The Brewers of Europe

Coronavirus COVID-19

prepared for

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by

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Part 1. Abbreviations

BFR - (Bundesinstitut fur Risikobewertung)
COVID-19 - Coronavirus Disease 2019
EFSA - European Food Safety Authority
FDA – Food and Drug Administration (US)
FSA - Food Standards Agency of the United Kingdom
SARS-CoV-2 - Severe Acute Respiratory Syndrome Coronavirus 2

Part 2. COVID-19 Statement

Note: National and International authorities have issued guidelines for minimising the risk of coronavirus transmission and should be referred to

- The European Food Safety Authority (EFSA) have stated that they are closely monitoring the situation regarding the coronavirus disease (COVID-19) and that there is currently no evidence to suggest that food is a likely source or route of transmission of the virus
- The World Health Organisation (WHO) have stated that it is not certain how long the virus that causes COVID-19 survives on surfaces, but that it seems to behave like other coronaviruses. Preliminary studies have shown that this virus may persist on surfaces for a few hours or up to several days, depending on the conditions (such as type of surface, temperature, humidity etc.)
- The FDA have stated that there is no evidence to support transmission of COVID-19 by food, since it is unlike other foodborne gastrointestinal viruses such as norovirus and hepatitis A which can make people ill through consumption of contaminated foods.
- BFR have stated that there are currently no cases of infection linked to the consumption of contaminated foods or via contact with contaminated articles.
- The United Kingdom Food Standards Agency has released guidance has been developed with the Department for Environment, Food and Rural Affairs (Defra) and covers a range of areas including good hygiene practice, management of employee sickness, and social distancing for specific food business settings.
- Transmission via surfaces recently contaminated with the virus is possible, however only likely to occur during a short period of time after contamination due to the relatively low stability of coronaviruses in the environment.
- WHO have advised that if you think a surface may be infected, clean it with simple disinfectant to kill the virus.
- A study (Borovec et al, 1998) investigated the inactivation of blood-borne viruses by treatment with sodium hydroxide and heat. The viruses investigated included non-enveloped viruses such as Hepatitis A virus, which are much more resistant to environmental stresses than coronavirus. Using 0.1 MNaOH at 60^{o}C for 2 minutes, a log reduction value of ≥5.7 was observed within 2 minutes.
- A recent paper (Kampf et al 2020) reviewed the persistence of other coronavirus strains on inanimate objects such as steel, aluminium, wood etc. The original SARS-CoV strain P9 persisted on the surface of glass for 4 days at room temperature. They concluded that at a temperature of 30^{o}C or more the duration of persistence is shorter.
- Cleaning of returnable beer bottles on a commercial scale is carried out by automated machinery. The process typically involves rinsing to remove any foreign objects, cleaning with a detergent solution to remove labels and soil, and rinsing to eliminate detergent residue. The output from the bottle washer is inspected to identify and remove any imperfectly cleaned bottles.

- Minimum recommended requirements for sterilising bottles are that unclean bottles shall be exposed to a 3% solution of which not less than 60% is caustic (NaOH) for not less than 5 minutes at a temperature not less than 55 degrees Celsius or an equivalent process. Bottled beer then generally undergoes either sterile filtration or pasteurisation (Alarcon, 2017).
- As far as personal hygiene is concerned, wash hands with soap and water for 20 seconds. If these facilities are not available, clean hands with an alcohol based hand rub (≥60% alcohol content).

References

Alarcon, C. 2017. Basic principles and operations of a bottle washer. Chapter 9. In Beer Packaging (Second edition), 129-146.

BFR (Bundesinstitut fur Risikobewertung): Can the new type of coronavirus be transmitted via food and objects? https://www.bfr.bund.de/en/can_the_new_type_of_coronavirus_be_transmitted_via_food_and_objects_-244090.html

BFR: https://www.bfr.bund.de/cm/364/protection-against-foodborne-infections.pdf

Borovec et al. (1998). Inactivation Kinetics of Model and Relevant Blood-borne Viruses by Treatment with Sodium Hydroxide and Heat. Biologicals. 26, pp237-244.

EFSA: Coronavirus. No evidence that food is a source or transmission route. https://www.efsa.europa.eu/en/news/coronavirus-no-evidence-food-source-or-transmission-route

FDA: https://www.fda.gov/food/food-safety-during-emergencies/food-safety-and-coronavirus-disease-2019-covid-19

FSA: https://www.food.gov.uk/news-alerts/news/fsa-publishes-guidance-for-food-businesses-on-coronavirus-covid-19

Kampf et al. (2020). Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents. Journal of Hospital Infection. 104. pp 246 – 251 (https://www.journalofhospitalinfection.com/article/S0195-6701(20)30046-3/fulltext)

WHO Coronavirus Disease (COVID-19) Pandemic information page: https://www.who.int/emergencies/diseases/novel-coronavirus-2019

Part 3. Frequently asked questions

Q. 1 I keep hearing different terms being used to describe the current Coronavirus outbreak. We hear Coronavirus, SARS-CoV-2 and COVID-19? - what's the difference between all these and what do they mean?

A. 1 Coronavirus = umbrella term for the family of viruses: any of a family (Coronaviridae) of single-stranded RNA viruses that have a lipid envelope studded with club-shaped projections which can infect birds and many mammals including the common cold in humans.

COVID-19 = specific name of the illness related to the current pandemic and the acronym for "Coronavirus Disease 2019"

SARS-CoV-2 = name assigned to the virus which causes COVID-19 and the acronym for "severe acute respiratory syndrome coronavirus 2"

Q.2 In the food industry we often hear about Norovirus and we've just had the major FSA report published on Norovirus in Foods. So what's the difference between Coronavirus and Norovirus?

A.2 We must remember that any virus can only increase its numbers when infecting its host cells. Once outside the cell it cannot "grow" or increase numbers at all, so once outside of its host, and in the environment both Norovirus and SARS-CoV-2 cannot increase in number, and indeed will gradually decrease in number over time.

Turning to the differences between the two:

Although they are both viruses, they cause illness in very different ways and their routes of transmission are different. This is a common source of confusion. SARS-CoV-2 is relatively unstable on the surface of foods and other materials, and cannot as far as is known, cause the Covid-19 infection via the ingestion of the virus, since it is a respiratory disease and has to be inhaled. Norovirus and other non-enveloped viruses such as Hepatitis A on the other hand can quite happily remain infectious for prolonged periods of time on the surfaces of foods and other materials given favourable conditions. These of course will result in infection by ingestion as they cause gastrointestinal illnesses.

Evidence would suggest that the potential for infection via eating foods is very highly improbable as the SARS-CoV-2 virus has to be inhaled to infect. Food is not likely to be a source of infection.

Q.3 What are the symptoms of COVID-19?

A.3 According to the NHS in the UK, the symptoms can be very similar to other illnesses that are much more common such as cold or flu, so it is likely to start with a fever, followed by a dry cough and then after about a week shortness of breath.

Q.4 What is the best way of reducing the risk of transferring the virus from person-to-person, person-to-surfaces and person-to-foods?

A.4 First, three areas of transmission - people, surfaces and food – are ranked from high to low risk.

The highest risk would be from person-to-person spread with the main risk from droplet infection, which is where coronaviruses are emitted from someone via droplets in the air, such as coughing or sneezing and then inhaled by someone else, such as by coughing. Also, since this is a respiratory disease, infection can usually only occur after inhalation of droplets containing the virus, however other routes of transmission could include if an infected person coughed into their hand, then shook someone else's hand and that person then touched their face, the risk of infection would then be increased.

Second, contracting the infection from hard surfaces is not currently considered to be a high risk, and the likelihood of inhaling droplets will be far less. However, to minimise any risk, ensure you practice good respiratory hygiene (using tissues and coughing or sneezing into the arm) and good hand hygiene as per current recommendations as well as cleaning the area affected using your normal cleaning protocols.

Thirdly, the risk of contracting the illness from food is negligible, for the reasons already stated. It is not considered to remain infectious on surfaces, including food surfaces for long periods of time and again, it would have to somehow be inhaled from the foods themselves. If you ingest foods which have the virus on the surface, the risk of infection would not be from ingestion of the food.

In general, to help reduce any risk, washing hands for at least 20 seconds with soap and water is recommended. If those facilities are not available, alcohol-based handrub which contains at least 60% alcohol content.

Q.5 Should I wear a facemask?

A.5 There is little evidence of any widespread benefit from the use of facemasks outside healthcare and clinical settings. They need to be worn correctly, changed frequently and disposed of safely in order to be effective.

Q.6 Are there any recommendations on cleaning areas such as factories?

A.6 Continuing with normal routine cleaning regimes should be sufficient unless there is a particular problem with employees showing symptoms and large areas becoming contaminated, since these types of viruses are easily killed by routine cleaning. If areas have become visibly contaminated, a 1000 ppm available chlorine bleach solution can be used on hard surfaces. If soft furnishings have become contaminated, steam cleaning is recommended.

Q7 Are there any risk of virus surviving in liquids which are not pasteurised?

A.7 There has been no work done of this nature on the SARS-CoV-2 strain itself. Survival in water of surrogate viruses similar in nature to coronavirus have shown evidence they can remain for several days, however there has been no evidence thus far that SARS-CoV-2 causes infection due to consumption.