



PRRS X3 Oral Fluid Elisa Introduced at ISU-VDL

ISU-VDL researchers have developed methods to adapt the IDEXX HerdCheck X3® Elisa for PRRS to the oral fluid matrix. The PRRS X3 ORAL FLUID ELISA is interpreted exactly as the PRRS serum ELISA: S:P ratios ≥ 0.4 are considered positive. The test was estimated to be 94.7% sensitive and close to 100% specific at the ≥ 0.4 cutoff (Kittawornrat, Zimmerman et al., 2012). As shown in the example below, the PRRS X3 ORAL FLUID ELISA detects maternal antibody, as well as antibody produced in response to PRRSV infection.

Table 1. Example of PRRS X3 oral fluid ELISA S/P values over time from two 1100 head WTF barns

PRRS X3 oral fluid ELISA S/P values by week post placement										
WTF	Pen	0	2	4	6	8	10	12	14	16
Site 1	1	4.15	1.72	0.21	0.17	0.26	0.06	-0.02	0.01	0.02
	2	4.27	1.79	0.34	0.19	0.07	-0.02	0.02	0.00	0.30
	3	4.41	1.76	0.29	-0.02	0.08	0.02	0.00	0.00	-0.03
	4	3.29	1.59	0.27	0.10	0.05	-0.02	0.03	-0.01	0.02
	5	4.02	1.43	0.51	0.05	0.00	0.01	-0.01	0.04	0.02
	6	4.01	0.91	0.83	0.38	0.13	0.03	0.06	0.02	0.01
Site 2	1	-0.03	0.26	0.21	0.49 P	1.62	1.65	2.66	1.60	2.10
	2	3.65	0.75	0.11 P	1.46 P	1.00	1.24	3.27	0.93	2.26
	3	3.79	0.26	0.48 P	2.03	1.17	2.50	2.74	2.21	0.56
	4	4.39	0.55	0.02	0.24 P	2.42 P	2.27	2.87	1.94	2.23
	5	3.69	0.06	0.01	0.56	2.11	1.72	3.21	2.31	1.79
	6	3.71	0.08	0.09	0.00 P	3.16	2.13	3.28	1.25	1.44

P = indicates PRRSV PCR-positive sample

S:P ratios ≥ 0.4 are considered positive

Submission Guidelines:

- Oral fluid samples can be readily collected from adult and growing pigs
- Submit oral fluid samples in 5 ml Falcon™ snap-cap tubes
- Keep samples cold or frozen (ship in brucellosis boxes on ice-packs)
- PRRS X3 Oral Fluid Elisa Assay is a 2-day test, as methods require an overnight incubation

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More information is available on our website: www.vdpam.iastate.edu