MIS-OP-03

EQUIVALENCE BETWEEN FTA-FIXED AND LIQUID ORAL FLUID OF PIGS FOR THE CONFIRMATION OF INFECTION BY VEROTOXIGENIC *ESCHERICHIA COLI* (EDEMA DISEASE) IN PIGS

L. Valls, A. Sanchez, J. Maldonado.

Hipra, Amer (Girona), Spain.

Introduction

FTA technology allows safe and practical storage and transportation of biological samples. However, its usefulness must be demonstrated with each new kind of sample. This study aimed to validate the use of FTA cards to detect the *VT2e* gene of verotoxigenic *Escherichia coli* (VTEC) in pig oral fluid by qPCR.

Material and Methods

To compare the qPCR performance in liquid and FTA-fixed samples, a panel of 10-fold serial dilutions of a collection VTEC strain, and 28 *VT2e* qPCR-positive diagnostic OF were used, respectively. FTA Elute were inoculated with 200 µl of either sample, and dried off at room temperature overnight. The remaining liquid samples were kept in refrigeration. The day after, qPCR was performed simultaneously on both samples. In addition, the stability of VTEC DNA in FTA Elute along time was assessed with a selected qPCR-positive diagnostic OF, and a liquid suspension of a collection VTEC strain. Samples were processed as described above at 1, 2, 4 and 8 weeks after inoculation.

Results

The limit of detection of the qPCR, when analyzing both liquid and FTA-fixed OF, was the same (<1.5 ng/µl of DNA). All 28 diagnostic OF were positive regardless their nature (liquid or desiccated). When comparing Ct values, 14/28 OF yielded better results in liquid form than their FTA-fixed counterparts, while the remaining 14 did so for the FTA-fixed form. The mean difference between Ct values was 0.19.

Discussion and Conclusion

This study demonstrates that the FTA Elute card is a good alternative for pig OF storing and

transportation. The fact that the VTEC DNA remains stable for a long time without degrading makes this system an excellent alternative to use liquid samples, that are sensitive to degradation and carry biological risk.

Acknowledgements

We thank the UCAM staff for sample collection and processing.