

Toxicology Submissions and Analytical Screens

In addition to performing analytical testing services for veterinary clinics and providing clinical assistance in the diagnosis of client cases, the Toxicology Laboratory also participates in various studies of interest to agriculture, industry, wildlife centers, educational institutions, pharmaceutical companies, and the veterinarian profession. Contact the laboratory for any special request or problems. The phone number for the Director of Operations is 607-253-3975; the Laboratory is 253-3974; the Clinical Toxicologist is 253-3470.

Sample Submissions and History

It is very important that not only the proper request be made for the analysis but that Toxicology receives the proper samples for the analysis along with a complete case history. **Please note: there is no such entity as a *single complete toxicology screen*.** Most frequently, the samples of choice for a live animal would be heparinized whole blood, urine, vomitus, etc. For animals that have expired, the samples of choice would be all of the above and along with fresh frozen liver, kidney, and stomach contents. Other samples pertinent to a case may be submitted to aid in a diagnosis (e.g., food, water, paint chips, suspicious samples, etc.). Samples should be kept cold or frozen until and during shipping. Samples should be submitted in separate, clean, tightly sealed containers and be well labeled with identification of sample, animal name/ID, and date.

A complete history, including drugs administered to an animal, is a must. This gives laboratory personnel assurance that the proper analysis is being performed given the history of symptoms and signs observed. It also lowers the cost to the submitter to confirm drugs that were knowingly administered to an animal, and prevents doing unnecessary analysis.

Equine Pre-Purchase Drug Screens (includes acidic and basic drug screens):

The preferred sample for drug analysis is 20 mls of heparinized whole blood (green or dark blue top vacutainer), and/or urine. Definitely **no gel clot activation tubes** should be used (red stopper with grey swirls). Refrigerate samples and ship with ice packs. Samples can be frozen if cells are spun down and plasma transferred to a clean red top blood collection tube.

- **Reserpine:** Special analysis request; additional 10 mls heparinized whole blood required
- **Special Request** is needed for (low dosage) potent narcotic analgesics, certain tranquilizers and others: These require sensitive analysis via Selected Ion Monitoring (SIM) via Capillary GC/MS. Examples are: Butorphanol, Buprenorphine, Clenbuterol, Detomidine, Diprenorphine, Etorphine, Fluphenazine and Fentanyl, etc.
- **Anabolic steroids in urine:** includes Stanozolol, Dianabol, Boldenone, Triamcinalone, Nandrolone, and Testosterone

Acidic-Extracted Drugs (including but not limited to):

Acetaminophen, Barbiturates, Bumetanide, Chlorothiazide, Diclofenac, Diflunisal, Firocoxib, Flufenamic acid, Flunixin, Flurbiprofen, Furosemide, Griseofulvin, Ibuprofen, Indomethacin, Ketoprofen, Meclofenamic acid, Meprobamate, Methocarbamol, Naproxen, Oxyphenylbutazone, Phenylbutazone, Nabumetone, Salicylic acid, Sulfiazine, Sulfadimethoxine, Sulfadimidine, Sulfafurazole, Sulfamerizine, Sulfamethoxazole, Sulfanilamide, Sulfapyridine, Sulfathiazole, Sulindac, Thiosalicylic acid, Tolmetin, Zomepirac

Basic-Extracted Drugs (including but not limited to):

Acepromazine, Amphetamine, Apomorphine, Atropine, Benzocaine, Brompheniramine, Brucine, Bupivacaine, Caffeine, Cimetidine (Tagamet), Chlorpromazine, Cocaine, Codeine, Cyproheptadine, Dextromethorphan, Diazepam, Dihydrocodeine, Dipyrone, Doxapram, Embutramide, Ephedrine, Griseofulvin, Hordenine, Hydrocodone, Ketamine, Lidocaine, Mepivacaine, Meprobamate, Methocarbamol, Methylphenidate, Methamphetamine, Metoclopramide, Pentazocine, Phenacetin, Phenothiazine, Procaine, Promazine, Phenylpropanolamine, Propoxyphene, Pyrilamine, Rantidine (Zantac), Strychnine, Tetracaine, Theobromine, Theophylline, Trimethoprim, Tropicamide, Xylazine

Anticoagulant Screening:

includes Brodifacoum, Bromadiolone, Chlorphacinone, Cholecalciferol, Dicoumarol, Diphacinone, Warfarin

Mycotoxin Multiresidue Screen:

includes Aflatoxins (B1, B2, G1, G2), Ochratoxin A, Zearalenone, T-2 Toxin, Diacetoxyscirpenol (DAS), and Deoxynivalenol (DON, Vomitoxin)