



Arizona Veterinary  
Diagnostic Laboratory

# USER GUIDE

Tests and Fees

Shipping Information

Sample Submission Information

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# WELCOME!

Welcome to the Arizona Veterinary Diagnostic Laboratory service guide. We are proud that you have selected our team of dedicated professionals to serve your diagnostic needs.

## MISSION STATEMENT

The **AzVDL** provides accurate and timely diagnostic assistance in animal health to veterinarians, animal owners, university researchers, and state and federal agencies. The submission of specimens through practicing veterinarians is encouraged, but specimens are also accepted from owners. **AzVDL** works closely with the office of the State Veterinarian, USDA A.V.I.C., Arizona Game and Fish Department, and other state and federal agencies. This laboratory serves a diverse client base with submissions of wild animals, exotic zoo animals, companion animals, horses, and food producing animals.

**The Arizona Veterinary Diagnostic Laboratory** is part of the College of Veterinary Medicine at The University of Arizona. The **AzVDL** is accredited for all species by the American Association of Veterinary Laboratory Diagnosticians and is a member of the United States Department of Agriculture's National Animal Health Laboratory Network.

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# DIRECTORY OF PERSONNEL

## LEADERSHIP:

Dr. Yan Zhang, D.V.M., PhD, DACVM  
Dr. Emily Janovyak D.V.M., MPH, DACVPM

Director  
Assistant Director

## DOCTORS:

Katherine Bauer, D.V.M., DACVP  
Alene Pohly, D.V.M., DACVP  
Patrick Maes PhD

Veterinary Pathologist  
Veterinary Pathologist  
Scientist

## Assisting Pathologists:

Sharon Dial, DVM, PhD, DACVP  
Jessica Elbert, DVM, DACVP  
Marjorie Kuipers, DVM, MS, PhD DACVP  
Latticha Pluemhathaikij, DVM, DACVP  
Lisa Viesselmann, DVM, MS, DACVP

## QUALITY OFFICE:

W. Reid Robertson

Quality Manager

## ADMINISTRATION AND OPERATION:

Darcy Kennedy  
Aurora Astorga  
Kristen Wirth

Business Manager  
Admin Operations Pro III  
Admin Support Assistant III

## **DIRECTORY OF PERSONNEL (Continued)**

### **MICROBIOLOGY (BACTERIOLOGY | PARASITOLOGY | SEROLOGY | VIROLOGY):**

Tarah Gutierrez

Veterinary Lab Technician III

### **CYTOLOGY:**

Angela Walsh  
Grace E. Davis

Veterinary Lab Technician III  
Research Associate Fellow

### **HISTOPATHOLOGY:**

Gabriella Briseño  
Maia Kolipoulos

Histotechnologist III  
Histotechnologist II

### **MOLECULAR DIAGNOSTICS:**

Zachary Desmond  
Bianca Reilly  
Hailey Gavigan

Molecular Technician  
Molecular Technician  
Research Associate Fellow

### **NECROPSY:**

Breanna G. Salt

Veterinary Lab Technician II

### **SEROLOGY/VIROLOGY**

Dawn M. Bueschel

Veterinary Lab Technician III

### **SPECIMEN ACCESSIONING AND PROCESSING:**

Angela Walsh

Receiving Coordinator

## **BUSINESS HOURS: Monday through Friday – 8 A.M. to 5 P.M.**

**After Hours Service:** A specimen refrigerator, located on the north side of the laboratory, is available between 6 AM and 8 PM seven days a week including holidays

The AZVDL no longer offers after-hours assistance with specimen drop-off. This has become necessary due to the retirement of key staff members and issues with on-site housing of university employees for the purpose of after-hour services. We recommend you explore local options for storage and preservation of carcasses until they can be delivered to AZVDL during regular business hours. Only samples and small bodies can be dropped off in the specimen refrigerator located on the north side of the laboratory (gate open between 6am-8pm).

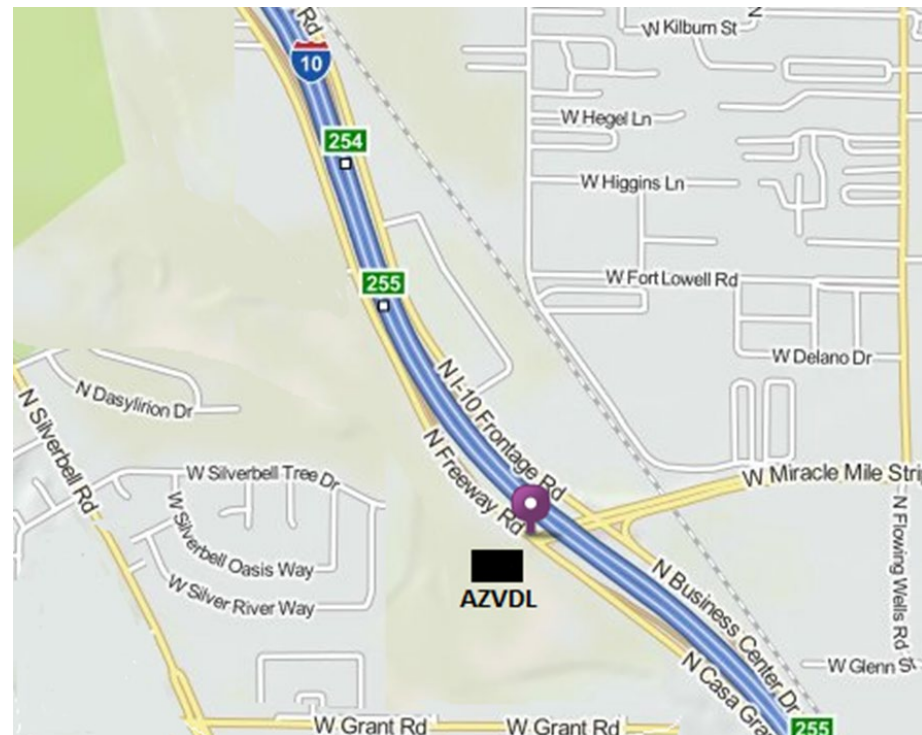
If you are a veterinarian or a livestock producer with an emergency, A PATHOLOGIST is available by phone between 8 A.M. and 8 P.M. at (520) 909-2324 to assist you.

### **Driving directions:**

Take Tucson Interstate 10 to the Miracle Mile Exit #255.

Travel approximately 1/4 mile on the southbound Frontage road between Miracle Mile and Grant Rd, where the hill ends and the road begins to flatten out.

Turn west onto the farm at the signed entrance.



# AzVDL POLICIES AND PROCEDURES

## General Policies:

1. Fees are subject to change without notice.
2. \$10.00 minimum submission fee.
3. \$35.00 shipping and handling fee will be assessed for shipping specimens to referral laboratories.
4. Results can be reported by email, fax or mail.

## Specimen retention:

Specimens received without adequate information to proceed with testing will be retained in the laboratory for no more than 7 business days. The laboratory will attempt to reach the client to obtain information required to proceed with testing. If information is not obtained within 7 business days, the specimen will be destroyed.

## Billing (Policy and Procedure):

Upon completion and reporting of final reports invoices are generated. Samples referred to outside laboratories are billed for any additional direct costs incurred, plus a \$35.00 flat shipping and handling fee (courier service charge may also apply).

NOTE: Owners submitting specimens must prepay for services. Case results cannot be released until payment is received.

At the end of each month, AzVDL billing personnel prepare statements listing all invoices not paid by the last day of the previous month for all clients with a balance due. The invoice/statement report is a combined report that includes case#, owner, all tests performed for each case and invoice number. The AZVDL no longer mail individual invoices. Please contact the laboratory via email at [CVM-azvdl@arizona.edu](mailto:CVM-azvdl@arizona.edu) or call (520) 621-2356 to make special arrangements if individual invoices are needed.

Payment is due upon presentation of statement. Payment in the form of cash, check, or credit card is accepted. Please make checks payable to the University of Arizona Veterinary Diagnostic Laboratory.

## Policy on client confidentiality:

1. Information pertaining to client submissions, whether in the form of written, printed, electronic, or faxed documents, or verbal communication, will not be given to any non-laboratory personnel other than the submitting veterinarian, or the owner.
2. Exceptions to this are as follows:
  - To fulfill governmental mandates
  - In the case of warrant, subpoena, or other court order
  - In the case of lawful public records request under Arizona's Public Records Law
  - With written authorization from the owner or submitting veterinarian

## Referral Laboratories:

Tests not performed at AzVDL are forwarded to an AAVLD accredited laboratory whenever possible. A \$35.00 shipping and handling fee is assessed. The specimen is shipped overnight to the referral laboratory, and the results are reported in our laboratory system. Turnaround time is determined by the referral laboratory and fees are subject to change.

## Subcontracted work:

In the event of extenuating circumstances, tests normally performed by the AzVDL may be shipped to another accredited laboratory. A list of accredited laboratories used by AzVDL is available upon request.

## Reporting Test Results:

If multiple tests are requested and the results entered at different times, the diagnostician will produce an intermediate report containing all results received to date. Intermediate reports are faxed and/or e-mailed to the submitter if a fax number and/or e-mail address is provided.

When test results are completed, a report titled "Final Report" will be produced and the report is faxed and/or e-mailed to the client if a fax number or e-mail address is provided. Phone report is available to clients with no fax and/or e-mail service. The original report will be mailed to the client with an invoice for services rendered.

Suggested turnaround times for all tests are listed in the test schedule. These times are estimates only and may be affected by the number of samples, laboratory workload, staffing, and availability of reagents and supplies. Reports are sent directly to submitting veterinarian if the clinic is responsible for the charges. However, it is laboratory policy that test results will be reported to the owner if we are requested to bill the owner directly (a copy of the report is sent to the veterinarian if requested by the owner).

### **Requests for second opinion:**

When calling to request samples or slides to be sent out to another laboratory for a second opinion, please have ready the AzVDL accession number of the case in question and the address where the slides are to be sent.

We will produce duplicate slides for this process. You will be charged \$15.50 per duplicate H&E slide plus shipping charges. The reviewing laboratory will charge you separately for their services. The AzVDL provides second opinions on histopathology and cytology performed at other laboratories. Please have the laboratory send a complete set of duplicate H&E stained slides or cytology slides for the case.

In many instances it proves helpful to perform special stains to aid in the diagnosis. Ask the laboratory to forward the paraffin blocks to us for this purpose. We will return the unused portions of the blocks after our testing is completed. Some laboratories are reluctant to send off the blocks and instead may suggest sending unstained slides. This is less than ideal, but acceptable. Ask that a minimum of three unstained slides from each block be sent along with the H&E specimens. Fax or e-mail us a completed submission form for the second opinion and indicate where the slides are being sent from and approximately when to expect them. We will bill you for this service. You will likely be charged by the sending laboratory for the cost of producing the slides and shipping.

### **Payment Terms:**

Payment is due at time of submission for owners and new clients. Payment is due upon presentation of statement for established clients.

Accounts past due over 30 days will be assessed a finance charge of 1.5%, or a minimum of \$3.00, of the past due balance. Collection notice is mailed to submitters with a delinquent balance. Any deviation in payment terms must be agreed to in writing. AZVDL has the right to ask for payment in advance if the established payment terms are not adhered to. AZVDL reserves the right to cease all work if you do not pay your invoices(s) over 30 days past due.

Accounts greater than 90 days past due will be referred to a collection agency. You will be responsible for collection costs; your balance will increase by 33 1/3% and your account will be reported to the Credit Bureau.

Dishonored checks will be assessed a \$25.00 service charge. A dishonored check is a check payment returned by the bank to The University of Arizona, unpaid, for any reason. The University will notify you in writing of a Dishonored Check. You have fourteen (14) days from the date of this notice to pay the total amount due. Until paid in full, you will be assessed a monthly Past Due Balance Charge. Unpaid dishonored checks may be referred to a Collection Agency. If it is deemed necessary to refer the account to an Agency, the debtor (account holder) will be responsible for all collection costs and legal fees. Per Arizona Revised Statute (ARS 12-671), you may be assessed twice the amount of the check or \$50.00, whichever is greater, in addition to the \$25.00 Service Charge. All payments for dishonored checks must be made to the University of Arizona Veterinary Diagnostic Laboratory. Only payments made by Money Order, Cashier's Check, or Cash will be accepted. Cash payments must be made in person at the Arizona Veterinary Diagnostic Laboratory. Questions regarding your account can be directed to the Accounts Receivable department.

## **PACKAGING AND SHIPPING INSTRUCTIONS**

**All diagnostic specimens MUST be packed in compliance with IATA Packing Instructions 650. The SHIPPER is responsible for compliance with these packaging instructions. This information is provided as a service to AzVDL clients and couriers. It is limited to the shipping of veterinary medical specimens for diagnostic testing. Although we work to ensure that the information provided here is current and accurate, it is ultimately the client's responsibility to perform and verify the training of their employees. To assist:**

### **3. Liquids:**

**Primary receptacle – must** be leak-proof and must not contain more than 500 ml. Absorbent material – between the primary receptacle and the secondary packaging, must be capable of absorbing all liquid in primary receptacle.

**Secondary packaging – must** be leak-proof, must be capable of withstanding an internal pressure producing a pressure differential of not less than 95 kPa in the range of –40 deg F to 130 deg F without leaking. Itemized list of contents – between primary and secondary packaging.

**Outer packaging – must not** contain more than 4 L.

### **4. Solids:**

**Primary receptacle – must** be sift-proof and must not contain more than 500 g.

**Secondary packaging – must** be leak-proof. Itemized list of contents – between primary and secondary packaging.  
**Outer Packaging – must not** contain more than 4 kg.

**5. Each completed package:**

**Must** be capable of successfully passing a drop test from a height of approximately 4 ft.

**Must** be labeled with the following **“BIOLOGICAL SUBSTANCE – CATEGORY B – UN 3373”** and **“Diagnostic Specimen packed in compliance with IATA Packing Instructions 650”**.

**Must** be at least 4 inches in the smallest overall external dimension.

Compliant packaging is available from a variety of vendors. We have had good results with Saf-T-Pak ([www.saftpak.com](http://www.saftpak.com)) products.

Multiple specimens (such as fresh tissues) from a field necropsy must be individually packed (PRIMARY RECEPTACLE) to prevent cross contamination; and then enclosed in a secondary leak proof container with absorbent material before being placed in a leak-proof outer container. Containers with screw-top lids are preferred packages for tissue and feces. Plastic vials with screw-top lids for blood, serum, and fluid transport are preferred as the primary containers for these specimens. If protected from breakage, single-use vacuum blood-collection tubes may also be satisfactory. Guarded culture swabs may be shipped in original packaging that is placed in an appropriate primary receptacle.

Formalin-fixed tissues from an individual animal may be pooled in a single container unless it is clinically relevant to have findings for each, reported separately. If possible, the specimens should be no more than 0.5 cm thick (about the thickness of five dimes) for adequate fixation.

If the specimen needs to be kept cool (i.e., blood, serum, etc.) please use the shipping containers designed specifically for refrigerated specimens. Please enclose the submission form in a plastic bag and place the submission form in the package between the PRIMARY RECEPTACLE and the SECONDARY PACKAGING.

## **Labeling:**

Each specimen must be labeled with pertinent information that should include animal number, herd number, lot number, animal name, source, body site, and identify the specimen. This is especially true when samples from multiple animals are submitted.

## How do I ship specimens to AzVDL?

**Tucson and surrounding area:** To arrange for a courier pick-up call the laboratory before 12:00 P.M. for same-day sample pick-up service.

**NOTE:** STAT Cytology and STAT Equine Infectious Anemia submissions must be received before 2:00 PM for same day results. Courier arrives to our facility around 4pm; STAT samples received via courier will be reported the next business day.

**Some exceptions apply:** Green Valley, Nogales, Sierra Vista, Benson, Bisbee, Douglas, Safford, and Wilcox, please call the laboratory for pre-printed UPS label to be sent to you; your account will be charged our discounted UPS price.

### **\*EXCEPTIONS:**

- To arrange delivery of cadavers, call the laboratory. We contract this service with a private courier, and additional charges may apply.
- Due to the rising cost of Courier Service, submissions requesting only tests referred to outside laboratories will be billed a \$20 surcharge.

### **The greater Phoenix area:**

Small specimens such as cultures, cytology, biopsy, etc. are best shipped via UPS or FedEx. Please call the laboratory (520) 621-2356 for pre-printed UPS label to be sent to you; your account will be charged our discounted UPS price.

To arrange delivery of small cadavers, call the laboratory. We contract this service with a private courier, and the charges will be added to your bill. Charges typically range from \$75-\$125.

### **Using AzVDL shipping services for your shipments:**

You can make significant savings using United Parcel Service (UPS) by charging your shipments to our account. If you would like a UPS pre-printed waybill to be sent to you, please call the laboratory at (520) 621-2356. We will add the shipping charges to our service fees.

### **Statewide:**

Small cadavers and specimens should be shipped UPS/FedEx Priority Overnight. If using AzVDL UPS shipping account, we will add the cost to your bill. For larger cadavers please contact local ground-based couriers.

***NOTE: Do not ship on Fridays, as we are not open on the weekend and will not receive the package until Monday afternoon.***

## INSTRUCTIONS TO COMPLETE SUBMISSION FORM

1. The client submitting the specimen to the laboratory should date and sign in the “Specimen Relinquished by” field.
2. Please check appropriate billing box ( ‘BILL TO’ check box is **REQUIRED**). The final report will be faxed, emailed, or mailed to the address specified (unless otherwise noted). Specify contact information if reporting to second party, please include the contact’s email.
3. Enter animal information, animal ID, Species and Breed. Be as detailed as possible and clinical history.
4. **TEST REQUEST(S):**  
Please label each container with clinic name, owner, and patient name. Specify the type of specimens submitted such as slides, fresh or formalin fixed tissues, swab, fluid, etc. Specify the source of the specimen such as liver, spleen, mass, etc.

### HISTOPATHOLOGY AND CYTOLOGY:

- Please specify lesion description such as source of specimen, size, margins, etc.
- STAT is available for cytology cases; same day reporting \$30 additional fee applies and sample must be received no later than 2:00PM.

### NECROPSY:

- Specify if sample submitted is for a **complete necropsy** or **Rabies only**
- **SAVE BODY:** Please specify if the body needs to be saved for a cremation company, a “Save Body” fee will be added to the Necropsy fee. **\*\*\*Bodies are released to cremation companies ONLY\*\*\***.  
Clinic or Owner **MUST** make prior arrangements directly with a cremation company. AZVDL has no long-term storage and will hold a body for 14 days, after which our normal disposal procedures will be followed.
- Specify if POSSIBLE LITIGATION and/or Rabies Suspect (rabies cases require a Rabies Suspect Form, please contact the laboratory).

### OTHER:

- Specify test(s) for bacteriology, Molecular Procedures, Serology, referral sendouts, etc. in page 2 of submission form
  - STAT service available for EIA. Same day results, sample must be received at AZVDL no later than 2:00pm. A \$30 additional fee per sample will apply.
5. Multiple animal submission form available on page 2. Please specify Animal ID, breed, specimen type and test(s) requests.  
FOR TRITRICHOMONAS PCR requests please complete “[Trichomoniasis Test Submission Form](#)”



## MICROBIOLOGY:

Proper selection and preservation of samples for bacteriologic analysis is essential for accurate and efficient diagnosis. Postmortem autolysis of tissues is the most common cause of interference with bacteriologic diagnosis. Tissues should be very fresh, collected aseptically and immediately refrigerated; and sent by overnight transport. When prompt submission is not possible, freezing is acceptable for most types of bacteriologic tests, although they are often unsuitable for other microbiologic or pathologic testing. A second cause of interference is collection of samples too late in the course of the disease or after the initiation of antibiotic therapy. Submit generous samples of tissue, exudates, or feces. Avoid the use of swabs when fresh tissues or exudates are available. The prompt collection of specimens with minimal exposure to air is particularly important for anaerobic culture. Tissue samples should be submitted in separate containers and properly identified. Adequate refrigeration in insulated containers with sufficient numbers of ice packs is essential for shipping specimens. Call the laboratory (520) 621-2356 for any questions on specimen collection, the availability of a test, or to inform us of the impending shipping of large numbers of samples.

### Acceptable samples for Bacteriological or Fungal Culture are:

- **All** bacteriological cultures: Specimens should be shipped overnight. Specimens for most bacterial cultures can be frozen, but freezing will interfere with histopathologic examination, and sometimes with other microbiologic tests.
- **Aerobic** cultures: Tissues, fluids, or exudates are preferred. If using swabs, submit swabs with aerobic bacterial transport medium: Stuart or Amies (with or without charcoal).

Test Description	Test #	Price	Specimen Preferred	Turnaround Time
AEROBIC CULTURE (Antibiotic sensitivity additional charge per isolate)	B103	\$33.00	Culture swab; exudate; tissue	4-5 working days (+1 day - sensitivity)
ANAEROBIC CULTURE	B104	\$33.00	Culture swab; exudates; tissue	4 working days
ANTIBIOTIC SENSITIVITY      *cost per isolate*	B101	\$25.00	Live Organism	5 working days

FUNGAL CULTURE	B106	\$33.00	Tissue; skin scrapings; hair	3-4 weeks
DERMATOPHYTE FUNGAL CULTURE	B106b	\$33.00	Tissue; skin scrapings; hair	3-4 weeks
SALMONELLA CULTURE	B126	\$33.00	Feces, tissue, swab, eggs, 200 g feed	4 working days
MALDI-TOF BACTERIOLOGY IDENTIFICATION	B103c	\$21.00	Pure isolated colony plate	2 working days
MALDI-TOF FUNGI IDENTIFICATION	B106d	\$26.00	Pure isolated colony plate	2 weeks
ACID FAST STAIN	B109	\$17.00	Tissue, impression smears	2 working days
GRAM STAIN	B111	\$17.00	Feces, tissue, or impression smears	1-2 working days

- **Anaerobic** cultures: Submit tissues, fluids, or exudates whenever possible. Avoid excessive exposure to oxygen. Swabs should be used with anaerobic bacterial transport medium (Port-A-Cul or similar). Swabs with Stuart or Amies medium are not suitable for the isolation of strict anaerobes.

**Microbiology:**

\*\* Requests for specific antibiotic panels can be made. Call and speak to the Microbiology Section Head or leave clear, legible instructions on the submission sheet

## CYTOLOGY:

1. Protect cytology slides from formalin fumes as exposure results in artifactual distortion of the cells and renders the slides nondiagnostic in most instances.
2. Cerebrospinal fluid must be submitted in red-top tubes. The anticoagulant in lavender-tops dilutes the sample and will adversely affect the cell count and protein values.
3. Fluids for fluid analysis must be submitted in lavender-top tubes to prevent clotting. Cerebrospinal fluid is the exception (see #2 above).
4. **STAT cytology** samples must be received at the laboratory before 2 P.M. for same-day results. We recommend that you do not use the courier system for STATS, as they often do not arrive at the lab until after the cutoff. Consider having one of your staff deliver the samples directly to AzVDL. **STAT SERVICE** \$30 Additional charge.

Test Description	Test #	Price	Specimen Preferred	Turnaround Time
CYTOLOGY	H106	\$72.00	Slides	2 working days
CYTOLOGY (ADDITIONAL SITE)	H106B	\$34.00	Slides	2 working days
CYTOLOGY (2ND OPINION)	H108	\$56.00	Slides	2 working days
<b>FLUID ANALYSIS:</b>				
CYTOLOGY FLUID ANALYSIS	H110	\$82.00	LTT, all fluids except CSF	2 working days
CYTOLOGY FA (ADDITIONAL SITE)	H110A	\$34.00	LTT, all fluids except CSF	
CSF FLUID ANALYSIS	H111	\$93.00	RTT	2-3 working days

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## HISTOPATHOLOGY:

**Biopsy charges:** We perform complete margins evaluation on every biopsy specimen. The number of slides required to do this is directly related to the size of the specimen. Therefore, the costs increase with increasing specimen size. The following guidelines are provided to assist you in correctly estimating biopsy charges for clients.

1. Measure the biopsy specimen at the greatest dimension. Specimens less than 2 cm are \$80.00; if between 2 cm and 5 cm the charge is \$88.00. For every additional 2 cm in size add an additional \$29.00. When multiple biopsies of different sites are submitted use the largest specimen to calculate the cost of the first site.  
**EXCEPTION:** Mandibulectomies, maxillectomies, intestinal resections, ear resections, and amputations are all charged \$127.00 regardless of size.
2. Additional sites: Each additional site is charged at a lesser rate. Measure the size of the specimen. The charge is \$34.00 for an additional site <2 cm and additional 2 cm in size \$29.00.
3. Skin biopsies from the same animal are considered one site \$80.00. This does not apply to multiple skin masses (see #1).
4. Biopsies of the gastrointestinal tract are charged separately for each site. For example: Endoscopic biopsies of stomach, small intestine, and colon would be charged as \$80.00 for the first site plus \$34.00 + \$34.00 (two additional sites) = \$148.00 total charge.
5. Nasal biopsies often include specimens from the right and left nasal cavities. They are considered one site and charged \$80.00.
6. There are no additional charges for pathologist-assisted grossing of specimens.

**Histopathology on field necropsy specimen charges:** Histopathology on field or clinic necropsy specimens is charged \$78.00 for the first tissue and \$22.00 for each additional tissue. There is a maximum charge of \$125.00 per animal for commercial livestock.

**Submission of large specimens in formalin:** Specimens in containers with large volumes of formalin can leak and create hazards for package handlers. When submitting these specimens, consider allowing the specimen to fix completely before shipping.

Drain off the formalin and package the specimens in a sealed container with gauze squares soaked in formalin. There will be sufficient formalin in the gauze to keep the specimen moist during shipping. This will limit the potential for leakage.

**Fixation and Decalcification requires 6-10 additional days on histopathology procedures.**

Test Description	Test #	Price	Specimen Preferred	Turnaround Time
SURGICAL BIOPSY (FIRST SITE <2 CM)	H101A	\$80.00	Formalin-fixed tissues	3 working days, decals 6-10 days
SURGICAL BIOPSY (EACH ADDITIONAL SITE <2 CM)	H101B	\$34.00	Formalin-fixed tissues	3 working days, decals 6-10 days
SURGICAL BIOPSY (FIRST SITE 2-5 CM)	H102A	\$88.00	Formalin-fixed tissues	3 working days, decals 6-10 days
SURGICAL BIOPSY (EACH ADDITIONAL SITE 2-5 CM)	H102B	\$53.00	Formalin-fixed tissues	3 working days, decals 6-10 days
SURGICAL BIOPSY (6-8 CM)	H102C	\$109.00	Formalin-fixed tissues	3 working days, decals 6-10 days
SURGICAL BIOPSY (9-11 CM)	H102D	\$130.00	Formalin-fixed tissues	3 working days, decals 6-10 days
SURGICAL BIOPSY (ADDITIONAL 2 CM IN SIZE)	H102E	\$29.00	Formalin-fixed tissues	3 working days, decals 6-10 days
SURGICAL BIOPSY (limb amputations, maxillectomies, and mandibulectomies)	H102F	\$127.00	Formalin-fixed tissues	5 working days, decals 6-10 days
DERMATOPATHOLOGY	H101C	\$88.00	Formalin-fixed tissues	4-5 working days
For Dermatopathology submissions, please complete the "Dermatopathology Submission form" available at <a href="#">AZVDL website</a>				
HISTOPATHOLOGY 2ND OPINION	H114	\$60.00	Slides, paraffin blocks	3 working days
<b>HISTOPATHOLOGY (NECROPSY TISSUES):</b>				
HISTOPATHOLOGY, NECROPSY TISSUES (FIRST TISSUE)	H103A	\$78.00	Formalin-fixed tissues	3-4 working days, decals 6-10 days

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HISTOPATHOLOGY, NECROPSY TISSUES (EACH ADDITIONAL TISSUE)	H103B	\$22.00	Formalin-fixed tissues	3-4 working days, decals 6-10 days
HISTOPATHOLOGY, NECROPSY TISSUES MAXIMUM CHARGE – COMMERCIAL LIVESTOCK ONLY	H103C	125.00	Formalin-fixed tissues, stained slides, paraffin blocks	4-5 working days, decals -10 days
<b>EQUINE THERIO SERVICES:</b>				
EQUINE ENDOMETRIAL UTERINE BIOPSY	H101E	\$80.00	Tissues in formalin or in Bouin's solution	4-6 days
EQUINE REPRODUCTION PANEL (Endometrial biopsy and cytology; and Aerobic culture)	H101P	\$150.00	Tissues in formalin or in Bouin's solution	4-7 days
<b>ADDITIONAL FEES:</b>				
EXTRA SLIDES ONLY	H105	\$15.50		
SPECIAL STAINS PER STAIN	H104	\$18.00		2-3 working days, decals 4-7 days

## IMMUNOHISTOCHEMISTRY:

All immunohistochemistry testing is referred to outside laboratories. Please call AzVDL for test availability, specimen requirements, turnaround time and pricing. \$35.00 shipping and handling fee will be added to the test price.

## MOLECULAR DIAGNOSTICS:

### Foreign animal disease tests for USDA and State Veterinarian:

Test Description	Test #	Price	Specimen Preferred	Turnaround Time
AI REALTIME PCR	-	\$50.00	Cloacal or tracheal swab, tissue	-
AVIAN PARAMYXOVIRUS-1 REALTIME PCR	-	\$50.00	Tracheal swab, tissue.	-
ASF, CSF, FMD REALTIME PCR (\$50 each)	-	\$50.00	Whole blood, swab, tissue (spleen, tonsil, lymph node)	-

### Molecular Diagnostic Tests:

Test Description	Test #	Price	Specimen Preferred	Turnaround Time
BOVINE CORONAVIRUS PCR	M172	\$35	Feces, fecal swab, intestine	2-3 working days
BOVINE <i>CRYPTOSPORIDIUM</i> PCR	M244	\$35	Feces, fecal swab, intestine	2-3 working days
BOVINE ROTAVIRUS PCR	M143	\$35	Feces, fecal swab, intestine	2-3 working days
BOVINE ENTERIC TRIPLEX PCR (Coronavirus, <i>Cryptosporidium</i> , and Rotavirus PCRs)	M303	\$50.00	Feces, fecal swab, intestine	2-3 working days
BOVINE HERPESVIRUS TYPE-1 (IBR/BHV-1) PCR	M101	\$35.00	1-2mL EDTA whole blood, semen, transtracheal wash, or bronchoalveolar lavage (BAL)	2-3 working days
BOVINE PARAINFLUENZA-3 VIRUS PCR	M173a	\$35.00	Nasopharyngeal swab, nasal swab, 1-2mL transtracheal wash, or bronchoalveolar lavage, 1gram fresh or frozen lung or trachea	2-3 working days
BOVINE VIRAL DIARRHEA PCR	M106	\$35.00	Nasopharyngeal swab, ear notch	2-3 working days
BVD PCR POOL (up to 20 samples per pool)		\$50.00	1-2mL EDTA whole blood, semen, transtracheal wash, or bronchoalveolar lavage (BAL)	

BOVINE RESP. SYNCYTIAL VIRUS PCR	M168	\$35.00	Nasopharyngeal swab, nasal swab, 1-2mL transtracheal wash, or bronchoalveolar lavage, 1gram fresh or frozen lung or trachea	2-3 working days
BLUETONGUE VIRUS PCR	M105	\$40.00	1-2 mL semen, 1-2 mL EDTA whole blood or 1 gram fresh spleen or lymph node	2-3 working days
<i>CAMPYLOBACTER FETUS - VENERIALIS</i> PCR	M236	\$35.00	1-2 mL preputial wash, 1-2 mL cervical swab, 1-2g feces, 1 g fresh tissue (fetus, placenta, lung)	2-3 working days
CANINE INFLUENZA VIRUS PCR	M242	\$35.00	Tracheal or nasal swab, 1g fresh tracheal or lung, 1-2 mL tracheal wash	2-3 working days
CANINE HERPESVIRUS PCR	M109	\$35.00	Fresh tissue, nasal swab, tracheal swab, pharyngeal swab, conjunctival swab.	2-3 working days
CANINE PARVOVIRUS PCR	M110	\$35.00	Fresh feces, 1 mL intestinal content	2-3 working days
<i>CAXIELLA BURNETII</i> (Q-FEVER) PCR	M187	\$35.00	Live animal: Serum, whole blood, CSF, BAL Dead animal: Spleen, whole blood Abortion: Placenta/fetal, spleen, liver, lung and milk	2-3 working days
<i>CLAMYDIACEAE</i> FAMILY PCR	M131	\$35.00	Conjunctival, nasal , pharyngeal, choanal, cloacal or tracheal swabs; placenta; feces; fresh tissue.	2-3 working days
ELEPHANT ENDOTHELIO TROPIC HERPESVIRUSES (EEHV) PCR	M248	\$75.00	1-2mL EDTA whole blood, trunk wash	2-3 working days
EQUINE HERPESVIRUS TYPE-1 PCR	M113A	\$35.00	1-2mL EDTA whole blood, nasal swab, transtracheal wash, or bronchoalveolar lavage	2-3 working days
EQUINE HERPESVIRUS TYPE 1 & 4 PCR	M113	\$45.00	1-2mL EDTA whole blood, nasal swab, transtracheal wash, or bronchoalveolar lavage	2-3 working days
EQUINE HEPATITIS PANEL (EqHV AND EqPV-H)	M265	\$40.00	1-2mL EDTA whole blood, liver	2-3 working days
EQUINE INFLUENZA VIRUS PCR	M156	\$35.00	Nasopharyngeal swab in viral transport media	2-3 working days
EPIZOOTIC HEMORRHAGIC DISEASE PCR	M111	\$40.00	1-2 mL semen, 1-2 mL EDTA whole blood or 1 gram fresh spleen or lymph node	2-3 working days
EHD and BTV MULTIPLEX rt-PCR	M194	\$60.00	1-2 mL semen, 1-2 mL EDTA whole blood or 1 gram fresh spleen or lymph node	2-3 working days
FELINE PARVOVIRUS PCR	M118	\$35.00	Fresh feces, 1 mL intestinal content, swab in transport media	2-3 working days

LEPTOSPIRA SPP PCR	M140A	\$35.00	Live animal: whole blood in EDTA tubes, urine Post-mortem: tissues – kidney, liver or placenta	2-3 working days
MALIGNANT CATARRHAL FEVER PCR	M121	\$35.00	3 mL LTT or other unclotted blood.	2-3 working days
MYCOPLASMA BOVIS PCR			Call the laboratory for information	
MYCOPLASMA BOVIGENITALIUM PCR			Call the laboratory for information	
MYCOPLASMA BOVIS AND BOVIGENITALIUM			Call the laboratory for information	
NEOSPORA CANINUM PCR	M228	\$35.00	Fresh/frozen placenta, fetal tissue (brain, liver, heart)	2-3 working days
SARS CORONAVIRUS-2 (COVID-19) rt-PCR	M163	\$70.00	Nasal swab, oropharyngeal swab, rectal swab, 1-2g feces	2-3 working days
Strangles - <i>STREPTOCOCCUS EQUI</i> PCR	M158	\$35.00	1-3 mL pharyngeal wash, nasal secretion, nasopharyngeal swab	2-3 working days
<i>TRITRICHOMONAS</i> & <i>CAMPYLOBACTER</i> DUPLEX	M143b	\$50.00	In-Pouch TF system (room temperature) 3 ml LTT or PBS Tube or transit tube	2-3 working days
<i>TRITRICHOMONAS FOETUS</i> PCR	M143	\$23.00	In-Pouch TF system (room temperature) 3 ml LTT or PBS Tube or transit tube	2-3 working days
<i>TRITRICHOMONAS</i> PCR (Pooled 1-5 Samples)		\$42.00		
<p><b>* See <i>Tritrichomonas foetus</i> testing guidelines for specimen handling and transport on next page.</b>  USE TRICHOMONIASIS TEST SUBMISSION FORM available on <a href="#">AZVDL website</a></p>				
TOXOPLASMA GONDII PCR	M246	\$35.00	Placenta, fetus, and fresh tissue (brain).	2-3 working days
WEST NILE VIRUS PCR	M125	\$35.00	Live animal: whole blood (preferably EDTA) Dead animal: fresh tissue – brain, heart, kidney, liver, spleen. In addition, for birds: swabs can be submitted (oropharyngeal, cloacal, or choanal).	2-3 working days
<b>MOLECULAR PANELS:</b>				
<b>Bovine Respiratory Panel-Viral PCR</b> (BRSV, BVD, PI-3, IBR/BHV-1)	M301	\$60.00	Nasopharyngeal swab, nasal swab, 1-2mL transtracheal wash, or bronchoalveolar lavage, 1gram fresh or frozen lung or trachea	2-3 working days

<b>Canine Respiratory panel (9 pathogens) PCR</b>	M304	\$120.00	Nasal swabs, oropharyngeal swabs, tracheal washes, and fresh lung tissue (20-30 mg of specimen or 200 µl of fluid is needed for testing)	3 working days
9 pathogens included: Bordetella bronchiseptica, Mycoplasma cynos, Mycoplasma canis, Canine adenovirus type 2, Canine herpesvirus 1, Canine parainfluenza virus, Canine distemper virus, Canine influenza virus, Canine respiratory coronavirus				
<b>Canine Respiratory panel 1 PCR</b> (Bordetella bronchiseptica, Mycoplasma cynos, Mycoplasma canis)	M304b	\$65.00	Nasal swabs, oropharyngeal swabs, tracheal washes, and fresh lung tissue (20-30 mg of specimen or 200 µl of fluid is needed for testing)	3 working days
<b>Canine Respiratory panel 2 PCR</b> Canine adenovirus type 2, Canine herpesvirus 1, Canine parainfluenza virus)	M304c	\$65.00	Nasal swabs, oropharyngeal swabs, tracheal washes, and fresh lung tissue (20-30 mg of specimen or 200 µl of fluid is needed for testing)	3 working days
<b>Canine Respiratory panel 3 PCR</b> (Canine distemper virus, Canine influenza virus, Canine respiratory coronavirus)	M304d	\$65.00	Nasal swabs, oropharyngeal swabs, tracheal washes, and fresh lung tissue (20-30 mg of specimen or 200 µl of fluid is needed for testing)	3 working days
<b>Equine Respiratory Panel PCR</b> (Equine Influenza, EHV 1 & 4, Aerobic Culture)	M302	\$100.00	Nasal swabs (must submit 2 – one in transport media (Amies, Stuarts, etc) and another with 1 mL of sterile saline red-top OR two red-top tubes, Fresh tissue lung or trachea	2-3 working days (Aerobic 2-5 days)
<b>Poultry Respiratory Panel PCR</b> <i>Avibacterium paragallinarum</i> , Infectious Laryngotracheitis (ILT), <i>Mycoplasma gallisepticum</i> , <i>Mycoplasma synoviae</i> Single pathogens available \$35/each	M305	\$90.00	Tracheal swabs, air sac swabs, trachea or lung tissue, and culture isolates	3 working days
<b>Poultry - Mycoplasma Duplex PCR</b> ( <i>Mycoplasma gallisepticum</i> , <i>Mycoplasma synoviae</i> ) Single pathogens available \$35/each	M306	\$60.00	Whole blood, tissues, tracheal swabs, cloacal swabs and cultures	3 working days

**ALL SAMPLES SHOULD BE SUBMITTED IN SEALED, LEAK-PROOF PLASTIC BAG OR CONTAINER, IF SHIPPED MUST BE SHIPPED OVERNIGHT BY UPS/FEDEX**

**\*Guidelines for bovine *Tritrichomonas foetus* testing – specimen handling and transport:**

Per the Arizona Department of Agriculture's June 2020 revision of ARS3-1205, the only official trichomoniasis test for the purposes of importing, exporting, selling, or transferring of bulls is an individual PCR test submitted by a USDA accredited veterinarian.

Submit preputial samples from bulls in the InPouch™ TF culture system, TF-Transit Tube (Biomed Diagnostics) or PBS tube (if you need PBS tubes please call or email and we will provide those to you at no cost, only S&H fees will apply). Pouches can be ordered directly from the manufacturer at [biomeddiagnostics.com](http://biomeddiagnostics.com). Include inoculation date on the tube. Do not use pouches past the expiration date. If samples are received in an expired pouch or tube, they can still be processed but a note will be added stating that the results cannot be used for the purposes of importing, exporting, selling, or transferring of bulls.

Hold inoculated pouches at room temperature until shipment to the lab. Protect the inoculated pouches from heat, cold, and direct sunlight.

Ship samples overnight. **Never refrigerate or freeze inoculated pouches.** Protect from extreme heat and cold. Use extra insulation and you can use a room temp ice pack in cold weather and refrigerated, **NOT frozen**, ice pack in hot weather. Samples must be kept between 59°F and 99°F from sample collection to arrival at the AZVDL. Exposure to temperature extremes can affect *T. foetus* growth and PCR results.

PBS tubes must be received within 96 hours after inoculation. Inoculated pouches must arrive at the lab within 48 hours (2 days) of collection as false negative results are possible. Samples received after 48 (pouches/transit tubes) & 96 (PBS tubes) hours, respectively, can still be processed however a note will be added stating that the results cannot be used for the purposes of importing, exporting, selling, or transferring of bulls. Failure to follow the above guidelines may result in rejection of the sample at the discretion of the laboratory.

## NECROPSY:

Test Description	Test #	Price	Specimen Preferred	Turnaround Time
SMALL ANIMAL NECROPSY (AVIAN, RODENTS, SMALL EXOTICS, PUPPIES/KITTENS (< 6 WEEKS))	N103	\$290.00	Cadaver – whole, partial	10 working days
CANINE, FELINE	N104	\$410.00	Cadaver – whole, partial	10 working days
DOMESTIC LIVESTOCK, UNDER 100 LBS	N109	\$258.00	Cadaver – whole, partial	10 working days
DOMESTIC LIVESTOCK, 100 TO 500 LBS	N110	\$360.00	Cadaver – whole, partial	10 working days
DOMESTIC LIVESTOCK, OVER 500 LBS	N111	\$460.00	Cadaver – whole, partial	10 working days
EXOTIC & WILDLIFE, OVER 100 LBS	N113	\$460.00	Cadaver – whole, partial	10 working days
HORSE, LESS THAN 200 LBS	N106	\$440.00	Cadaver – whole, partial	10 working days
HORSE, 200 LBS – 500 LBS	N107	\$720.00	Cadaver – whole, partial	10 working days
HORSE, OVER 500 LBS	N108	\$1030.00	Cadaver – whole, partial	10 working days
ABORTION LARGE ANIMAL	N101	\$250.00	Fetus and placenta	10 working days
ABORTION SMALL ANIMAL	N102	\$200.00	Fetus and placenta	10 working days

### ADDITIONAL FEES:

BRAIN REMOVAL – SMALL ANIMAL	N119	\$ 30.00
BRAIN REMOVAL – LARGE ANIMAL	N120	\$ 50.00
SAVE BODY REQUEST	N105	\$ 30.00
SPINAL CORD REMOVAL, EQUINE	N117	\$185.00
SPINAL CORD REMOVAL, SMALL ANIMAL	N118	\$145.00
EQUINE CREMATION (>500 POUNDS ONLY) (Owner provides receptacle for ashes - One 5 gal/500lbs)	N121	\$1200.00
INSURANCE SURCHARGE	N115	\$270.00
LITIGATION DOCUMENTATION PROCESSING FEE	A035	\$150.00

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The results obtained from a necropsy are directly related to the condition of the cadaver when received. Badly decomposed bodies yield little diagnostic data. Taking steps to ensure refrigeration of the body as soon as possible after death will go a long way in preserving its diagnostic value. Insulated shipping containers are a must for small animals. Animals too large to fit in an insulated container (some very large ice chests are available) should be surrounded and covered with bags of ice and covered with a plastic tarp before hauling. This is critical for large animals such as horses and cattle and animals with thick-insulating fleeces or body fat (swine). A four-hour trip to the diagnostic lab in the heat of the summer months is too long without cooling of carcass.

We do not recommend freezing cadavers as this induces significant tissue artifact and hinders histologic examination. However, a frozen cadaver is better than a decomposed one if there are no other options available for cooling.

There are several options for shipping bodies to the laboratory. See the Shipping Section for details.

Our interpretation of necropsy findings is highly dependent on receiving a complete history of the case. History should be a concise distillation of the relevant history, clinical laboratory, management, and signalment by someone directly knowledgeable about the case.

Results are usually available within 7-10 working days. Some testing may take longer, in which case you will receive preliminary reports with diagnostic findings to date followed by a final report when all tests have been completed.

Necropsy fees include gross evaluation, routine histopathology, basic microbiology, and disposal. Additional fees may be charged for more complex microbiological and toxicological testing including any testing referred to outside laboratories.

#### **Rabies Suspect:**

Animals testing negative for rabies may be released to a private cremation service once all testing results are known. Due to public health concerns, all tissues and remains of cases positive for rabies or other diseases of major public health concern, cannot be released for private cremation.

#### **Save Body request:**

Save body request is available for necropsy submissions. "Save Body" must be checked on the submission form. Remains may only be released to the cremation company specified by the submitter.

#### **Additional Requests:**

Special necropsy procedures such as spinal cord removal, insurance cases and possible litigation cases will require additional fees as indicated.

**Cosmetic necropsy is NOT performed.**

## Important Information regarding necropsy submissions:

We understand that memorial items such as paw prints or nose prints can be a meaningful way to remember a beloved animal.

Please note that any keepsakes of your animal such as paw prints, nose prints, fur clippings, etc. **must be completed by the attending veterinarian or by the owner before the animal arrives at the Veterinary Diagnostic Laboratory (VDL).**

- Any specific requests, including DNA testing, need to be completed before the animal is sent in for necropsy. There are **no exceptions**.

Once an animal has been **received for necropsy**, we are **unable to perform special services**. For biosecurity and public health safety reasons, remains are sealed after necropsy, including those being sent to a cremation facility.

Thank you for your understanding and care in helping us follow these important laboratory protocols.

## PARASITOLOGY:

Test Description	Test #	Price	Specimen Preferred	Turnaround Time
EXTERNAL PARASITE IDENTIFICATION	P108	\$23.00	Refrigerated unfixed or 70% alcohol-fixed parasite sent to UA Dept of Entomology	
INTERNAL PARASITE IDENTIFICATION ( <i>CALL THE LABORATORY- REFERRAL SENDOUT</i> )				
GIARDIA/CRYPTOSPORIDIUM ASSAY TEST	P116	\$28.00	3-5 grams of feces	1-2 working days
FECAL FLOTATION QUALITATIVE	P104	\$21.00	3-6 grams fresh, refrigerated feces	2 working days
FECAL FLOTATION QUANTITATIVE (Bovine, Canine, Equine, Feline, and Ovine only)	P104b	\$21.00	3-6 grams fresh, refrigerated feces	2 working days
Fecal Flotation Qualitative available for species not covered under Fecal Flotation Quantitative.				
SKIN SCRAPING, MACERATION	P105	\$19.00	Skin scrapings from the edge of a lesion	1-2 working days
WET MOUNT	P107	\$22.00	Feces, fluid	1 working day

**\*Tests not listed will be forwarded to a referral laboratory for testing. Turnaround time is determined by the referral laboratory and prices are subject to change. \$35.00 shipping and handling fee will be added to the test price.**

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## SEROLOGY:

1. Send  $\geq 1$  ml of serum per test or  $\geq 3$  ml blood.
2. Send serum only whenever possible. The submission of whole blood, even in separator tubes, often results in hemolysis and interference with some of the tests.
3. Identify the tubes properly, making sure there are matching animal IDs on the submission form and the tubes. Ship sera in racks or cardboard boxes with dividers.
4. Submit acute and convalescent sera together in cases where paired sample serology is needed.

### EQUINE INFECTIOUS ANEMIA:

1. For EIA tests submitted through Global Vet Link, there will be an additional fee of \$0.85 per sample (this is a fee AZVDL pays GlobalVet Link to report results to clients submitting via this system). GlobalVet Link is a separate entity; clients submitting via GVL will need to set up their accounts directly with GVL.
2. EIA Elisa will routinely be run on Monday, Wednesday and Friday.

### **STAT service for EIA (ELISA) testing is available Monday to Friday for an additional \$30 per animal.**

Practitioners who wish to test specific animals as STAT must submit those animals for STAT service on separate AzVDL Submission forms for the STAT animals. Animals tested at the same time, not requiring STAT service should be submitted on separate paperwork.

Test Description	Test #	Price	Specimen Preferred	Turnaround Time
BOVINE LEUKEMIA VIRUS (BLV) ELISA	S134	\$10.00	1 mL Serum	2-3 working days
BRUCELLOSIS CARD TEST ( <b>Federal form required</b> )	S136	\$6.50	Serum ( $\geq 1$ ml)	1-2 working days
<i>COCCIDIOIDES SP</i> (IgM/IgG) SCREEN WITH TITER	S127b	51.00	Serum ( $\geq 1$ ml)	3 working days
All samples run with the screening test and only positive samples will be further titrated.				
EQUINE INFECTIOUS ANEMIA (ELISA) <b>Federal Form Required (Feb 2018)</b> <b>STAT EIA:</b> must submit before 2:00pm for same day	S126	\$11.00  <b>\$30.00 Addl</b>	Serum ( $\geq 1$ ml)	1-3 Working Days (Run: Mon, Wed, Fri) <b>STAT Monday-Friday</b>

LEPTOSPIRA SPP – 6 serovars (MAT) ( <i>poโมนา, ictero, canicola, grippo., hardjo, and bratislava</i> ) <b>Individual serovars also available at \$6.00each</b>	S114	\$28.00	1mL Serum	2-3 working days
		\$6.00ea	1mL Serum	
SMALL RUMINANT LENTIVIRUS (CAE/OPP) cELISA	S123	\$10.00	1 mL Serum	2-3 working days

## TOXICOLOGY

Test Description	Test #	Price	Specimen Preferred	Turnaround Time
Nitrate (Semi-quantitative)	T140b	\$20.00	Ocular fluid, Serum (1 ml)	1-2 working days

Other toxicology and nutritional testing are referred to outside laboratories. Please contact our laboratory for pricing and test availability.

## VIROLOGY:

Proper selection and preservation of samples submitted for analysis is essential for accurate and efficient diagnosis.

- **Ambient conditions:** Samples should be refrigerated at 4-8° C
- Whole blood in a lavender top tube with anticoagulant submitted as buffy coat.
- Blood specimens submitted, as blood smear, should be on a labeled microscope slide or as determined by Pathologist.
- Tissue submitted should be >cm in size

Test Description	Test #	Price	Specimen Preferred	Turnaround Time
BOVINE HERPESVIRUS TYPE-1 (BHV-1/IBR) FA	V112	\$10.00	Trachea, lung, or as determined by pathologist	1-2 working days
BOVINE PARAINFLUENZA TYPE-3 (PI-3) FA	V113	\$10.00	Trachea, lung, gastrointestinal tract, lymph node, and spleen. Whole blood and blood	1-2 working days
BOVINE RESPIRATORY SYNCYTIAL VIRUS FA	V108	\$10.00	Nasopharyngeal swab, transtracheal wash, bronchoalveolar lavage (BAL), lung tissue	1-2 working days
BOVINE VIRAL DIARRHEA VIRUS FA	V114	\$10.00	Trachea, lung, gastrointestinal tract, lymph node, spleen. Whole blood and blood smears	1-2 working days
CANINE ADENOVIRUS FA	V122	\$10.00	Lung, liver, and kidney	1-2 working days
CANINE DISTEMPER VIRUS IFA	V105b	\$55.00	1.0 ml serum or plasma	2 working days
CANINE PARAINFLUENZA VIRUS TYPE-2 FA	V121	\$10.00	Lung, trachea, nasal smear	1-2 working days
EQUINE HERPESVIRUS TYPE-1 FA	V146	\$10.00	Fresh lung from necropsy. Current infection: nasal swabs and smears	1-2 working days
FELINE LEUKEMIA VIRUS (FeLV) IFA	V110b	\$55.00	Whole blood, bone marrow, slides with buffy coat smears (with thin feathered edge), necropsy tissues	2 working days

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