



ISWAVLD 2023

International Symposium of the World
Association of Veterinary Laboratory
Diagnosticians

29 JUNE-1 JULY
2023
Congress Centre
Lyon

Towards
the veterinary
diagnostics
of the
future

Main topic : Animal Health

A Comparative Study of Storage Conditions for Porcine Reproductive and Respiratory Syndrome Virus Antibody Detection in Serum and Oral Fluid using Indirect ELISA

MUNJIDEE S.¹, CHIARASUMRAN S.¹, PREMPRE S.¹, MOTHAM M.², KOMKHUM T.¹, CHADATHONG S.¹

¹ Thai Foods Research Center Co., Ltd., Bangkok, Thailand; ² Thai Foods Group Public Company Limited, Kanchanaburi, Thailand

Introduction: Porcine reproductive and respiratory syndrome virus (PRRSV) is a significant pig pathogen that causes economic losses worldwide. Reliable diagnostic methods and the duration of sample storage are crucial for disease surveillance.

Methods: This study evaluated the diagnostic performance of a commercial serum and oral fluid antibody ELISA test for detecting PRRSV antibodies under different storage conditions. Blood and oral fluid samples were collected from 29 pigs vaccinated with an attenuated PRRSV live vaccine (genotype 2) and stored at 4°C for 1, 3, 5, 7 and 9 days post-collection. Samples were tested with the IDEXX PRRSV X3 Antibody Test Kit and IDEXX PRRS Oral Fluid Antibody Test Kit.

Results: The results, based on sample to positive ratio (S/P ratio), showed that between day 1 and day 9, all 29 pigs tested positive for PRRSV antibodies. Oral fluids provided higher S/P results than serum, but the patterns of response were highly similar. In serum samples, the effective rates on days 1, 3, 5, 7 and 9 post-collection were 100.00%, 98.69%, 96.43%, 90.87%, and 84.14%, respectively, and in oral fluid samples, they were 100.00%, 99.79%, 98.38%, 86.95%, and 76.56%, respectively.

Conclusion: The best storage conditions for both blood and oral fluid samples were found to be 1-5 days, with no significant difference observed ($p>0.05$). Therefore, these findings suggest that samples can be stored at 4°C for up to 5 days without affecting the test results.