
EHEDG DOCUMENT FOOD INDUSTRY RESILIENCE

Staff / Operators			
Contamination source	Transmission mechanism	Transmission control / Protection measures / PPE in production	Access / Transmission control people flow
Contaminated droplets/aerosols	Sneezing, coughs, smear infection. Inhalation of droplets / aerosols. possibility of smear infection.	Mask FF2 & face shield Segregation of staff through use of e.g. plexiglass or polycarbonate panels	People flow in one direction, no crossflows, e.g from raw to cooked. Social distancing (> 1,5 meter apart) in production, offices, changing rooms, washrooms, canteens etc..
Contaminated surfaces / products via smear infection.	Transmission by just touching the same object not proven, but transmission can occur via touching of contaminated surfaces and then touching the face, especially mouth, nose, eyes.	Regular cleaning and disinfection of surfaces as precautionary measure. More frequent cleaning of frequently touched surfaces. Use dedicate equipment, utensils, pens with disinfectant e.g. 70 % Ehtanol.	Reduce people flow to minimum. Dedicate people to certain areas in the plant. Reduce number of in process samples to reduce interaction with lab.
	Inhalation of droplets and aerosols. Touching of surfaces		
			Exclusion of symptomatic staff from work. Training of staff to be aware of the symptoms and report immediately for exclusion. Active screening who is entering the plant. Fill out of questionnaire mandatory - any symptoms for corona or contact with a positive corona case. Fever screening of everyone entering the plant with an infrared thermometer. Handwashing facilities / hygiene point at strategic points in all areas, including all entrances and exits
		Training on - hand hygiene, i.e., washing, drying, use of hand sanitisers; Respiratory etiquette, i.e., coughing into the elbow, coughing or sneezing into a disposable tissue and immediate disposal of the tissue after use, covering the nose and mouth with the hand followed by immediate hand washing; Use of disposable latex in production environment -In a plant people should have sufficient disposable tissues that are immediately thrown into waste baskets. I am not in favour of this elbow stuff because that can lead to smear transmission.	A common misunderstanding among both food business operators and customers is that it is a legal requirement that food handlers must wear gloves when handling and preparing food. It is perfectly acceptable to prepare and handle food with bare hands provided proper hand washing procedures are in place. Gloves may be used, but food workers they must be properly trained to ensure that the gloves are changed frequently and that hands are washed between glove changes and when gloves are removed. Gloves must be changed when carrying out non-food related activities such as emptying bins, handling money etc. Wearing gloves can allow bacteria to build up on the surface of the hands, so hand washing is extremely important when gloves are removed.

Materials traffic	Decontamination	
	Decontamination steps	Decontamination measures
Transmission control materials / process zoning		
Install transfer zone to remove secondary packaging from (raw) materials, packaging materials, supplies etc	1) Basic decontamination at entrance plant	56°C 15min
Strict access control plant, entrance data logging	2) re- decontamination when travelling through zones and at predefined time intervals depending on work / environment	<p>Alcohol disinfectants (60 - 85%) or similar - Many disinfectants are active against coronaviruses and achieve their effective inactivation within minutes. Those currently recommended by the World Health Organisation (WHO), for environmental disinfection associated with SARS-CoV-2 in healthcare facilities, include:</p> <ul style="list-style-type: none"> • 70% Ethyl alcohol to disinfect reusable equipment between uses. • Sodium hypochlorite at 0.5% (equivalent 5000ppm) for disinfection of frequently touched surfaces. <p>For those in the US and countries that follow the guidance of the US-EPA, visit https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2 and use your EPA registration number to identify suitable disinfectants.</p> <p>For those in Europe and countries using the EN norms, use a disinfectant that has an official approval or local registration (partial approval for enveloped viruses) to EN 14476; EN 1276; or EN 13697.</p>
Use of hygiene points when travelling through different zones. Hygien points are locations in the plant where people can wash hands / disinfect hands, shoes. Should be equipped with sink, soap dispenser, disinfectant dispenser, waste basket with inliner and pivoting lid.	Identify prominent transmission and adapt cleaning plans and move to disinfecting surfaces to several times a day (e.g. handrails, toilets, doors), increase cleaning frequency also on weekends	
Shoe disinfection when entering the production buildings. Overalls often have too long trouser legs. Potential risk for transmission from floor to floor.	Prepare emergency box which can be used in case someone gets ill in the plant. The box should contain at least 3x PPE incl. Safety glasses (one for patient, one for companion, one for first aid person)	<p>A common misunderstanding among both food business operators and customers is that it is a legal requirement that food handlers must wear gloves when handling and preparing food.</p> <p>It is perfectly acceptable to prepare and handle food with bare hands provided proper hand washing procedures are in place.</p> <p>Gloves may be used, but food workers must be properly trained to ensure that the gloves are changed frequently and that hands are washed between glove changes and when gloves are removed. Gloves must be changed when carrying out non-food related activities such as emptying bins, handling money etc.</p> <p>Workers should be aware that wearing gloves can allow bacteria to build up on the surface of the hands, so hand washing is extremely important when gloves are removed.</p>
Gowning procedures when accessing critical part of process.		<p>Hands should be washed for at least 20 seconds as follows:</p> <p>Wet hands under warm running water</p> <p>Use enough soap to form a good lather</p> <p>Rub all parts of hands with soap and water</p> <p>Lather for at least 20 seconds, vigorously and thoroughly rubbing all hand surfaces, including the fingertips and thumbs</p> <p>Rinse hands thoroughly with running water</p> <p>Dry hands thoroughly with disposable paper</p> <p>When entering the production area, an alcohol rub can be applied</p>
face masks or shields, gloves, disposable overshoes		

Indirect production areas		Utilities & suppliers
Social facilities	Control rooms / labs / procedural	Utilities & suppliers
Canteen only used by own employees. Encourage truck drivers to eat in their cars/ prepare lunch area - container for truck drivers at gate.	Prepare plan how reduced workload looks like to be prepared for worst case scenario Reduce workload to a minimum (see analysis)	Quality agreements with suppliers. No raw material testing inhouse.
Social distancing rules canteen, meeting rooms, smoking areas, unofficial break rooms, coffee machine etc. only one chair per table helps people to follow rules	No overlap between shifts; shift handover via documents or phone	Audit "Corona critical" suppliers, especially packaging, also secondary packaging. To be balanced with the risk.
Truck drivers separate toilets / washing facilities at gate. Truck drivers are not allowed to leave their truck when on site . When they enter the plant someone needs to wait already for them to hand over papers. Papers are handed over with a tool to keep distance, e.g. bar with a clip	De-synchronise times for shift change to allow for distancing in changing rooms, showers, etc.	Air Conditioning systems: So far there is no scientific evidence that the Corona virus is transmitted via air conditioning systems. However it is recommended to check that the air conditioning system is operating as designed
Keep record who visited the canteen and when.	Always keep one shift in reserve to bridge possible quarantines. Establish a deep cleaning plan to be prepared when positive cases occur.	
All toilets equipped with hygiene points, appropriate signage that explains hand washing and gowning rules.	Layout suitable for social distancing; make sure 2 m distance is given between working areas or a protection is installed between working places (e.g. Polycarbonate shield).	Virus survival rates in chemicals & supplies. Qualify/determine/keep track of these rates, ask statement from suppliers for cases where it is not obvious and/or where you have short turnover times
No take away meals in the canteen as well as cutlery. Everything is handed out by the canteen employees who should be highly aware of hygiene rules.	Provide minimum one overall per day plus 1 reserve.	Postpone visits of suppliers, customers, maintenance of lab equipment until you have fully established, implemented and validated measures & controls.
Highly frequent communication about hygiene rules, keeping distance etc. In the beginning every day, use screens and posters on the wall.	Sufficient PPE's in place for working conditions. Humid conditions will reduce time to wetting for face masks.	
Special posters in sanitary rooms about hygiene rules (e.g. minimal 20-30 sec. for hand washing, disinfecting, creaming etc.)	No (bulk) loading operations by truck drivers, use own staff	
	Frequent hygiene training programs for operators, lab personnel, maintenance, contractors.	
	Adapted maintenance programs & procedures	
	Segregation of dayshifts either by time (shift planning) or space (different rooms with no interaction)	
	For office areas establish plans for rotation home office. Reduce the number of people who are on site at the same time. This to allow to keep distances and reduce contamination risk (the more people the more contamination possibilities)	
	Make sure shifts or working partners are together for one shift cycle and don't switch working groups in between.	
	If release analysis can't be performed anymore due to missing resources agree with customers to send out product without release. Release should in this case be governed by keeping your CCP's under control. However, it makes sense to regularly analyse sample to verify that your process is still under control.	
	Have Q&A for supervisors in place with scenarios how to react	
	Check holiday planning and ask people to adapt their holidays regarding company needs.	
	All meetings held via skype	
	Prepare remote access for critical employees to work from home - also possible from a normal desktop PC; no laptop needed	
	Send people coming back from holiday trips to home office or quarantine	

Hygiene points consist of hand washing facility with soap

Remark 1	<p>Many disinfectants are active against coronaviruses and achieve their effective inactivation within minutes. Those currently recommended by the World Health Organisation (WHO), for environmental disinfection associated with SARS-CoV-2 in healthcare facilities, include:</p> <ul style="list-style-type: none"> • 70% Ethyl alcohol to disinfect reusable equipment between uses. • Sodium hypochlorite at 0.5% (equivalent 5000ppm) for disinfection of frequently touched surfaces. <p>For those in the US and countries that follow the guidance of the US-EPA, visit https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2 and use your EPA registration number to identify suitable disinfectants.</p>
Remark 2	<p>Hands should be washed for at least 20 seconds as follows:</p> <ul style="list-style-type: none"> Wet hands under warm running water Use enough soap to form a good lather Rub all parts of hands with soap and water Lather for at least 20 seconds, vigorously and thoroughly rubbing all hand surfaces, including the fingertips and thumbs Rinse hands thoroughly with running water Dry hands thoroughly with disposable paper When entering the production area, an alcohol rub can be applied
Remark 3	<p>A common misunderstanding among both food business operators and customers is that it is a legal requirement that food handlers must wear gloves when handling and preparing food.</p> <p>It is perfectly acceptable to prepare and handle food with bare hands provided proper hand washing procedures are in place.</p> <p>Gloves may be used by food workers, but they must be properly trained to ensure that the gloves are changed frequently and that hands are washed between glove changes and when gloves are removed.</p> <p>Gloves must be changed when carrying out non-food related activities such as emptying bins, handling money etc.</p> <p>Workers should be aware that wearing gloves can allow bacteria to build up on the surface of the hands, so hand washing is extremely important when gloves are removed to avoid subsequent contamination of food.</p>