
Instructions for Sample Collection / Shipping - Diagnostic Real-time PCR

Real-time PCR Research and Diagnostics Core Facility
University of California, Davis
School of Veterinary Medicine
1275 Med Science Dr
3110 Tupper Hall
Davis, CA 95616

Website: <https://pcrlab.vetmed.ucdavis.edu/>

Phone: 530.752.7991

Fax: 530.754.6862

Sample collection information:

Keep samples cool (refrigerator/ice pack) at all times to preserve DNA integrity and accuracy of qPCR testing

1. **Whole blood** - 2 ml EDTA blood (unspun, lavender top tube - LTT). ****DO NOT SEND SERUM FOR PCR****
2. **Swabs** (nasal/rectal/fecal/etc.) - synthetic swab (no cotton tipped swabs) snapped off into a red top tube (RTT or LTT). Avoid swabs with wooden applicators. Swabs from culturettes are acceptable, but please snap swab off into an empty RTT or LTT. Also, avoid putting swab back into media/gel. Ship dry - no culture media, viral transport media, or saline solution is necessary.
3. **Cerebrospinal fluid (CSF)** - ~0.5 ml in LTT or RTT. Sample should be less than three days old.
4. **Aqueous humor** - at least 0.5 ml in LTT or RTT.
5. **Tissue** - 25-100 mg of fresh or frozen tissue with no preservative. Formalin-fixed tissues must be fixed for less than 24 hours.
6. **Tracheal wash** - ~5 ml in any sterile, leak proof container.
7. **Joint tap** (synovial fluid) - at least 0.5 ml in LTT or RTT.
8. **Feces** - fresh as possible, no more than one fecal cup (~2 g).
9. **Urine** - ~5-10 ml in any sterile, leak proof container.
10. **Cavitary effusion** (thorax/abdomen) - at least 0.5 ml in LTT.
11. **Bacterial culture** - 2-3 bacterial colonies in saline solution.
12. **Paraffinized tissue** (FFPE) - three or four 20-24 micron scrolls. Tissue can not be fixed in formalin for more than 24 hours before paraffinization. Paraffin blocks may be submitted as well, but will not be returned to the submitter. Please note that results for FFPE samples will be delayed an extra 24 hours due to intricate processing techniques.

Packing/Shipping Instructions:

1. Write patient's full name on sample.
2. Include a completed **Sample Submission Form** (page 2) with each shipment.
3. Most samples fall under Biological Substance Category B - UN 3373. Below is a condensed version of the IATA (International Air Transport Association) regulations.
 - Samples must be shipped in a rigid container (i.e. cardboard or Styrofoam box)
 - Include an ice pack and absorbant material (no ice needed for fixed tissues)
 - Sample must be in a leak proof container.*A few cultures may be considered Biological Substance Category A - UN 2814 or UN 2900 and have more stringent shipping regulations. Please refer to IATA regulations.
4. **Ship overnight** (the laboratory is open Monday-Friday). Samples must be received by 11am PST for same day processing. Do not ship on Friday for Saturday delivery. Hold samples in the refrigerator overnight or over the weekend.
5. Use FedEx, UPS, or other express courier. ****DO NOT USE USPS**** as all packages are held at a central sorting facility on campus before distribution and will result in delay of receipt.

Shipping address:

Real-time PCR Research and Diagnostics Core Facility
1275 Med Science Dr
3110 Tupper Hall
Davis, CA 95616
Tel: 530.752.7991

Payment options upon receipt of invoice (mailed via USPS or emailed upon request):

1. Credit card (VISA, MasterCard, American Express, Discover)
2. Check (personal or business)



**Diagnostic Real-time PCR
Sample Submission Form**



Real-time PCR Research and Diagnostics Core Facility
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 1275 Med Science Dr
 3110 Tupper Hall
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<https://pcrlab.vetmed.ucdavis.edu/>

Phone: 530.752.7991
 FAX: 530.754.6862

Date: _____

Veterinarian: _____

Clinic or Hospital: _____

Address (billing): _____

Phone: _____

How would you like results reported? (check all that apply)

Fax: _____

Email: _____

	Patient #1	Patient #2 or Sample #2	Patient #3 or Sample #3
Patient's Name:			
Owner's Name:			
Species:			
Sample Type(s)*:			
Test(s) Requested:			
Clinical signs:			

**If you would like to combine (pool) multiple sample types from the same patient to save costs, please indicate in comments section below.*

Comments: _____

Biological samples submitted to the Real-time PCR Research and Diagnostics Core Facility may be used for teaching or research purposes consistent with the mission of the University.



FedEx Online Reduced Price Program* (optional) Enrollment Form

A negotiated contract between FedEx and the Real-time PCR Core Facility allows our clients to receive University bulk discounted pricing for FedEx Priority Overnight shipping. Join our FedEx reduced price program and **save up to 50% on shipping costs** (compared to standard listed rates) when sending packages from anywhere in the United States to the Core Facility! For example, shipping a 1 lb package Priority Overnight from the East Coast to the Core Facility costs about \$40.00, \$35.00 from the Midwest, and \$30.00 from the West Coast using our reduced price program (prices can vary depending on several factors- weight, fuel costs, pick up/drop off options, signature requirements, etc.)

Why enroll in the FedEx reduced price program?

- 1.) Enrollment is free and simple, just follow the three steps below!
- 2.) Using the online FedEx shipping website is an easy way to create shipments, and we provide detailed instructions to make it even easier!
- 3.) You pay nothing upfront for shipping. We will bill your clinic for any shipping charges when we bill you for our PCR services.
- 4.) Not only will you be able to use your online account to create shipments, but you can also print shipping labels, sign up to receive tracking notifications via email, schedule a pickup (or find the nearest drop off location), and view weekly/monthly shipping summaries.

Step 1 Fill out the contact information below:

Contact Person: _____

Clinic or Hospital: _____

Address (billing): _____

Phone: _____

FAX: _____

Email address: _____

(of contact person)

Step 2: FAX or email this Enrollment Form to the Real-time PCR Research and Diagnostics Core Facility at 530-754-6862.

Step 3: Within one business day we will email you your clinic's UserID, Password, and instructions so you can create shipments online anytime!

*** The FedEx reduced price program can only be used to ship packages to the Real-time PCR Core Facility. Abuse of the program by shipping elsewhere will lead to immediate deactivation.**

Abbreviation	Price	Bacteria (continued on next page)	Sample Type	Turnaround Time
bc:A.equuli	\$42.00	<i>Actinobacillus equuli</i>	Tracheal wash, placenta tissue, cervix swab, or uterine swab	Same day*
bc:Amy	\$42.00	<i>Amycolatopsis</i> spp	Placenta tissue	Same day*
bc:A.phago	\$42.00	<i>Anaplasma phagocytophilum</i>	Whole blood (LTT), tick, cavitory effusion, CSF, spleen tissue, or liver tissue	Same day*
bc:A.platys	\$42.00	<i>Anaplasma platys</i>	Whole blood (LTT) or tick	Same day*
bc:Bart	\$42.00	<i>Bartonella</i> spp (including <i>henselae</i>)	Whole blood (LTT) or spleen tissue	Same day*
bc:Bord	\$42.00	<i>Bordetella bronchiseptica</i>	Oropharyngeal swab or nasal swab	Same day*
bc:B.burg	\$42.00	<i>Borrelia burgdorferi</i> (Lyme Disease)	CSF, synovial fluid, skin biopsy is region of tick bite, urine, or tick	Same day*
bc:Chlam	\$42.00	<i>Chlamydomphila felis/psittaci</i>	Feline - nasal or conjunctiva swab. Avian - conjunctiva, cloaca, and choana swabs (please swab all three areas with one swab or with three separate swabs)	Same day*
bc:ChlamPN	\$42.00	<i>Chlamydomphila pneumoniae</i>	Bronchial wash, sputum, nasopharyngeal wash or swab, tracheal wash, heart, liver or spleen tissue	Same day*
bc:CDIA/B	\$42.00	<i>Clostridium difficile</i> toxins A and B	Feces, colon tissue, or bacterial isolate	Same day*
bc:C.perf	\$66.00	<i>Clostridium perfringens</i> antigen, alpha toxin (CPA), and beta toxin (CPB) - see below for additional toxins	Feces or colon tissue	Same day*
bc:C.perf(CPB2)	\$42.00	<i>Clostridium perfringens</i> beta2 toxin (CPB2) - \$15 to add on to bc:C.perf	Feces or colon tissue	Same day*
bc:C.perf(netF)	\$42.00	<i>Clostridium perfringens</i> cytotoxin (netF) - \$15 to add on to bc:C.perf	Feces or colon tissue	Same day*
bc:C.perf(CPE)	\$42.00	<i>Clostridium perfringens</i> enterotoxin (CPE) - \$15 to add on to bc:C.perf	Feces or colon tissue	Same day*
bc:CD PLP	\$42.00	<i>Corynebacterium pseudotuberculosis</i> (Pigeon Fever)	In order of preference: 1.) abscess swab or aspirate, 2.) skin biopsy, 3.) whole blood (LTT), or 4.) soil	Same day*
bc:Cross.equi	\$42.00	<i>Crossiella equi</i>	Placenta tissue	Same day*
bc:E.canis	\$42.00	<i>Ehrlichia canis</i>	Whole blood (LTT), tick, CSF, joint fluid, or liver tissue	Same day*
bc:E.chaff	\$42.00	<i>Ehrlichia chaffeensis</i>	Whole blood (LTT)	Same day*
bc:E.coli	\$42.00	<i>Escherichia coli</i> (FhuA gene)	Placenta tissue, cervix swab, uterine swab, bacterial isolate, or whole blood (LTT)	Same day*
bc:F.tul	\$42.00	<i>Francisella tularensis</i>	Oropharyngeal or conjunctiva swab, swab of lesion, skin biopsy, spleen, lung or lymph node tissue	Same day*
bc:K.pneu	\$42.00	<i>Klebsiella pneumoniae</i>	Placenta tissue, cervix swab, or uterine swab	Same day*
bc:L.intra	\$42.00	<i>Lawsonia intracellularis</i> qPCR	Feces, rectal swab, or intestinal tissue	Same day*
	\$20.00	<i>Lawsonia intracellularis</i> IPMA serology	Serum (RTT)	1-3 business days
bc:Lepto	1 sample: \$42.00 2 samples: \$70.00	<i>Leptospira</i> spp	Please submit both whole blood (LTT, early stages of infection) and urine (later stages of infection) if possible. Other acceptable sample types include: CSF, aqueous humor, kidney, liver, placenta, or fetal kidney tissues	Same day*
bc:L.mono	\$42.00	<i>Listeria monocytogenes</i>	CSF, feces, placenta, food, soil, whole blood (LTT)	Same day*
bc:MAC	\$42.00	<i>Mycobacterium avium</i> Complex	Feces, colon, spleen, bone marrow, lymph node, liver or kidney tissue	Same day*
bc:MTC	\$42.00	<i>Mycobacterium</i> spp	Sputum, nasal swab, lung, lymph node, liver or spleen tissues, bone marrow, skin biopsy, or food	Same day*
bc:M.felis	\$42.00	<i>Mycoplasma felis</i>	Nasal swab, throat swab, conjunctiva swab, nasal biopsy, or lung tissue	Same day*
bc:Dog small	\$42.00	<i>Mycoplasma haematoparvum</i>	Whole blood (LTT)	Same day*
bc:M.haemocanis	\$42.00	<i>Mycoplasma haemocanis</i>	Whole blood (LTT)	Same day*
bc:M.haemofelis	\$42.00	<i>Mycoplasma haemofelis</i>	Whole blood (LTT)	Same day*

Abbreviation	Price	Bacteria (continued)	Sample Type	Turnaround Time
bc:M.lamae	\$42.00	<i>Mycoplasma haemolamae</i>	Whole blood (LTT)	Same day*
bc:Cat small	\$42.00	<i>Mycoplasma haemominutum</i>	Whole blood (LTT)	Same day*
bc:M.ovis	\$42.00	<i>Mycoplasma ovis</i>	Whole blood (LTT)	Same day*
bc:M.tur	\$42.00	<i>Mycoplasma turicensis</i>	Whole blood (LTT)	Same day*
bc:N.hel	\$42.00	<i>Neorickettsia helminthoeca</i> (Salmon poisoning)	Whole blood (LTT), lymph node aspirate, feces, spleen or liver tissues, or food	Same day*
bc:PHF	1 sample: \$42.00 2 samples: \$70.00	<i>Neorickettsia risticii</i> (Potomac Horse Fever) Both samples must be from same animal	Please submit both feces and whole blood (LTT) if possible. Additional options include: Intestine or colon tissue	Same day*
bc:P.aggl	\$42.00	<i>Pantoea agglomerans</i>	Placenta tissue, cervix swab, or uterine swab	Same day*
bc:P.aeru	\$42.00	<i>Pseudomonas aeruginosa</i>	Placenta tissue, cervix swab, uterine swab, urine, or ocular swab	Same day*
bc:R.equi	\$42.00	<i>Rhodococcus equi</i> (vapA gene)	Tracheal wash or feces	Same day*
bc:rickrick	\$42.00	<i>Rickettsia</i> spp (including <i>Rickettsia rickettsii</i>)	Whole blood (LTT) or tick	Same day*
bc:SalmA	\$42.00	<i>Salmonella</i> spp	Feces, GI tissue, or environmental swabs	Testing on fresh sample (same day*), testing on enrichment (36 hours)
bc:MecA	\$42.00	<i>Staphylococcus aureus</i> with methicillin resistance gene MecA (MRSA)	Culture, swab of infection site, urine or nasopharyngeal swab	Same day*
bc:S.equimilis	\$42.00	<i>Streptococcus dysgalactiae</i> subsp <i>equisimilis</i>	Placenta tissue, cervix swab, or uterine swab	Same day*
bc:S.equi	\$42.00	<i>Streptococcus equi</i> subsp <i>equi</i> (quantitative load). If positive, then vaccine vs. non-vaccine differentiation is available upon request for an additional \$40.	Guttural pouch lavage, nasal or nasopharyngeal swab or wash, tracheal wash, or abscess drainage	Same day*
bc:S.zoo	\$42.00	<i>Streptococcus equi</i> subsp <i>zoepidemicus</i>	Transtracheal wash, abscess drainage, placenta tissue, or uterine swab	Same day*

Abbreviation	Price	Fungi	Sample Type	Turnaround Time
fu:A.fumi	\$42.00	<i>Aspergillus fumigatus</i>	Lung tissue, skin biopsy, other fluids, tissues, or swabs of infection site	Same day*
fu:C.albicans	\$42.00	<i>Candida albicans</i>	Skin biopsy at site of lesion or other fluids, tissues, or swabs at infection site	Same day*
fu:C.immitis	\$42.00	<i>Coccidioides immitis/posadasii</i> (Valley Fever)	Lung tissue, joint fluid, other fluids, tissues, or swabs at infection site	Same day*
fu:C.neo	\$42.00	<i>Cryptococcus neoformans</i> v. <i>neoformans</i>	Biopsy, swab, or aspirate of lesion, CSF, nasopharyngeal swab, or lung tissue	Same day*
fu:M.orni	\$42.00	<i>Macrorhabdus ornithogaster</i>	Feces or fecal swab	Same day*
fu:M.canis	\$42.00	<i>Microsporium canis</i>	Lesion biopsy or lesion swab	Same day*
fu:S.schen	\$42.00	<i>Sporothrix schenckii</i>	Skin biopsy, swab of lesion, synovial fluid, CSF, or soil	Same day*
fu:T.ment	\$42.00	<i>Trichophyton mentagrophytes</i>	Lesion biopsy or lesion swab	Same day*

Abbreviation	Price	Parasites	Sample Type	Turnaround Time
pc:A.canton	\$42.00	<i>Angiostrongylus cantonensis</i>	CSF or central nervous system tissue	Same day*
pc:Babesia spp	\$42.00	<i>Babesia</i> spp (including <i>canis</i> , <i>divergens</i> , <i>gibsoni</i> , <i>microti</i>)	Whole blood (LTT) or tick	Same day*
pc.B.conradae	\$42.00	<i>Babesia conradae</i>	Whole blood (LTT), tick, or spleen tissue	Same day*
pc:Crypto spp	\$42.00	<i>Cryptosporidium</i> spp	Feces or GI tissue	Same day*
pc:C.felis	\$42.00	<i>Cryptosporidium felis</i>	Feces or GI tissue	Same day*
pc:Giardia	\$42.00	<i>Giardia</i> spp (including <i>lamblia</i> and <i>intestinalis</i>)	Feces or small intestine tissue	Same day*
pc:Leish	\$42.00	<i>Leishmania</i> spp	Whole blood (LTT)	Same day*
pc:Neosp	\$42.00	<i>Neospora hughesi/caninum</i>	CSF, aborted material, brain or heart tissue	Same day*
pc:S.neuro	\$42.00	<i>Sarcocystis neurona</i>	CSF or brain tissue	Same day*
pc:Tox18	\$42.00	<i>Toxoplasma gondii</i>	CSF, feces, brain, placenta, mammary tissue, or whole blood (LTT)	Same day*
pc:T.foetus	\$42.00	<i>Tritrichomonas foetus</i>	Testing for felines only: Feces, fecal swab or GI tissue	Same day*

Abbreviation	Price	Virus	Sample Type	Turnaround Time
v:Betav	\$58.00	Betahodavirus	Fresh or frozen neural, brain, or eye tissue	Same day*
v:BLV	\$42.00	Bovine Leukemia Virus	Whole blood (LTT) or milk	Same day*
v:BPV	\$59.00	Bovine Papillomavirus 1 and 2	Skin biopsy, sarcoid swab, or sarcoid biopsy	Same day*
v:CAV2	\$42.00	Canine Adenovirus 2	Nasal swab, tracheal wash, ocular swab, or lung tissue	Same day*
v:CRCVS	\$58.00	Canine (Respiratory) Coronavirus	Nasal swab, tracheal wash, or lung tissue	Same day*
v:CDV	\$58.00	Canine Distemper Virus	CSF, whole blood (LTT), ocular or nasal swab, brain tissue, or urine	Same day*
v:CHV	\$42.00	Canine Herpesvirus	Nasal or pharyngeal swab, ocular swab, vaginal swab, nasal or lung tissue	Same day*
v:COPV	\$42.00	Canine Oral Papillomavirus	Lesion biopsy or lesion swab	Same day*
v:CPIV	\$58.00	Canine Parainfluenza Virus	Nasal or pharyngeal swab, tracheal wash, lung or nasal tissue	Same day*
v:CPV1	\$42.00	Canine Parvovirus 1 (Minute Virus)	Feces or GI tissue	Same day*
v:CParV2	\$42.00	Canine Parvovirus 2	Feces or GI tissue	Same day*
v:CEV	\$42.00	Carp edema virus	Gill biopsy, gill swab, kidney, liver, or spleen tissue	Same day*
v:CypHV1	\$42.00	Cyprinid (carp) herpesvirus 1	Gill biopsy, gill swab, kidney, liver, or spleen tissue	Same day*
v:EAV	\$58.00	Equine Arteritis Virus (EVA)	Nasal or conjunctival swab, nasopharyngeal swab, whole blood (LTT), lung tissue, semen, or placenta tissue	Same day*
v:ECV	\$58.00	Equine Coronavirus	Feces	Same day*
v:EHV1	1 sample \$64.00 2 samples \$80.00	Equine Herpesvirus 1 (quantitative load) and genotype (neuropathogenic and non-neuropathogenic) Both samples must be from same animal	Please submit both nasal swab and whole blood samples if possible. If not, a nasal swab is more desirable. Other sample types include: CSF, lung, bone marrow, liver, placenta tissue, or uterine swab	Same day*
EHV1 RNA	Please inquire	Equine Herpesvirus 1 transcript; presence or absence of active replication Only available as an add-on test when patient tests EHV1 positive		
v:EHV2	\$42.00	Equine Herpesvirus 2 (quantitative load) - Due to a high prevalence of EHV2 in the horse population, this test should be requested for research purposes only. A positive PCR result does not necessarily confirm EHV2 as the disease causing agent.	Nasal swab or wash, nasopharyngeal swab, (trans)tracheal wash, BAL, lung tissue, or whole blood (LTT)	Same day*
v:EHV3	\$42.00	Equine Herpesvirus 3	Vaginal swab, penile swab, or biopsy of sore	Same day*
v:EHV4	\$42.00	Equine Herpesvirus 4	Nasal swab or wash, nasopharyngeal swab, (trans)tracheal wash, or lung tissue	Same day*
v:EHV5	\$42.00	Equine Herpesvirus 5 (quantitative load) - Due to a high prevalence of EHV5 in the horse population, this test should be requested for research purposes only. A positive PCR result does not necessarily confirm EHV5 as the disease causing agent.	BAL, lung tissue, nasal swab or wash, nasopharyngeal swab, (trans)tracheal wash, or whole blood (LTT)	Same day*
v:ERAV	\$58.00	Equine Rhinitis A Virus (additional \$15 for ERBV add-on)	Nasal swab or wash, nasopharyngeal swab, (trans)tracheal wash, lung tissue, urine	Same day*
v:ERBV	\$58.00	Equine Rhinitis B Virus (additional \$15 for ERAV add-on)	Nasal swab or wash, nasopharyngeal swab, (trans)tracheal wash, or lung tissue	Same day*
v:Rota	\$58.00	Equine Rotavirus	Feces or rectal swab	Same day*
v:FCV	\$58.00	Feline Calicivirus	Nasal swab, oropharyngeal swab, nasal biopsy, or lung tissue	Same day*
v:FCoV	\$58.00	Feline Coronavirus (FCoV) - associated with FIP	Peritoneal fluid, feces, whole blood (LTT), CSF, ocular swab, spleen, lung or kidney tissue	Same day*
v:FHV1	\$42.00	Feline Herpesvirus 1	Nasal swab, pharyngeal swab, oral swab, or ocular (cornea) swab	Same day*
v:FIV	\$59.00	Feline Immunodeficiency Virus (subtypes A,B,C,F)	Whole blood (LTT)	Same day*
v:FeLV	\$42.00	Feline Leukemia Virus (FeLV) - exogenous form	Whole blood (LTT), CSF, bone marrow, or tissue	Same day*
v:FPLV	\$42.00	Feline Parvovirus (Panleukopenia)	Feces, whole blood (LTT), or lymphatic tissues	Same day*
v:Flu H3N8	\$58.00	Influenza A (H3N8) - If initial testing for Flu H3N8 is positive, Clade 1 vs. Clade 2 differentiation is available upon request for an additional \$40.	Nasal swab or wash, nasopharyngeal swab, (trans)tracheal wash, or lung tissue	Same day*
v:Flu H3N2	\$58.00	Influenza A (H3N2) - \$15 to add on influenza A H3N8	Nasal swab or wash, nasopharyngeal swab, (trans)tracheal wash, or lung tissue	Same day*
v:KHV	\$42.00	Koi Herpesvirus	Gill biopsy, gill swab, kidney, liver, or spleen tissue	Same day*
v:SVCV	\$58.00	Spring viremia of carp virus	Gill biopsy, gill swab, kidney, liver, or spleen tissue	Same day*
v:WNV	\$58.00	West Nile Virus	Avian: conjunctiva, cloaca, and choana swabs (please swab all three areas with one swab or with three separate swabs). Other options for all species include: CSF, brain, spinal cord, liver, kidney or spleen tissue	Same day*

Abbreviation	Price	EQUINE	Sample Type	Turnaround Time
Neuro:Equine	\$98.00	Equine Neurological Panel: Equine herpesvirus 1 (quantitative load and genotyping), <i>Borrelia burgdorferi</i> , West Nile virus, <i>Sarcocystis neurona</i> , <i>Neospora hughesi/caninum</i>	CSF or tissue from the central nervous system	Same day*
Resp:Equine	\$98.00	Equine Respiratory Panel: Equine herpesvirus 1 (quantitative load and genotyping), equine influenza A (H3N8), equine herpesvirus 4, <i>Streptococcus equi</i> subsp <i>equi</i> , equine rhinitis A virus, and equine rhinitis B virus	Nasal swab or wash, tracheal wash, pharyngeal swab or wash, or lung tissue	Same day*
Airway:Equine	\$97.00	Equine Lower Airway Panel: <i>Streptococcus equi</i> subsp <i>zooepidemicus</i> , <i>Actinobacillus equuli</i> , <i>Klebsiella pneumoniae</i> , <i>Rhodococcus equi</i> , <i>Corynebacterium pseudotuberculosis</i> , <i>Coccidioides immitis/posadasii</i> , <i>Aspergillus fumigatus</i>	Transtracheal wash (LTT or RTT) or bronchoalveolar lavage (LTT or RTT)	Same day*
GI/Diarrhea:Standard	\$98.00	Equine GI/Diarrhea Standard Panel: <i>Clostridium difficile</i> toxins A and B, equine coronavirus, <i>Lawsonia intracellularis</i> , <i>Neorickettsia risticii</i> , <i>Salmonella</i> spp (<i>Salmonella</i> spp testing will be performed on fresh feces and 24-hour selenite enriched feces)	Feces or rectal swab	All testing on fresh sample (same day*), <i>Salmonella</i> testing on enrichment (36 hours)
GI/Diarrhea:Foal/Neonate	\$145.00	Foal/Neonate GI/Diarrhea Panel: <i>Clostridium difficile</i> toxins A and B, equine coronavirus, <i>Lawsonia intracellularis</i> , <i>Salmonella</i> spp (<i>Salmonella</i> spp testing will be performed on fresh feces and 24-hour selenite enriched feces), <i>Cryptosporidium</i> spp, equine rotavirus, <i>Rhodococcus equi</i> (vapA gene), <i>Clostridium perfringens</i> (antigen and toxins CPA, CPB, CPB2, netF, CPE)	Feces or rectal swab	All testing on fresh sample (same day*), <i>Salmonella</i> testing on enrichment (36 hours)
Vector-Borne:Equine	\$80.00	Equine Vector-borne Panel: <i>Anaplasma phagocytophilum</i> , <i>Bartonella</i> spp, <i>Rickettsia</i> spp, <i>Borrelia burgdorferi</i> **WHOLE BLOOD NOT RECOMMENDED FOR <i>B.burgdorferi</i> (see comments below)**	Tick or whole blood (LTT)**	Same day*
Abortion:Equine Standard	\$155.00	Standard Equine Abortion Panel: <i>Amycolatopsis</i> spp, <i>Crossiella equi</i> , <i>Escherichia coli</i> (FhuA gene), Equine herpesvirus 1 (quantitative load and genotype), <i>Pantoea agglomerans</i> , <i>Klebsiella pneumoniae</i> , <i>Leptospira</i> spp, Panfungal (universal fungal assay), <i>Pseudomonas aeruginosa</i> , <i>Streptococcus dysgalactiae</i> subsp <i>equisimilis</i> , <i>Streptococcus equi</i> subsp <i>zooepidemicus</i>	Uterine swab, placenta tissue, and/or fetal tissue (stomach fluid, liver, lung)	Same day*
Abortion:Equine 2	\$48 (if added on to Standard Panel), \$95 (if ordered alone)	Supplementary Equine Abortion Panel: <i>Actinobacillus equuli</i> , equine arteritis virus, <i>Salmonella</i> spp, <i>Staphylococcus aureus</i> (MRSA)	Uterine swab, placenta tissue, and/or fetal tissue (stomach fluid, liver, lung)	Same day*

Abbreviation	Price	CANINE	Sample Type	Turnaround Time
Neuro:Canine 1	\$95.00	Canine Neurological I Panel: Canine distemper virus, <i>Toxoplasma gondii</i> , <i>Neospora hughesi/caninum</i> , <i>Borrelia burgdorferi</i> **WHOLE BLOOD NOT RECOMMENDED FOR <i>B.burgdorferi</i> and <i>N. hughesi/caninum</i> (see comments below)	CSF and/or whole blood (LTT)**	Same day*
Neuro:Canine 2	\$127.00	Canine Neurological II Panel: Canine distemper virus, West Nile virus, <i>Neospora hughesi/caninum</i> , <i>Toxoplasma gondii</i> , <i>Anaplasma phagocytophilum</i> , <i>Rickettsia</i> spp, <i>Ehrlichia canis</i> , <i>Borrelia burgdorferi</i> **WHOLE BLOOD NOT RECOMMENDED FOR <i>B.burgdorferi</i> and <i>N. hughesi/caninum</i> (see comments below)	CSF and/or whole blood (LTT)**	Same day*
Resp:Canine	\$101.00	Canine Respiratory Panel: Influenza A virus (H3N8), influenza A virus (H3N2), <i>Bordetella bronchiseptica</i> , canine adenovirus 2, canine distemper virus, canine herpesvirus, canine parainfluenza virus, canine respiratory coronavirus, <i>Streptococcus equi</i> subsp <i>zooepidemicus</i>	Nasal swab or wash, tracheal wash, pharyngeal swab or wash, or lung tissue	Same day*
GI/Diarrhea:Canine	\$93.00	Canine GI/Diarrhea Panel: <i>Clostridium difficile</i> toxins A and B, <i>Cryptosporidium</i> spp, <i>Salmonella</i> spp, <i>Giardia</i> spp, canine parvovirus 2 (<i>Salmonella</i> spp testing will be performed on fresh feces and 24-hour selenite enriched feces)	Feces or rectal swab	All testing on fresh sample (same day*), <i>Salmonella</i> testing on enrichment (36 hours)
Vector-Borne:Canine	\$102.00	Canine Vector-borne Disease Panel: <i>Anaplasma phagocytophilum</i> , <i>Anaplasma platys</i> , <i>Bartonella</i> spp, <i>Ehrlichia canis</i> , <i>Rickettsia</i> spp, <i>Borrelia burgdorferi</i> , <i>Babesia</i> spp, <i>Mycoplasma haemocanis</i> **WHOLE BLOOD NOT RECOMMENDED FOR <i>B.burgdorferi</i> (see comments below)	Tick or whole blood (LTT)**	Same day*
Blood Donor:Canine	\$137.00	Canine Blood Donor Panel: <i>Anaplasma phagocytophilum</i> , <i>Anaplasma platys</i> , <i>Ehrlichia canis</i> , <i>Rickettsia</i> spp, <i>Leishmania</i> spp, <i>Babesia</i> spp, <i>Babesia conradae</i> , <i>Bartonella</i> spp, <i>Mycoplasma haemocanis</i> , <i>Mycoplasma haematoparvum</i>	Whole blood (LTT)	Same day*

Abbreviation	Price	FELINE (continued on next page)	Sample Type	Turnaround Time
Neuro:Feline	\$95.00	Feline Neurological Panel: <i>Toxoplasma gondii</i> , feline coronavirus, feline leukemia virus	CSF and/or whole blood (LTT)	Same day*
Resp:Feline	\$98.00	Feline Respiratory Panel: <i>Bordetella bronchiseptica</i> , <i>Chlamydomphila felis/psittaci</i> , feline calicivirus, feline herpesvirus 1, <i>Mycoplasma felis</i>	Nasal swab or wash, pharyngeal swab or wash, or lung tissue	Same day*

Abbreviation	Price	FELINE (continued)	Sample Type	Turnaround Time
GI/Diarrhea:Feline	\$127.00	Feline GI/Diarrhea Panel: <i>Clostridium difficile</i> toxins A and B, <i>Cryptosporidium</i> spp, <i>Salmonella</i> spp, <i>Giardia</i> spp, feline coronavirus, feline parvovirus (Panleukopenia), canine parvovirus 2, <i>Tritrichomonas foetus</i> (<i>Salmonella</i> spp testing will be performed on fresh feces and 24-hour selenite enriched feces)	Feces or rectal swab	All testing on fresh sample (same day*), <i>Salmonella</i> testing on enrichment (36 hours)
Vector-Borne:Feline	\$97.00	Feline Vector-borne Disease Panel: <i>Anaplasma phagocytophilum</i> , <i>Anaplasma platys</i> , <i>Bartonella</i> spp, <i>Borrelia burgdorferi</i> , <i>Rickettsia</i> spp, <i>Mycoplasma haemofelis</i> , <i>Mycoplasma haemominutum</i> **WHOLE BLOOD NOT RECOMMENDED FOR <i>B.burgdorferi</i> (see comments below)**	Tick or whole blood (LTT)**	Same day*
Blood Donor:Feline	\$101.00	Feline Blood Donor Panel: <i>Mycoplasma haemofelis</i> , <i>Mycoplasma haemominutum</i> , <i>Mycoplasma turicensis</i> , feline leukemia virus, feline coronavirus, <i>Bartonella</i> spp, feline immunodeficiency virus	Whole blood (LTT)	Same day*
Cyto:Feline	\$93.00	Feline Cytopenia Panel: Feline leukemia virus, feline parvovirus (panleukopenia), canine parvovirus 2, <i>Bartonella</i> spp, feline immunodeficiency virus	Whole blood (LTT)	Same day*
FHM Panel	\$64.00	Feline Hemotropic Mycoplasma Panel: <i>Mycoplasma haemofelis</i> (Haemobartonella), <i>Mycoplasma haemominutum</i> , <i>Mycoplasma turicensis</i>	Whole blood (LTT)	Same day*
Conjunctivitis:Feline	\$95.00	Feline Conjunctivitis Panel: Feline herpesvirus 1, <i>Chlamydomytila felis/psittaci</i> , feline calicivirus	Ocular swab, conjunctiva swab, or corneal swab	Same day*
Uveitis:Feline	\$99.00	Feline Ocular Uveitis Panel: <i>Bartonella</i> spp, <i>Toxoplasma gondii</i> , feline herpesvirus 1, feline leukemia virus, feline coronavirus, feline immunodeficiency virus	Aqueous humor	Same day*

Abbreviation	Price	FUNGUS	Sample Type	Turnaround Time
Breakout:Fungus	\$93.00	Fungus Breakout Panel: <i>Aspergillus fumigatus</i> , <i>Candida albicans</i> , <i>Cryptococcus neoformans v. neoformans</i> , <i>Microsporium canis</i> , <i>Trichophyton mentagrophytes</i> , <i>Coccidioides immitis/posadasii</i>	Biopsy, swab, or exudate of lesion, or CSF	Same day*

Abbreviation	Price	FISH (CARP)	Sample Type	Turnaround Time
Carp Panel	\$95.00	Carp Panel: carp edema virus, cyprinid (carp) herpesvirus 1, spring viremia of carp virus, koi herpesvirus	Biopsy of skin or gill, tissues from kidney, liver, and/or spleen	Same day*

Abbreviation	Price	BIOSECURITY and INFECTIOUS DISEASE CONTROL (10 samples or more must be submitted at one time to qualify for discounted pricing)	Sample Type	Turnaround Time
IDC:Resp Equine	\$44.00	IDC Respiratory Panel: Equine herpesvirus 1 (quantitative load and genotype), equine influenza A (H3N8), equine herpesvirus 4, <i>Streptococcus equi</i> subsp <i>equi</i>	Nasal swab or wash, tracheal wash, pharyngeal swab or wash	Same day*
IDC:GI Equine	\$40.00	IDC GI/Diarrhea Panel: <i>Salmonella</i> spp, <i>Clostridium difficile</i> toxin A and B. Fresh samples will be tested for <i>Clostridium difficile</i> before undergoing a 20-hour selenite enrichment step and testing for <i>Salmonella</i> spp	Feces, rectal swabs, or environmental swabs	<i>C.diff</i> testing on fresh sample (same day*), <i>Salmonella</i> testing on enrichment (36 hours)
bc:SalmA IDC	\$23.00	<i>Salmonella</i> spp - Any fresh samples will undergo a 20-hour selenite enrichment step before qPCR testing.	Fresh or post-selenite enriched feces, fecal swabs, gastric reflux, bedding, surface swabs/washes/gauze	<i>Salmonella</i> testing on enrichment (36 hours)
IDC:EHV-1	\$27.00	Equine herpesvirus 1 (quantitative load and genotype)	Nasal swab or wash, tracheal wash, pharyngeal swab or wash	Same day *

***Samples must be received by 11am PST for same day turnaround time (by 5pm PST). Samples failing quality control will require an additional 24-hours for retesting. Any formalin fixed paraffin embedded (FFPE) tissues take an additional 24-hours due to intricate processing techniques.**

****Whole blood is not recommended for the detection of *Borrelia burgdorferi*, *Neospora hughesi/caninum*, and West Nile virus via qPCR. By the time clinical signs manifest, these pathogens no longer, or infrequently, circulate in the blood stream. A negative PCR result in blood does not rule-out infection by these pathogens.**

*****Additional Pricing Information:**

Add-on tests are performed at a reduced rate: Full price for the most expensive test/panel, plus \$15 per additional test or half price per additional panel. Testing must be performed on one sample to receive price break.

Example 1: Tests requested: Equine Herpesvirus 1, Equine Herpesvirus 4, and Influenza H3N8 virus on one nasal swab
Charges: EHV1 (\$64) + EHV4 (\$15) + EIV (\$15) = \$94 total

Example 2: Tests requested: Canine Neurological II Panel and Fungus Breakout Panel on one CSF sample
Charges: Neuro:Canine 2 (\$127) + Fungus:Breakout (\$93/2) = \$173.50 total