TECHNICAL INFO: ***MYCOPLASMA BOVIS* SERODIAGNOSTIC TEST FOR MILK**

Method / Test type	**ELISA / Qualitative**
Sample	**Milk in sterile container without additives**
Sample volume	**4 ml**
Min. volume accepted	**2 ml**
Sample collection	**Collect milk using normal process – pour off required sample volume into clean sterile container suitable for shipping.**
Shipping	**Ship frozen or refrigerated, for next-day delivery. Frozen is recommended.**
Stability	**30 days at -20°C (Frozen); OR 7 days at 4°C (Refrigerated)**
Rejection criteria	**Sample that is not milk.** **Clearly contaminated sample – bacterial, fungal, foreign objects.** **Sample arriving outside of stability.**
Reportable/Ref. range	**Positive or Negative. Negative is normal.**
Reporting time	**3 days (from lab receipt)**
Significance	***Mycoplasma bovis* was 1st isolated in US cattle in 1961 and is currently identified as an important, and one of most frequently isolated *Mycoplasma* spp. associated with cattle disease worldwide. *Mycoplasma* infections are typically highly contagious (esp. in intensively raised cattle), difficult to resolve and cause mastitis, pneumonia, arthritis, and reproductive disorders.** **Accurate and rapid diagnosis is essential, and combining multiple diagnostics: ELISA & PCR, with clinical signs and herd history – provides robust disease status characterization of herd to avoid the sizable economic losses from mortality, treatment costs, and growth delays that can result from *Mycoplasma* disease outbreaks.**
Test specifics	**Sandwich ELISA: 96-well plate is coated with recombinant *M. bovis* protein, if milk sample contains specific anti-*M.bovis* immunoglobulins (Igs) they bind to the recombinant *M.bovis* protein and the amount (titer) of specific anti-*M.bovis* Igs bound are determined by secondary binding of IgG-specific antibody conjugated to peroxidase, used to catalyze a colorimetric reaction (with TMB) to produce blue color at OD450nm. Sample result is based on Sample coefficient** result to the provided positive and negative sample.** ****((OD sample – OD negative) / (OD positive – OD negative)) * 100** **Sample is reported as: Negative <37% coefficient** **Positive = or > 37% coefficient**

See Parker et al. (2018) A review of *Mycoplasma* diagnostics in cattle. – provided on request