NOTE

Preliminary validation of a portable real-time RT-PCR assay for the detection of salmonid alphavirus.

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Abstract
An RT-qPCR method for quick detection of salmon alphavirus (SAV) in a field environment was compared to a laboratory-based method. RNA extraction was comparable. The RT-qPCR kit detected all genotypes tested and gave satisfactory specificity results. The in-field kit was less sensitive, however, this may be acceptable depending on testing requirement.

The genesig® Easy q16 is a portable qPCR machine designed for use in the field environment. The genesig® Easy RNA/DNA extraction kit has been developed for use with the q16 allowing complete processing and analysis of qPCR tests outside the laboratory in approximately four hours. There are a number of RT-qPCR and qPCR assays available commercially for use with the q16 in the detection of fish pathogens including the salmon alphavirus genesig® Easy kit.

Infection with salmonid alphavirus (SAV) may cause pancreas disease (PD) or sleeping disease (SD) in Atlantic salmon (*Salmo salar* L.), rainbow trout (*Oncorhynchus mykiss*, Walbaum) and brown trout (*Salmo trutta* L.) (for review see McLoughlin and Graham, 2007). The virus is widespread throughout Scotland and is considered an economically important pathogen to the Scottish aquaculture industry. SAV has been divided into six genotypes (I – VI) (Fringuelli et al., 2008). Genotypes I, II, IV and V have been detected in Scotland (Graham et al., 2012).

A bench-top validation exercise of the Primerdesign™ Ltd. salmon alphavirus genesig® Easy kit for use on the genesig® q16 was performed. The RNA extraction method intended for use with the q16, the genesig® Easy DNA/RNA extraction kit, was also included. These protocols were assessed by comparison to the current method in use for routine testing at Marine Scotland Science (MSS), the National Reference Laboratory (NRL) for finfish, shellfish and crustacean diseases in Scotland. As a NRL,

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