

Tick Submission and Testing

Instructions for Submitting Ticks for Laboratory Testing

The Department of State Health Services (DSHS) has partnered with the University of North Texas Health Science Center (UNTHSC) Tick-Borne Disease Research Laboratory to test ticks for disease agents in the *Borrelia*, *Ehrlichia*, and *Rickettsia* genera using molecular methods. Ticks must first be submitted to the DSHS Zoonosis Control office for identification after which they will be forwarded to UNTHSC for testing. **There is no charge for testing**, however this service is available only to **Texas residents** submitting specimens from a Texas address and for ticks that were attached to a human. Submissions of ticks that were not attached to a human or that were received from outside of Texas will not be tested and will not be returned to the submitter. The primary purpose of this service is tick surveillance, not disease diagnosis. If infected with a tick-borne pathogen, individuals typically develop symptoms within two weeks of exposure to a tick, before test results are available. Individuals exhibiting typical tick-borne disease symptoms (acute onset of fever, headache, myalgia, rash, etc.) should not wait for tick testing results before seeking medical care. Remember to tell the doctor about your recent tick bite, when the bite occurred, and where you most likely acquired the tick.

Tick Collection

1. Only ticks that were attached to a human host may be submitted for testing. DO NOT submit ticks removed from animals.
2. When handling or removing ticks, use forceps or tweezers. If you use your hands, wear disposable gloves or shield your fingers with a paper towel or other suitable material. When removing ticks from a person, grasp the tick as close to the skin as possible and pull upward with steady, even pressure. **DO NOT** twist or jerk the tick, as this may cause the mouthparts to break off, leaving them embedded in the skin.
3. Avoid folklore remedies such as "painting" the tick with nail polish or petroleum jelly, or using heat to make the tick detach from the skin. Your goal is to remove the tick as quickly as possible, not wait for it to detach.
4. Carefully place the tick(s) into a secure container, screw cap vial or plastic bag; place the primary container (or bag) inside a sturdy plastic bag. Do NOT preserve ticks in alcohol, formalin or saline. Place ticks from different persons/collection sites into separate containers, marking each container with appropriate identifying information so that each can be matched to its corresponding tick submission form.

Sample Submission

1. Completely fill out a [Texas Tick Submission Form](#) for each tick submitted.
2. Place the container(s), sufficiently padded if breakable, and the accompanying Tick Submission Form(s) into a box or envelope and mail to the appropriate address below, depending on the shipping method:

If sending via U.S. Mail:

Department of State Health Services
ATTN: Zoonosis Control - MC 1956
P.O. Box 149347
Austin, TX 78714-9347

If sending via UPS/FedEx/Etc.

Department of State Health Services
ATTN: Zoonosis Control – MC 1956
1100 W 49th St
Austin, TX 78756

Identification and Testing

1. DSHS Zoonosis Control personnel will identify all ticks to species, stage of development, and state of engorgement.
2. DSHS Zoonosis Control personnel will forward the identified ticks to the UNTHSC laboratory for testing.
3. All ticks will be tested for the presence of pathogenic agents from the *Borrelia*, *Ehrlichia*, and *Rickettsia* genera. All positives will be further identified to the species and, where applicable, to the subspecies and/or strain.
 - o Testing for other tick-borne pathogens is available at UNTHSC (<https://www.unthsc.edu/school-of-biomedical-sciences/microbiology-immunology-genetics/tick-borne-disease-research-laboratory/>) for a fee.

Result Reporting

1. DSHS Regional Zoonosis Control personnel will communicate test results to the original submitter, usually within 3-4 weeks of receiving the specimen(s).
2. Results should be interpreted with caution:
 - o Exposure to a tick that contains a disease-causing organism does not indicate transmission occurred.
 - o Conversely, exposure to a tick that tests negative does not rule out infection—the tick may have infected you with a pathogen that was not tested for, or exposure to a different tick may have occurred unknowingly.
 - o Tick testing results should be shared with your medical provider for interpretation when they become available.

Contact Information

For information about ticks and the diseases they may transmit, contact the [DSHS Regional Zoonosis Control Office](#) for your area. If you have questions about submitting ticks, please email the DSHS Zoonosis Control Branch at The.Vet@dshs.texas.gov or call 512-776-7255 to leave a message for a program contact.

For more information on ticks, go to:

CDC tick website: <https://www.cdc.gov/ticks/index.html>

CDC tick-borne disease reference manual for providers: <https://www.cdc.gov/ticks/tickbornediseases/TickborneDiseases-P.pdf>

Tick Submission Form

Only ticks from a human host may be submitted for testing.
Do NOT submit ticks removed from animals.

S U B M I T T E R	Name: _____ Address: _____ City: _____ County: _____ Zip: _____ Phone: (____) _____ Fax: (____) _____ Email: _____	Mail to: Department of State Health Services ATTN: Zoonosis Control – MC 1956 P.O. Box 149347 Austin, TX 78714-9347 For DSHS Staff Use Only: Date Received: _____ Date Shipped: _____ Processed by: _____						
I N V E S T I G A T I O N	Patient* Name: _____ Patient Address: _____ <i>*If patient is different than submitter</i> , check appropriate box for relationship between submitter and patient: <input type="checkbox"/> healthcare provider <input type="checkbox"/> parent/guardian <input type="checkbox"/> spouse/partner <input type="checkbox"/> other Was the tick attached to the patient? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If attached, how long? _____ hours Comments: _____							
S P E C I M E N	Specimen Collection Information Collection Date (date tick likely attached OR was discovered): _____ Geographic location where tick was likely <u>acquired</u> (describe geographic location, including Texas county OR other state/country—e.g. Zilker Park, Austin, Travis County): _____ _____							
Information below this point will be completed by DSHS Staff								
I D E N T I F I C A T I O N	Specimen Number: _____ PHR: _____ Condition of specimen upon receipt at DSHS: <input type="checkbox"/> alive <input type="checkbox"/> dead <input type="checkbox"/> no head <input type="checkbox"/> partial specimen <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Tick Species</th> <th style="width: 20%;">Stage (F M N L)¹</th> <th style="width: 40%;">State (UNE PE E)²</th> </tr> </thead> <tbody> <tr> <td style="height: 40px;"></td> <td style="height: 40px;"></td> <td style="height: 40px;"></td> </tr> </tbody> </table>		Tick Species	Stage (F M N L) ¹	State (UNE PE E) ²			
Tick Species	Stage (F M N L) ¹	State (UNE PE E) ²						
<small>1: F – Female; M – Male; N – Nymph; L – Larva 2: UNE – Unengorged; PE – Partially Engorged; E – Engorged</small>								
RESULT REPORTING: The University of North Texas Health Science Center (UNTHSC) reports results to DSHS Zoonosis Control (ZC) Central Office, generally within two weeks after receipt of the specimen. ZC staff forwards results to the appropriate Regional ZC staff, which contacts submitters with results.								