Yishuai Du, J Aquac Res Development 2016, 7:8 (Suppl)
http://dx.doi.org/10.4172/2155-9546.C1.008

Development and application of a real-time PCR assay for the detection of *Aeromonas salmonicida*

Yishuai Du
Institute of Oceanology-CAS, China

A rapid, economical, specific and sensitive real-time polymerase chain reaction (RT-PCR) assay coupled with SYBR Green I chemistry was developed for the quantitative detection of *Aeromonas salmonicida* (*A. salmonicida*) isolated from farmed Atlantic salmon (*Salmo salar*) with the symptoms of furunculosis. The set of primers designed from the virulence array protein (*vapA*) gene was specific to the *A. salmonicida* and didn't cross-react with other bacteria. Compared with the conventional PCR, RT-PCR had a lower detection limit of 5.6 copies of the positive plasmids. The standard curve, which showed the relationship between the copies of *A. salmonicida* and its cycle threshold (C_T) value, could be described as: log (copies of A. salmonicida) = -0.3213 CT +10.721. The quantitative detection of copies of *A. salmonicida* in different tissues of the moribund Atlantic salmon showed that *A. salmonicida* could be detected in all tissues detected; the spleen contained the largest number of *A. Salmonicida* and then the kidney. These results suggest that the RT-PCR assay reported here is a specific, sensitive and quantitative method for detecting *A. salmonicida* in different tissues of Atlantic salmon. It can be used for the routine tests of *A. salmonicida* in the local aquaculture enterprise and for the research of infection routes of *A. salmonicida* to Atlantic salmon.

Biography

Yishuai Du has completed his PhD from Institute of Oceanology, Chinese Academy of Sciences (IOCAS). He is a Assistant Professor of IOCAS. He has published three papers in the field of Disease Control of Marine Animals.

duyishuai@qdio.ac.cn

Notes: