



Vector Borne Disease Diagnostic Lab

www.cvm.ncsu.edu/vth/ticklab.html



Ship Overnight ON FREEZER PACKS to: NCSU VBDDL Room 462A 4700 Hillsborough Street Raleigh, NC 27606 Phone # 919-513-8279 Please do not send payment with the samples. You will be invoiced by the university.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">INTERNAL USE ONLY</th> </tr> <tr> <td style="width: 50%; height: 40px;">DATE RECEIVED</td> <td style="width: 50%;">VBDDL#</td> </tr> </table>	INTERNAL USE ONLY		DATE RECEIVED	VBDDL#
INTERNAL USE ONLY					
DATE RECEIVED	VBDDL#				
Account # Clinic Address Phone # Fax# Email:	Date of Sample: _____ Animal Name: _____ Species: _____ Breed: _____ Sex: F FS M MC Age: _____ Owner's Name: _____				

SEROLOGY: REQUIRES 2 ml serum, 1 week turnaround for results.

Serologies test for presence of antibodies against the microorganisms.

This test determines if the animal has ever been exposed, but does not necessarily indicate a current infection.

PCR testing (page 2) tests for current infections.

Please use separate request forms if sending paired antibody titers. Indicate acute or convalescent

Paired antibody titers are recommended for any animals with acute illness to document seroconversion.

For chronic illness, antibody titers greater than or equal to 1:64 are indicative of exposure and/or active infection.

CANINE TESTS	DESCRIPTION	COST	✓
TICK PANEL	Includes: (By IFA) <i>E. canis</i> , <i>B. canis</i> , <i>R. rickettsii</i> , <i>B. henselae</i> , <i>B. vinsonii</i> , (By Snap® 4Dx®) Lyme/ <i>E. canis</i> / <i>Anaplasma</i> /heartworm antigen	\$95.00	
Individual Tests			
<i>R. rickettsii</i>	Tests for antibodies against <i>Rickettsia rickettsii</i> (Rocky Mountain Spotted Fever) by IFA	\$20.00	
<i>B. henselae</i>	Tests for antibodies against <i>Bartonella henselae</i> by IFA	\$20.00	
<i>B. vinsonii</i>	Tests for antibodies against <i>Bartonella vinsonii</i> by IFA	\$20.00	
<i>E. canis</i>	Tests for antibodies against <i>Ehrlichia canis</i> by IFA	\$20.00	
<i>B. canis</i>	Tests for antibodies against <i>Babesia canis</i> by IFA	\$20.00	
<i>B. gibsoni</i>	Tests for antibodies against <i>Babesia gibsoni</i> by IFA	\$20.00	
<i>L. infantum</i>	Tests for antibodies against <i>Leishmania infantum</i> by IFA	\$20.00	
<i>B. burgdorferi</i>	Tests for antibodies against <i>Borrelia burgdorferi</i> by Snap® 4Dx®	\$20.00	
FELINE TEST			
<i>B. henselae</i>	Tests for antibodies against <i>Bartonella henselae</i> by IFA	\$20.00	

TESTING ADDITIONS			✓
Stat Export Fee	Turnaround time of 3 business days Please include animal's microchip number here:	\$20.00	
Blood Smear – Export Only	Giemsa Smear for <i>Babesia</i> Organisms, 30 minute review	\$20.00	
Individual Serology Stat	Turn around time of 3 business days	\$20.00	
Tick Panel Stat	Turn around time of 3 business days	\$95.00	

*When possible, please include 2 ml serum and 2 ml blood in EDTA for each animal submitted.

*Our lab is closed on weekends. Refrigerate blood drawn on Fridays and ship on Monday.

*All tested or Paired samples are stored for a minimum of 1 year.

*Form Date September 15, 2009.



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PCR TESTING:

REQUIRES 2 ml of whole blood in EDTA, Amplifies DNA to determine CURRENT INFECTIONS.

Tests for the presence of the organism, so **all animal species can be tested.**

Samples can take up to 3 weeks for results, but the typical turn around time is 5 working days.

The VBDDL at NCSU prides itself on our quality control, testing standards, and accurate results. For each sample received, we first perform a DNA extraction using the Qiagen M48 Biorobot which has been proven to have a 100% contamination free extraction method. We then perform a quality control PCR reaction on the extracted sample DNA to determine that the DNA present can be amplified up to our standards. If the DNA from a sample cannot be amplified properly in this reaction, an aliquot from the original sample is re-extracted and the Quality control reaction repeated (this is why we request 2 ml of EDTA blood for each animal tested). All samples must pass quality control before being tested for your requested organisms, this helps to prevent false negative results. After a sample has passed our QC, it is then tested for each organism requested first on a genus level. If the genus test is negative your results are reported immediately. If positive, the sample is then tested in several species identification reactions and often sent for confirmatory sequencing. By performing several speciation reactions and confirmatory sequencing, we are able to detect dual infections and occasionally a new species.

TESTS AVAILABLE	DESCRIPTION	COST	✓
PCR PANEL	Tests for all organisms listed in <i>Babesia</i> genera, <i>Bartonella</i> genera and <i>Ehrlichia</i> genera tests. Sample will be speciated and DNA sequenced as needed, free of charge.	\$125.00	
<i>Rickettsia</i>	Tests for Spotted Fever group <i>rickettsiae</i>	\$50.00	
<i>Babesia</i> genera	Test on the genus level for <i>Babesia canis canis</i> , <i>Babesia canis rossi</i> , <i>Babesia canis vogeli</i> , <i>Babesia gibsoni</i> Asian genotype, and <i>Babesia coco</i> . Genotype.PCR positives are speciated in several reactions to verify positive results as well as to detect possible dual infections.	\$50.00	
<i>Leishmania</i>	Tests for <i>Leishmania infantum</i> in blood or Lymph Node Aspirate	\$50.00	
<i>Ehrlichia</i> / <i>Anaplasma</i> genera	Tests on the genus level for <i>Ehrlichia canis</i> , <i>Ehrlichia chaffeensis</i> , <i>Ehrlichia ewingii</i> , <i>Anaplasma phagocytophilum</i> , and <i>Anaplasma platys</i> . PCR positives are DNA sequenced to verify positive results as well as to detect possible dual infections.	\$50.00	
<i>Bartonella</i> genera	Tests on a genus level for <i>Bartonella henselae</i> , <i>Bartonella quintana</i> , <i>Bartonella clarridgeiae</i> , <i>Bartonella vinsonii</i> . PCR positives are DNA sequenced to verify positive results as well as to detect possible dual infections.	\$50.00	
<i>Cytauxzoon felis</i>	Tests for <i>Cytauxzoon felis</i>	\$50.00	

TESTING ADDITIONS			✓
PCR Single Stat	Genus and Species(if positive) results within 3 working days (4 days for <i>Ehrlichia</i>)	\$50.00	
PCR Panel Stat	Genus and Species(if positive) results within 3 working days (4 days for <i>Ehrlichia</i>) For the three genus panel listed above	\$125.00	
Tissue Extraction Fee	We accept fresh, frozen, or paraffinized tissues for Manual DNA Extraction and testing. Tissue PCR cannot be stat at this time.	\$75.00	

**PLEASE REMEMBER TO SEND BOTH PAGES OF THIS FORM
 EVEN IF YOU ARE ONLY REQUESTING PCR TESTING.**

- *When possible, please include 2 ml serum and 2 ml blood in EDTA for each animal submitted.
- *Our lab is closed on weekends. Refrigerate blood drawn on Fridays and ship on Monday.
- *All tested or Paired samples are stored for a minimum of 1 year.
- *Form Date September 15, 2009.