

Abortion/Stillbirth – Examination and tissue collection of an aborted fetus should be done as soon after delivery as possible because fetal tissues are often already decomposing at delivery. Placenta is extremely important and even small pieces can be diagnostic. Do not freeze but sample in field when prompt delivery to the diagnostic lab is not possible. Collecting serum samples from dam and cohorts may be result in diagnostic information if vaccination history is provided. A recommended list of initial testing for common pathogens is provided. A list of additional tests for less common pathogens, for other test methods or for referral testing is also provided.

Recommended Initial Testing:

Test Name	Recommended Samples	In-state Price*	Details	Lab/Section/Test Schedule	Turn Around Time
Necropsy	Freshly aborted fetus and placenta. Do not freeze.	\$75.00 (includes disposal fee)	Placenta is extremely important; even small pieces should be submitted. Additional testing is determined by veterinarian and tests done at NCVCLS are included in necropsy fee.	All/Necropsy/M-F	3-21 days
Aerobic Culture (antibiotic susceptibility upon request)	One or more of: Placenta, lung, abomasal contents	\$17.00/sample	Pieces of tissue at least 1" thick and in individual and labeled containers.	Rollins/Bacti/M-F	3-5 days
<i>Listeria</i> culture	One or more of: Placenta, lung, abomasal contents	\$14.00/sample or pool	Pieces of tissue at least 1" thick and in individual and labeled containers. Can request to pool abomasal contents and lung.	Rollins/Bacti/M-F	5 days -12 weeks
<i>Salmonella</i> culture (antibiotic susceptibility upon request)	One or more of: Placenta, lung, abomasal contents	\$14.00/sample or pool	Pieces of tissue at least 1" thick and in individual and labeled containers. Can request to pool abomasal contents and lung.	Rollins/Bacti/M-F	3-5 days
<i>Neospora caninum</i> ELISA	Dam's serum (minimum 1 ml)	\$6.00/sample	Detects antibodies but may not be the cause of fetal death. Detection of organism in formalin fixed tissue via IHC is definitive.	Rollins/Sero/M-F	1-2 days
Viral isolation (VI)	One or more of: Fresh lung, liver, spleen, placenta	\$30.00/test	Infectious Bovine Rhinotracheitis Virus (IBR), Bovine Viral Diarrhea Virus (BVDV). Individual and labeled containers. Samples will be pooled. Request both IBR and BVD VI.	Rollins/Viro/M-F	2-4 weeks
Histopathology/Field necropsy	Placenta, brain, heart, skeletal muscle, liver, lung, spleen, lymph node	\$45.00 for the first 4 slides. \$5 for every additional slide.	Adequate formalin fixation (10:1 – formalin:tissue) is critical. Tissue sections < ¼" thick. Fresh tissue testing is also recommended, see diagnostic plan list.	Rollins/Histo/M-F	2-3 days
Bovine viral diarrhea virus (BVDV) testing	See BVDV Testing Plan				

* Out-of-state submissions are charged at two times the in-state rate. See fee schedule for details.

A \$2.00 accession fee is applied to each case.

Bovine Abortion/Stillbirth Additional Testing:

Test Name	Recommended Samples	In-state Price*	Details	Lab/Section/Test Schedule	Turn Around Time
<i>Brucella</i> sp. culture	One or more of: Placenta, lung, abomasal contents	\$12.00/sample or pool	Pieces of tissue at least 1" thick and in individual and labeled containers.	Rollins/Bacti/M-F	10-14 days
<i>Campylobacter jejuni</i> culture	One or more of: Placenta, lung, abomasal contents	\$12.00/sample or pool	Pieces of tissue at least 1" thick and in individual and labeled containers. Can request to pool abomasal contents and lung.	Rollins/Bacti/M-F	3-7 days
<i>Campylobacter fetus</i> culture	One or more of: Placenta, lung, abomasal contents	\$12.00/sample or pool	Pieces of tissue at least 1" thick and in individual and labeled containers. Can request to pool abomasal contents and lung.	Rollins/Bacti/M-F	3-7 days
<i>Trichomonas</i> exam	Semen, prepucial scrapings or cervical mucus	\$12.00/sample	Submit in InPouch TF media.	Rollins/Bacti/M-F	Up to 6 days
<i>Listeria monocytogenes</i> Immunohistochemistry (IHC)	Formalin fixed placenta, tissue block, slide	\$45.00 for 1 slide, \$25.00 for each additional slide.	Placenta preferred, can be run using lung if placenta not available.	Rollins/IHC/T,Th	2 – 4 days
<i>Neospora caninum</i> Immunohistochemistry (IHC)	Formalin fixed tissue, tissue block, slide	\$45.00 for 1 slide, \$25.00 for each additional slide.	Confirms identity of organisms in tissue sections.	Rollins/IHC/T,Th	2 – 4 days
<i>Leptospira</i> sp. Immunohistochemistry (IHC)	Formalin fixed placenta, liver or kidney, tissue block, slide	\$45.00 for 1 slide, \$25.00 for each additional slide.	This primary antibody has been validated for <i>Leptospira interrogans</i> (incl serovars <i>canicola</i> , <i>grippityphosa</i> , <i>hardjo</i> , <i>icterohaemorrhagiae</i> , <i>pomona</i>). Useful for differentiating exposure and disease.	Rollins/IHC/T,Th	2 – 4 days
<i>Brucella abortus</i> BAPA	Dam's serum (minimum 1 ml)	\$1.25/sample	Detects antibodies to <i>Brucella</i> .	Rollins/Sero/M-F Western/M-F	1-2 days
Infectious bovine rhinotracheitis virus (IBR) VN	Dam's serum (minimum 1 ml)	\$6.75/sample	Detects antibodies to bovine herpesvirus type 1.	Rollins/Viro/M,F	3-5 days
<i>Leptospira</i> sp. MAT	Dam's Serum (minimum 1 ml)	\$12.25/sample	Detects antibodies to <i>L. canicola</i> , <i>grippityphosa</i> , <i>hardjo</i> , <i>icterohemorrhagiae</i> , <i>pomona</i>	Rollins/Sero/M-F	2-3 days

<i>Campylobacter fetus</i> PCR referral	One or more of the following: 1 g fresh placenta, lung, 1-2 mL stomach contents, 1-2 mL preputial wash, 1-2 mL cervical swab, 1-2 mL uterine wash, 1-2 g feces.	\$25.00/sample, pool, \$7.00 accession fee, and \$20 for shipping	<i>Referral</i> - Differentiation of <i>Campylobacter fetus</i> subsp <i>fetus</i> and <i>Campylobacter fetus</i> subsp <i>venerealis</i> by real time PCR. Moist swabs are preferred; it its recommended to add 1-2 drops of sterile saline to the swab and place in a sterile, leak-proof container (e.g. red top tube). Bacterial culture swabs submitted in bacterial culture media (gel, charcoal, etc.) are not suitable for PCR testing. Fresh samples provide the most accurate results.	Texas Medical Veterinary Diagnostic Laboratory	2-5 days
Vitamin A referral	10 grams fresh liver 2 ml serum (fetal)	\$45.00, \$7.00 accession fee, and \$20 for shipping	<i>Referral</i> – Remove serum from clot and ship in additive free transport tube. Keep sample out of light.	Texas Medical Veterinary Diagnostic Laboratory	3-10 days
Vitamin E referral	5 grams liver	\$46.00 – liver; Serum - \$40 and \$20 for shipping	<i>Referral</i>	Pennsylvania Animal Diagnostic Laboratory	10 days
Selenium referral	5 grams liver	\$39.00 and \$20 for shipping	<i>Referral</i>	Pennsylvania Animal Diagnostic Laboratory	10 days
Mineral screen (nutritional) referral	5-30 grams liver	\$62.00 and \$20 for shipping	<i>Referral</i> - calcium, cobalt, copper, iron, magnesium, manganese, molybdenum, selenium, zinc	Pennsylvania Animal Diagnostic Laboratory	5 days
Nitrate (ocular fluid)	0.5-1.0 ml fetal ocular fluid	In-house - \$0.00 Referral - \$49.00 and \$20 for shipping	Aqueous humor in additive free tube or whole eye. In-house testing with water-quality test strips for presumptive diagnosis of nitrate toxicity. Referral for ion chromatography quantification.	All/Necropsy/M-F Referral - Pennsylvania Animal Diagnostic Laboratory	1-2 day 5 days

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