

**P006** Quantification of virus inactivation by RT-QPCR and its application to the measurement of the thermal stability of non-cultivable Noroviruses

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Noroviruses are highly infectious common causative agents of gastrointestinal disease. NoVs cannot be grown in culture and therefore control measures have been based on data obtained from other enteric viruses or surrogate viruses such as Feline Calicivirus (FCV). A problem for PCR based measurement of viral inactivation is the inability of PCR to distinguish infectious and inactivated virus particles. In this study we have developed a method that allows the quantitative measurement of the exposure of Norovirus capsid RNA following a process. The method relies on the use of low RNA copy numbers ( $10^4$ - $10^5$  copies) and RNase treatment to distinguish exposed RNA from capsid protected RNA. We have used this method to compare the behaviour of NoVs with surrogate FCV both in RT-QPCR and in plaque assays. Data will be presented demonstrating the relationship between RT-QPCR data and conventional plaque assays for infectivity for FCV. Data obtained using NoV clinical isolates and FCV spiked samples have revealed that FCV is significantly more temperature sensitive than NoVs.