Pros and Cons of Available Methods for Foodborne Virus Detection

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Virus detection in food matrices is challenging due to physical and chemical properties of the type of food to be tested, the difficulty to detect low level of viruses and the impossibility to enrich the samples before detection. The main targeted viruses are NoV and HAV, the two main viruses implicated in foodborne outbreaks. The majority of methods currently used for the detection of foodborne viruses, are based on molecular detection including virus elution, nucleic acid extraction and detection. The viral detection is based on either ISO reference method, quantification and confirmation methods, molecular detection methods from intact virus capsids, detection of infectious virus as well as new technologies such as digital PCR and sequencing. The advantages and disadvantages of available methods for detection of human enteric viruses in food will be discussed.

**Biography**

**Dr Fabienne Hamon** has worked in virus foodborne safety issue for over 20 years. Following a PhD in molecular virology, she founded in 2005 the private company Ceeram. This pioneer company was dedicated to help industrials to better understand and manage virus issue in food. She served for 10 years as a Chief Scientific Officer for Ceeram and develops a complete range of diagnostic solutions for virus detection in food and environmental samples. Ceeram Company received the IAFP food safety innovation awards for its worldwide expertise on foodborne viruses. After selling the Ceeram Company to bioMérieux, she joined this international group as manager of molecular biology R&D in charge of the development of complete diagnostic tools for the detection of pathogens for the industry business. She is also part of several ISO experts groups in charge of virus detection methods in food and PCR detection methods for food and feed pathogens.