

IDENTIFICATION OF **AFRICAN SWINE FEVER DISEASE OF PIGS** USING MICROCHIP REAL-TIME PCR ANALYZER ARIADNA®

Identification of pathogens that cause infectious diseases of pigs is essential for correct diagnosis and treatment of infections. African swine fever (ASF) is an infectious disease of domestic and wild pigs of all breeds and ages, caused by a virus that produces a range of syndromes. Acute disease is characterised by high fever, haemorrhages in the reticuloendothelial system, and a high mortality rate. The PCR is an excellent, highly sensitive, and rapid technique for ASFV detection and it is very useful under a wide range of circumstances. It is especially useful if the tissues are unsuitable for virus isolation and antigen detection. The LUMEX INSTRUMENTS real-time PCR analyzer AriaDNA® and microchips with lyophilized reagents offer simple, rapid and accurate determination of ASF pathogen, matching cost-effectiveness and throughput requirements of the industry. The microchips with lyophilized PCR reagents just need an addition of the test sample into the individual reactors of the microchip thus significantly minimizing human error.



Microchip-based real-time PCR
analyzer AriaDNA



Nucleic acid extraction kit



Microchip kit for identification
of ASF

► LAYOUT OF MICROCHIP FOR ASF DETECTION



Layout of microchip for analysis of **13 samples** in duplicate (or **26 samples** in singlicate). Test kits for identification of **ASF** is shown along with Internal control (**IC**) test kit. Positive (**C+**), negative (**C-**) and negative extraction (**NEC**) control samples are included.



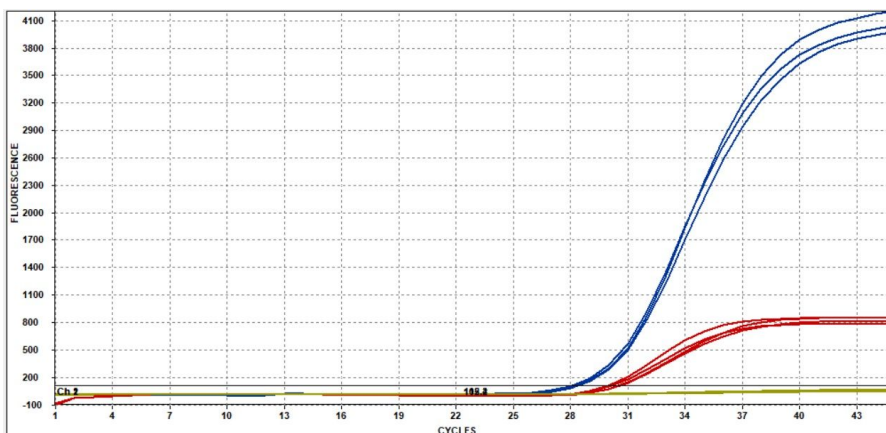
► ADVANTAGES OF THE MICROCHIP-BASED REAL-TIME PCR

- Rapid determination within 45 minutes
- Minimized manual operations in preparation of PCR mixes
- Minimize the risk of contamination and human error
- Analysis of **ASF** virus in **13** or **26** samples
- The microchips can be transported and stored at ambient temperature up to 6 months

► ANALYSIS FLOW-CHART

1 Extract DNA from samples (pig blood, tissues)

2 Add extracted DNA samples into the microchip reactors



Results of microchip real-time PCR of positive ASF sample (n=3). Results were positive for the sample with ASF DNA (**blue curves**). Internal controls (IC) are also positive (**red curves**), revealing no signs of inhibition. Negative control samples (**yellow curves**) demonstrate expected results.

3 Insert the microchip into the AriaDNA[®] analyzer and run the analysis using the software on a PC

4 Obtain real-time PCR results and print report in 45 minutes

The information and specifications in this publication are subject to change without notice.

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