coronavirus-no-evidence-food-source-or-transmission-route>
7. Ong, S. (2020, March 04). SARS-CoV-2 Contamination of Air, Environmental Surfaces, and Personal Protective Equipment. Retrieved April 17, 2020, from <https://jamanetwork.com/journals/jama/fullarticle/2762692>
8. COVID-19 cannot be transmitted by either farm animals or domestic animals: Anses - Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail. (n.d.). Retrieved April 17, 2020, from <https://www.anses.fr/en/content/covid-19-cannot-be-transmitted-either-farm-animals-or-domestic-animals-o>
9. 139939. (2020, April 08). AAO-HNS: Anosmia, Hyposmia, and Dysgeusia Symptoms of Coronavirus Disease. Retrieved April 17, 2020, from <https://www.entnet.org/content/aa-hns-anosmia-hyposmia-and-dysgeusia-symptoms-coronavirus-disease>
10. IDFA Member Update on Coronavirus (COVID-19). (2020, April 17). Retrieved April 17, 2020, from <https://www.idfa.org/news/coronavirus>
11. Government of Canada, Canadian Food Inspection Agency. (2020, April 07). Government of Canada / Gouvernement du Canada. Retrieved April 17, 2020, from <https://inspection.gc.ca/covid-19/cfia-information-for-industry/guidance-to-meat-slaughter-and-processing-establishments/eng/1585620151816/1585620617343>
12. Guidance for schools, workplaces & institutions. (n.d.). Retrieved April 17, 2020, from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/guidance-for-schools-workplaces-institutions>
13. Solutions for Businesses Impacted by COVID-19. (n.d.). Retrieved April 17, 2020, from <https://www.aibinternational.com/en/Solutions-for-Businesses-Impacted-by-COVID-19>
14. Interim Guidance for Food Manufacturing Facilities or Food Retail Stores. (n.d.). Retrieved April 17, 2020, from <https://coronavirus.health.ny.gov/interim-guidance-food-manufacturing-facilities-or-food-retail-stores>
15. Water, sanitation, hygiene and waste management for COVID-19. (n.d.). Retrieved April 17, 2020, from <https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19>
16. When and How to Wash Your Hands. (2020, April 02). Retrieved April 17, 2020, from <https://www.cdc.gov/handwashing/when-how-handwashing.html>
17. Advice on the use of masks in the community, during home care and in healthcare settings in the context of the novel coronavirus (COVID-19) outbreak. (n.d.). Retrieved April 17, 2020, from [https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-\(2019-ncov\)-outbreak](https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak)

18. Recommendation Regarding the Use of Cloth Face Coverings. (2020, April 3). Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html>
19. List N: Disinfectants for Use Against SARS-CoV-2. (2020, April 16). Retrieved April 18, 2020, from <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
20. Considerations in the investigation of cases and clusters of COVID-19. (n.d.). Retrieved from <https://www.who.int/publications-detail/considerations-in-the-investigation-of-cases-and-clusters-of-covid-19>
21. Coronavirus Resources. (n.d.). Retrieved April 18, 2020, from <https://www.fmi.org/food-safety/coronavirus>
22. Cleaning and Disinfecting Your Facility. (2020, April 14). Retrieved April 17, 2020, from https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html?CDC_AA_refVal=https://www.cdc.gov/coronavirus/2019-ncov/prepare/disinfecting-building-facility.html
23. Vetsch, K. (n.d.). Social Distancing in Food MFG (Version 2.1). Retrieved April 16, 2020, from <https://www.foodnorthwest.org/food-northwest-social-distancing-in-food-mfg>
24. Food Facility COVID-19 Strategy Checklist. (n.d.). Retrieved April 17, 2020, from <https://instituteforfoodsafety.cornell.edu/coronavirus-covid-19/risk-management-strategy-checklist/>
25. Prepare your Small Business and Employees for the Effects of COVID-19. (2020, April 4). Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-small-business.html>
26. Templates. (n.d.). Retrieved April 18, 2020, from <https://dairyextension.foodscience.cornell.edu/resources/templates/>
27. Public Health Recommendations for Community-Related Exposure. (2020, March 30). Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/php/public-health-recommendations.html>
28. Posters & leaflets. (2011, June 8). Retrieved from <https://www.who.int/gpsc/5may/resources/posters/en/>
29. Welcome to CDC stacks |. (n.d.). Retrieved from <https://stacks.cdc.gov/view/cdc/40433>