Our Services
The Toxicology Section offers bone marrow fat determinations on postmortem samples to assess the antemortem nutritional condition of deceased animals. The percentage of fat in the bone marrow of animals is used in conjunction with other findings to diagnose starvation, because this fat depot is typically the last in the body to be depleted. Interpretations of results are provided by our toxicologist and/or analytical chemist.

Bone Marrow Diagnostics
Typical gross pathologic findings related to the diagnosis of protein calorie malnutrition and/or starvation include poor body condition; loss of skin turgor; dull hair or coat; sunken eyes; prominence of ribs, vertebrae, and pelvis; muscle atrophy; and serous atrophy of the fat. To assist the client in making a postmortem diagnosis of malnutrition and/or starvation, the current test uses a solvent extraction system to quantify marrow fat stores. The test (#70024) is available for all species of wildlife, livestock, and domestic pets. Reference ranges and the effects of storage conditions have been explored at DCPAH for adult bovine, canine, and equine bone marrows.

Sample Submission
The Toxicology Section suggests that for greatest accuracy this test be performed on animals that have been dead for less than 48 hours. The bone of choice is the femur. If possible, please split the bone before shipping to confirm the presence of bone marrow. Note that a charge will be added for samples found to lack marrow. Please pack the bone in a leakproof container and ship by overnight mail with ice packs.

For more information, please contact the Toxicology lab at 517.353.1683, or visit our website at animalhealth.msu.edu.
DCPAH is a full-service veterinary diagnostic laboratory, fully accredited by the AAVLD for all species through 2017.

Sample Submission Forms
Visit our website at animalhealth.msu.edu to access our most current submittal forms. Customized forms preprinted with your clinic information are also available at no cost via the Product Order Form.

Unbeatable Shipping
DCPAH offers a variety of shipping options. Our mailers comply with U.S. Postal Service, FedEx, UPS, and DHL regulations. All UPS mailers include prepaid overnight weekday delivery. All U.S. Postal Service mailers include prepaid delivery; delivery time will vary depending on your location.

Order Mailing Supplies
Individual, insulated, and biopsy mailers are available. Contact us at 517.353.1683 or complete the Product Order Form available online at animalhealth.msu.edu.

Packaging and Mailing Samples
For shipping recommendations for individual tests, please refer to the information provided at animalhealth.msu.edu under “Available Tests.”

Speak Directly to Experts
Our veterinary professionals are available for consultation and can help you interpret your test results to better manage the health of animals entrusted to you.

Get Results by Email and Online
Had it with the fax machine? Contact us at 517.353.1683 to have results delivered by email.
All DCPAH clients also have free, quick access to view results online through WebView. Reports are posted to the web hourly. Visit animalhealth.msu.edu and click “Log In” to request access to your diagnostic results.

Expect Quality in Testing and Service
DCPAH is a leader in establishing technical guidelines for public veterinary diagnostic laboratories in the United States and maintains a quality assurance team dedicated to promoting accuracy and reliability.

Customer Service Hours
Monday through Friday, 7:30 a.m. to 5:30 p.m. EST