

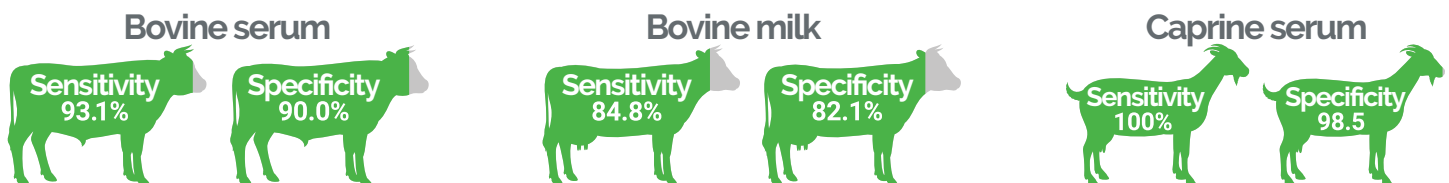
A versatile serology solution from VMRD for Johne's disease

Johne's disease is a chronic and highly contagious wasting disease of all ruminants caused by *Mycobacterium avium* ssp. *paratuberculosis* (MAP). Major clinical signs include weight loss, pipestream diarrhea, edema, decreased milk production, and eventually death. In the US, Johne's disease affects ~70% of dairy herds^[1], costing the industry **up to \$250 million per year** in production loss^[2]. An estimated 5-10% of beef herds are also affected^[3]. Currently, no effective vaccines or specific treatments are available, making proper diagnostic testing pivotal for management efforts.

[1] USDA. NAHMS - Dairy, 2008. [2] Ott SL, et al. Prev Vet Med, June 1999. [3] USDA. NAHMS - Beef, 1999.

Taking control of Johne's Disease with ELISA testing

- ✓ Cost-effective for assessing herd prevalence and risk
- ✓ Identifies target areas for focused management efforts
- ✓ Highly sensitive and specific for diagnosis of clinically affected animals



User-friendly qualities Speed and simplicity

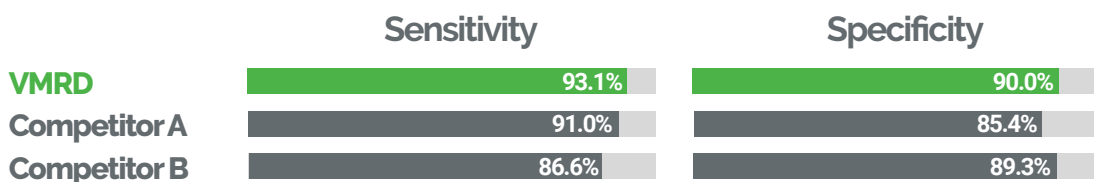
- ✓ **No pre-incubation** step for absorption
- ✓ Results in **<75 min**
- ✓ **Ready-to-use** conjugate and controls
- ✓ Straightforward reagent preparation
- ✓ Simple reagent identification by color
- ✓ Reliable reagent consistency – no precipitation



Accurate detection of Johne's disease in bovine serum

VMRD's *Mycobacterium paratuberculosis* (MAP) Antibody Test Kit was validated for detection of antibodies to MAP in 432 positive and 261 negative bovine serum samples. The status of each sample was confirmed by fecal PCR and culture.

	Tested positive	False negative	Tested negative	False positive
VMRD	402	30	235	26
Competitor A	393	39	223	38
Competitor B	374	58	233	28
	Confirmed positive: 432		Confirmed negative: 261	



User-friendly qualities Speed and simplicity

- ✓ User friendly
- ✓ Simplified workflow
- ✓ Quick turnaround
- ✓ **Validated** for bovine serum and milk
- ✓ USDA-licensed
- ✓ Effective for herd management

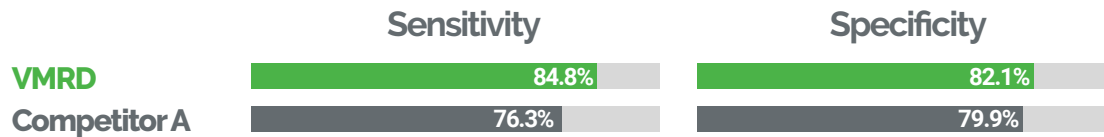


Accurate detection of Johne's Disease in bovine milk

VMRD's *Mycobacterium paratuberculosis* (MAP) Antibody Test Kit was validated for detection of antibodies to MAP in 59 positive and 224 negative bovine milk samples. The status of each sample was confirmed by culture of paired fecal samples.

	Tested positive	False negative	Tested negative	False positive
VMRD	50	9	184	40
Competitor A	45	12 + 2*	179	41 + 4*
	Confirmed positive: 59		Confirmed negative: 224	

* number of suspicious results



User-friendly qualities Speed and simplicity

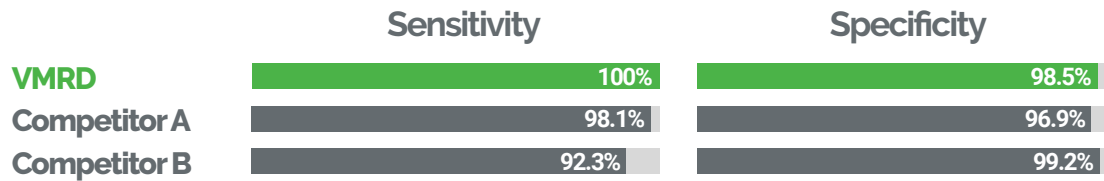
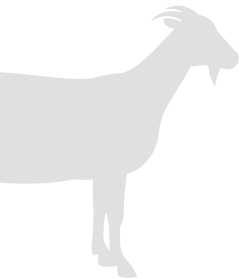
- ✓ User friendly
- ✓ Simplified workflow
- ✓ Quick turnaround
- ✓ **Validated** for bovine serum and milk
- ✓ USDA-licensed
- ✓ Effective for herd management



Accurate detection of Johne's disease in goat serum

VMRD's *Mycobacterium paratuberculosis* (MAP) Antibody Test Kit was evaluated for detection of antibodies to MAP in 52 positive and 130 negative goat serum samples. The negative status was confirmed by consensus fecal culture and fecal PCR. The positive status of animals was confirmed by at least one of the tests: fecal culture, fecal PCR or necropsy.

	Tested positive	False negative	Tested negative	False positive
VMRD	52	0	128	2
Competitor A	51	1	126	4
Competitor B	48	4	129	1
	Confirmed positive: 52		Confirmed negative: 130	



User-friendly qualities Speed and simplicity

- ✓ User friendly
- ✓ Simplified workflow
- ✓ Quick turnaround
- ✓ **Validated** for goat serum
- ✓ Effective for herd management

