University of Queensland
School of Veterinary Science
Veterinary Laboratory Services

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Research Testing Services
& Analytical Equipment

THE UNIVERSITY OF QUEENSLAND

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GENERAL INFORMATION

Veterinary Laboratory Services (VLS) offers its services to the wider research community and can assist with veterinary pathology investigations, sample analyses (biochemistry, haematology, endocrinology, urinalysis, coagulation testing), microbiological isolations and supply of isolates, along with the investigation of anatomical abnormalities, herd health, parasitology and molecular (PCR) assays for screening populations.

We are interested in discussing any services we may be able to provide to researchers. Please email us with your enquiry on: vls@uq.edu.au

Prices are determined on an individual basis by considering (a) tests required (b) no of samples (c) time-frame for results.

In addition to Clinical Pathology, Microbiology, Histology and Parasitology, other analytical instruments and microscopes owned by SVS may also be used upon application. These include:

- Elisa Plate Reader
- Deconvolution microscope (fluorescent)
- Molecular equipment including real-time PCR
- Flow cytometer
- UPLC - Mass spec

Submission of samples
Samples submitted must be accompanied by the appropriate VLS Test Request Form or RISQ form. All samples must be correctly labelled and the Request Form completed as fully as possible to avoid delays in processing.

Please do not submit samples in rubber gloves or in syringes with needles attached. Such samples pose an unacceptable safety risk to laboratory staff.

Veterinary Laboratory Services reserves the right to refuse to process samples that are not submitted in an appropriate manner.

Operating hours
The laboratory operates Monday to Friday from 8:30 am to 4:00 pm.
**CLINICAL PATHOLOGY**

**Haematology** [Analyser – CellDyn 3700] [Sample – EDTA blood]
- WBC count (White blood cell count), Automated leucocyte differential
- RBC count (Red blood cell count), Haematocrit, Haemoglobin, MCV, MCHC, MCH
- Platelet count
  - [Manual analysis – available on request] [Sample – EDTA blood and Direct Blood Smear]
- Manual PCV (Packed cell volume)/Total plasma protein
- Blood smear evaluation: Manual leucocyte differential count (important in leukaemias, inflammatory disease etc), RBC, WBC, and PLT morphologies, PLT count confirmation

**Biochemistry** [Analyser – Beckman AU480] [Sample – Serum or Lithium-Heparin plasma]
The following analytes are currently being run on the Analyser. However others will be considered upon application.
- Sodium, Potassium, Chloride, Bicarbonate, Calcium, Magnesium, Phosphorus, Anion gap (calc)
- AST, Creatinine, Triglycerides, Urea, Total protein, Total bile bilirubin, Lactate, Albumin, Glucose, A/G ratio, Serum Amyloid A
- Cholesterol, Total protein, Globulin (calc), Haptoglobin, Lipase

**Endocrinology/Immunoassays** [Analyser – Immulite1000]
[Sample – Serum, Lithium-Heparin or EDTA plasma depending on analytes requested]
The following are currently being run on the Analyser. Other tests by negotiation/request.
- Insulin
- Endogenous ACTH
- Cortisol
- Total T4
- Progesterone

**Urinalysis** [Method – manual] [Sample – urine in a sterile container]
- USG
- Dipstick (pH, blood, protein, glucose, ketones, bilirubin)
- Sediment analysis (RBC, WBC, casts, crystals, microorganisms)
- Urine protein:creatinine ratio

**Coagulation assays** [Method – manual] [Sample – citrated fresh whole blood or fresh/stored plasma]
- PT/APTT

**Cytology** [Method – slide preparation and pathologist interpretation] [Sample – fine needle aspiration smears, body cavity fluids e.g. peritoneal, pleural, pericardial, CSF, BAL/TTW]
- Fine needle aspirates
- Body fluid analysis – including TNCC, RBC, TP, slide preparation and pathologist interpretation
MICROBIOLOGY
Salmonella spp. only culture (per sample)
Aerobic culture & sensitivity
Anaerobic culture
Dermatophyte culture & microscopy
Fungal culture
Blood culture - Blood to be submitted in blood culture enrichment bottles
Equine Pre-mating
Environmental

PARASITOLOGY
Faecal Float
Faecal Egg Count
Larval Culture & Identification
Cryptosporidium
Giardia
Baermann Technique
Fluke Egg Sedimentation
Parasite Identification - This can take some time depending on host, location etc

ANATOMICAL PATHOLOGY
Tissue Specimens
Biopsy specimens
Tissue processing only
Tissue processing and staining

NOTE:
- All samples submitted should be fixed in 10% Neutral Buffered Formalin and adhere to IATA 650 packing instructions. Please contact our Pathologist for the correct submitting procedures.
- If samples arrived unfixed or appear to be potentially improperly fixed, a Pathologist will require additional fixation times of approximately 12-48hrs before processing the sample.
- Samples containing Calcium (Bone and Teeth) will require a decalcification period which is dependent on the sample type and size, additional delays of up to 1-2 weeks before processing can be expected.

Necropsies
Includes gross pathology, histology, disposal, special stains and formal reporting by the duty pathologist.

For submission of cadavers arrangements must be through a Pathologist BEFORE the cadaver is submitted. The duty pathologist will discuss how and when and where to submit cadavers and any other relevant information. Cadavers should be kept refrigerated at 4° C but NOT FROZEN.

A clear Hendra exclusion must be performed on all equine submissions prior to necropsy. Please contact the pathologist regarding this testing requirement.
**TERMS AND CONDITIONS**

**Delivery of results**
Upon delivery of samples in good order and condition UQSVS will use its best efforts to meet standard turnaround times for resulting. UQSVS laboratories will advise the submitter of any samples that we receive in damaged, contaminated, or improperly preserved condition or which do not meet the sample volume requirements prior to processing if possible. Results of diagnostic analyses will be returned only to the named veterinary surgeon(s) submitting the sample unless otherwise required by state or federal regulations. Specimens will not be received from members of the general public without prior approval and arrangement. For research samples results will be returned only to the named researcher(s) submitting the sample.

**Sample**
Specimen packaging is the responsibility of the submitter and must conform to IATA regulations, section 650, or other regulations as amended from time to time. UQSVS reserves the right to charge for supplied shipping containers and IATA packaging materials supplied to submitters or used in the rerouting of specimens to external laboratories or institutions.

UQSVS reserves the right to refuse to accept or to rescind acceptance of any sample which in the judgement of UQSVS is likely to pose an unreasonable risk in handling or analysis. You represent and warrant that any sample containing any hazardous substance that is to be delivered to UQSVS will be packaged, labelled, transported, and delivered in accordance with applicable laws.

We may at our option either dispose of or return to you unused portions of samples found or suspected to be hazardous or to contain hazardous materials according to state and federal guidelines at the completion of analytical work or on the suspension of analytical work after material is deemed to pose unacceptable risk in handling or analysis. We may invoice you for the reasonable cost of disposal or return of the sample.

**Retention of samples**
After we report analytical results, we routinely retain diagnostic samples in our laboratory for the following periods: Blood 1 month; serum a minimum of 5 years; samples for bacterial and fungal culture a minimum of one week following issue of final report; parasitology samples will be held for a minimum of 1 week, histopathology wet samples 1 month; histopathology blocks for a minimum of 5 years; histology slides a minimum of 1 year.

Animal remains destined for private cremation must have this clearly indicated on the accompanying paperwork at the time of sample accession. Animal remains will be held for a maximum of 5 working days post examination prior to disposal only with prior request of the submitter. Any animal remains where private cremation is not indicated will be sent for routine UQ bulk waste disposal on the next available shipment.

UQSVS reserves the right to use deidentified diagnostic samples and specimens for teaching and research purposes.

**Retention of reports**
Unless otherwise agreed in writing, UQSVS will retain copies of analytical reports for a minimum period of 5 years. UQSVS stores all analytical reports in electronic format. A hard copy is available on request. UQSVS reserves the right to charge for additional copies of reports once the original copy has been submitted. UQSVS reserves the right to use the contents of deidentified analytical reports for teaching and research purposes.

**Limited Warranty and Limits of Liability**
In accepting analytical work, UQSVS warrants the accuracy of the test results for the sample as submitted. We accept no legal responsibility for the purposes for which you use the test results. Where permitted by law, all terms, conditions, warranties and representations whether express or implied, statutory or otherwise, relating to the work are excluded and we will not be under any other liability in respect of any loss or damage (including consequential loss or damage) however caused (whether by negligence or otherwise) which may be suffered or which may arise directly or indirectly with respect of the work. Subject to law UQSVS liability is limited to our option to supply the work again or the payment of the cost to resupplying the work.