



REFERENCE MATERIALS FOR NOROVIRUS AND HEPATITIS A

Reference materials (RM) are important elements of quality control in microbiological testing. In partnership with CEFAS, the United Kingdom's Health Protection Agency (HPA) provides RMs for norovirus (genogroups I and II) and hepatitis A virus. These RM's can be used as in-run positive controls for quantitative molecular assays such as real time qRT-PCR and for method calibration and characterisation. They are also suitable for use in qualitative conventional or semi-quantitative RT-PCR analysis.

The RM's were developed in parallel with the draft standard - Microbiology of Food and Animal Feed: Detection of Norovirus and Hepatitis A in Foodstuffs - Part 1: Quantitative Determination, and Part 2: Qualitative Determination which was developed by the European Committee for Standardisation (CEN). For further details see Lees D. N. and CEN TAG4 (2010).

Reference values:

The RMs are supplied with a certificate of analysis which gives reference values. These values are generated using a real time qRT-PCR using CEFAS' ISO 17025 accredited procedures for virus quantification and are based upon the draft CEN standard.

Further details of the methodology used for quantification of norovirus and hepatitis A can be found in Dancer *et al.*, (2010) and Costafreda *et al.*, (2006). If your laboratory methods differ from that used to generate the reference values you are advised to carry out calibrations using your routine methods.

For further advice please contact the HPA:

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Website: www.hpa.org.uk/leqa/rm

References:

- Costafreda, M. I., Bosch, A. and Pinto, R. M. (2006). Development, evaluation, and standardization of a real-time TaqMan reverse transcription-PCR assay for quantification of hepatitis A virus in clinical and shellfish samples. *Applied and Environmental Microbiology*. 72: 3846-3855.
- Dancer D.; Rangdale R. E., Lowther J.A., Lees D.N-(2010) Human norovirus RNA persists in seawater under simulated winter conditions but does not bioaccumulate efficiently in Pacific Oysters (*Crassostrea gigas*). *Journal of Food Protection* 73 (11) 2123-2127.
- Lees D.N. , and CEN WG6 TAG4 (2010). International standardisation of a method for detection of human pathogenic viruses in molluscan shellfish. *Food and Environmental Virology*. 2:146-155.