

Assessing the survival of SARS-CoV-2 on food surfaces and food packaging materials

Area of research interest: [Foodborne pathogens](#)

Study duration: 2021-02-15

Planned completion: 31 May 2022

Project code: FS430621

Conducted by: University of Southampton

Background

SARS-CoV-2, the coronavirus which causes COVID-19, is a respiratory virus thought to be primarily transmitted by droplets and, particularly in poorly ventilated indoor areas, via aerosols. A risk assessment completed and published by the FSA in 2020 concluded that it was very unlikely that you could catch coronavirus via food.

This assessment included the worst-case assumption that, if food became contaminated during production, no significant inactivation of virus would occur before consumption. However, the rate of inactivation of virus on products sold at various temperatures was identified as a key uncertainty.

Objectives and approach

This project has been commissioned to measure the rate of inactivation of virus on the surface of various types of food, reducing that uncertainty. The results will be used to consider whether the assumption currently made in our risk assessment remains appropriate for food kept at a range of temperatures, or whether a lower risk is more appropriate for some.

Scientists will conduct a laboratory-based study to artificially inoculate infectious SARS-CoV-2 virus onto the surfaces of these materials and then measure how the amount of infectious virus present on those surfaces declines over time. The food and packaging types to be studied include:

- fresh vegetables
- fresh fruit
- baked produce
- delicatessen items
- polyethylene terephthalate (PET) plastic bottles (500ml)
- PET material such as ready meal containers
- aluminium cans (330ml)
- composite material drinks cartons with a rip/pull feature

They will be studied at a range of temperatures and humidity levels and over time periods that reflect their typical storage conditions. The contractor will begin by comparing several methods for the recovery of virus from these materials to ensure that the best available method is used for the other experiments.