

What is the Bronson Animal Disease Diagnostic Laboratory (BADDL), and what can BADDL do for cattle producers?¹

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For years, cattle producers have acted as unofficial researchers and detectives. As caregivers to domesticated animals, cattle producers and veterinarians sometimes find themselves outwitted by nature and need more pieces to solve a puzzle. That is where the Bronson Animal Disease Diagnostic Laboratory, or BADDL, can help. The BADDL exists to help with more difficult diagnoses.

The BADDL, centrally located in Kissimmee, Florida, is operated as a bureau within the Florida Department of Agriculture and Consumer Services Division of Animal Industry. The purpose of the BADDL is to provide complete scientific expertise in the detection and investigation of animal diseases that affect livestock. The BADDL is a state-of-the-art facility that completed a multi-million-dollar renovation in November of 2019. This renovation has allowed the facility to add services in the areas of chronic wasting disease, scrapie, leptospirosis, bovine viral diarrhea, and bacterial culture and identification. These are a few of the diseases that the laboratory can test for and services that the laboratory can perform.

The BADDL is open to the public Monday through Friday between 8:00 AM and 5:00 PM, excluding holidays. Submissions to the laboratory can be made by private cattle

owners and veterinarians alike. Depending on the disease, the laboratory may require blood, feces, ear notch, tissue, organs, or the entire animal. When submitting a sample, it is important to follow the guidelines because certain tests require specific tissues or fluids. A few recommendations are listed below.

- Collect the specimen prior to administration of antibiotics.
- Collection should be done in a sterile container.
- Collect an adequate amount.
- Provide a thorough clinical history with the specimen, as well as adequate labeling. Include animal ID, type of sample, and collection date.

Certain laboratory tests require more specific collections. These collection methods are: bacteriology, clinical pathology, cytopathology, histopathology, molecular biology, necropsy, rabies testing, and virology. If there is a question about the sample submission, it is better to call the laboratory to get appropriate guidance. Occasionally, there are many types of tests available for a single disease. The laboratory may guide the submitter regarding the suitable sample based on the scenario.

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The BADDL offers many services. Several of their more common services are listed in Table 1, with the sample requirements and turnaround time.

Additional Resources

To make it more convenient for producers to submit samples to the laboratory, the BADDL provides an option to create shipping labels via FedEx. This and more information can be found at the BADDL website (<https://www.fdacs.gov/Agriculture-Industry/Livestock/Bronson-Animal-Disease-Diagnostic-Laboratory-BADDL>). You can also contact the laboratory via phone at (321) 697-1400. The laboratory recommends owners contact their veterinarian for guidance regarding the submission of samples.

Additionally, the laboratory provides educational information for producers. One of those educational resources is their free quarterly newsletter.

Anyone can register to receive this newsletter electronically via the BADDL website. The laboratory provides over 150 laboratory diagnostic tests and exists to support those in food production. The laboratory strives to provide scientific expertise in detecting causes of animal disease and is an important asset to Florida's cattle producers and cattle industry.

Table 1. List of common services.

Test	Submission	Turnaround Time
<i>Anaplasma marginale</i> qPCR	Whole blood from a bovine in EDTA (purple top); shipped chilled overnight.	2–4 days
Bluetongue Virus qPCR	Spleen or whole blood in EDTA (purple top) shipped chilled overnight.	1–3 days
Bovine Viral Diarrhea (BVD) IHC	Ear notch in formalin in a leakproof container.	10 days
Bovine Viral Diarrhea (BVD) qPCR	Serum, whole blood in EDTA (purple top), plasma, milk or fresh ear notch in a sterile container; shipped chilled overnight. Large groups of serum samples can be combined into groups of 50 for a discounted price. This pooling will only be done at BADDL. Submissions of samples pooled by the client will be rejected. Large groups of ear notch samples can be combined into groups of 25 for a discounted price. This pooling will only be done at BADDL. Submissions of samples pooled by the client will be rejected. Positive pools may be tested individually, and the cost of the additional tests will be charged to the client.	2–4 days
Johne's Disease (<i>Mycobacterium avium</i> subspecies <i>paratuberculosis</i>) qPCR	1 gm of feces in a sterile container; shipped chilled overnight. 1 gm of feces for up to 5 animals, each in a separate sterile container; shipped chilled overnight. Large groups of samples can be combined into groups of 5 for a discounted price. This pooling will only be done at BADDL. Submit samples individually.	2–4 days
Leptospirosis IHC	Kidney in formalin in a leakproof container.	10 days
Necropsy Exam—Food and Fiber Animal	Fresh carcass (preferred not frozen), double bagged inside a leakproof container or cooler; shipped chilled overnight. For carcass delivery, contact the facility directly.	20 days depending on ancillary testing
Necropsy Exam—Research, and Insurance	Fresh carcass (preferred not frozen), double bagged inside a leakproof Styrofoam or plastic cooler; shipped chilled overnight.	20 days depending on ancillary testing
<i>Neospora caninum</i> cELISA	1 ml of serum in a serum separator tube (red top/tiger top); shipped chilled overnight.	3–5 days Tests run on Thursday for samples received prior to 12:00 PM.
<i>Tritrichomonas foetus</i> qPCR	Fresh preputial swab/wash, smegma, or cervical-vaginal mucus from a bovine inoculated into InPouch™ TF for qPCR, delivered within 48 hours of collection, shipped in a package protected from light with a temperature range of 15°C–37°C (50°F–100°F). Smegma in sterile PBS (phosphate buffered saline) for direct qPCR should be placed in a 4 ml test tube with 1.5 ml of PBS and be delivered within 48 hours of collection, shipped chilled overnight. The collection pipet should be rinsed with the PBS by aspirating several times to ensure all of the smegma sample is deposited in the tube. Red top vacutainer or similar test tube is acceptable. The tube should be labeled as smegma with bull ID/date collected. No incubation required. Samples for direct smegma qPCR cannot be pooled for testing.	2–5 days Large groups of samples can be combined into groups of 5. This pooling will only be done at BADDL. Submissions of samples pooled by the client will be rejected. Samples for direct smegma qPCR cannot be pooled for testing. Positive pools will be tested individually and the cost of the additional tests will be charged to the client. Samples submitted in expired media will be rejected.
* Tests are available for other species. See the BADDL website for more details.		