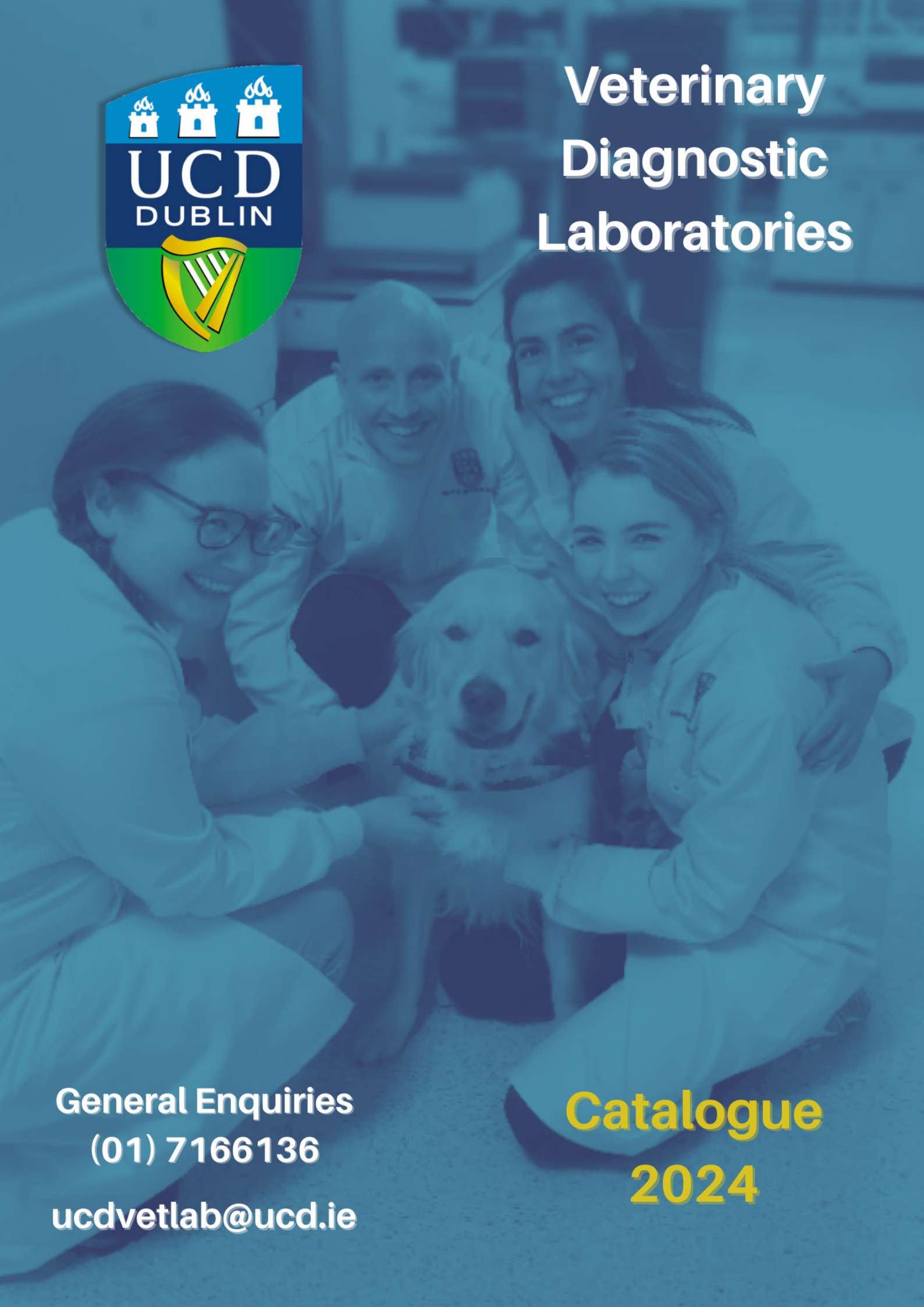
# Veterinary Diagnostic Laboratories



General Enquiries
(01) 7166136

ucdvetlab@ucd.ie

## Catalogue 2024

# TABLE OF CONTENTS

General Enquiries
(01) 7166136
ucdvetlab@ucd.ie

## GENERAL INFORMATION

Introduction 2
Sample submission 3
Packaging legislation 3
Laboratory contact numbers 5

## CLINICAL PATHOLOGY (HAEM/BIO & CYTOLOGY)

Which blood tubes to use 6
Common tests and panels 7
Canine/Feline investigative panels 8
Equine/Bovine investigative panels 9
Exotic species information 10

## ENDOCRINOLOGY

Test guide 11
Protocols 12
Contact information 14

## PATHOLOGY (BIOPSY & POST MORTEM)

Test guide 15
Protocols 15
Contact information 16

## PARASITOLOGY

Test guide 17
Contact information 18

## MICROBIOLOGY (BACTERIOLOGY/MYCOLOGY)

Test Guide 19
VITEK information 20
Report interpretation 20
Contact information 22

## MISCELLANEOUS

Courier booking guide 23
Submission forms (all areas) 24
A-Z Test guide 27

## Introduction

This catalogue is a guide to the services of the **Veterinary Diagnostic Laboratories** which are located in the **School of Veterinary Medicine, University College Dublin.** We provide a rapid in-house diagnostic service for the UCD Veterinary Hospital (UCDVH) and an external, fast, friendly and highly accurate diagnostic service to veterinary practitioners around Ireland.

Our diagnostic services include:

- Clinical Pathology (haematology, biochemistry & cytology)
- Bacteriology & Mycology
- Endocrinology
- Morphological Pathology (biopsy & post-mortem examination)
- Parasitology

**Useful Links**

**School of Veterinary Medicine**
ucd.ie/vetmed/

**UCD Veterinary Hospital**
ucd.ie/uvh/
**(Diagnostic Laboratories under Services tab)**

 **@ucdvet**

 **@ucdvetmed**

 **@ucdvethospital**

# General Information

## Sample Submission

## Submission Forms see page 24 – 26

**Do**

- Submit all owner and animal details e.g. name, tag number, on all containers.
- Please make sure your practice name and contact details are clearly displayed on all request forms.
- Please make handwriting legible.
- Use correct blood tubes, containers and packaging.
- Make sure all lids are secured tightly.

**Do not**

- Send any unlabelled or badly written tubes.
- Sellotape the lids of tubes.
- Send glass tubes or slides unless suitably packaged (see page 4).
- Send any sample through the post unless suitably packaged. It is the senders' responsibility and improperly packaged samples may result in the withdrawal of delivery services by An Post or our courier company.

## Poor Quality Samples

If we receive a sample that is of poor quality e.g. haemolysed, we may not be able to perform the required tests. A repeat sample will be required to complete your request.

## Protocols

If your practice requires any laboratory test protocols do not hesitate to contact the relevant laboratory. It is in your best interests to use the correct equipment and procedures to optimise results.

## How To Address Your Sample Package

Follow the **Packaging Regulations** on page 4 and address your sample(s) to the relevant laboratory.

## Example:

**Only biochemistry:**

**Clinical Pathology Laboratory**
**(Biochemistry)**
**School of Veterinary Medicine**
**UCD**
**Belfield**
**Dublin 4**
**D04W6F6**

## UN3373 Biological Substances
## Packaging & Labelling Requirements

**All samples should comply with the appropriate instructions: (PI) 650**

All **Biological Substances** should follow a basic triple packaging system:

- **Primary Container:** containing the specimen should be clearly labelled, watertight and leak proof. Containers should be wrapped in sufficient absorbent material should breakage occur and placed in a secondary container.

- **Secondary Container**: should protect the primary container and be secure, leak proof and watertight, with adequate protective cushioning material should multiple primary receptacles be used.

- **Outer Shipping Package i.e. rigid carboard box:** place the secondary receptacle in an outer shipping package, with suitable cushioning that protects it and its contents from physical damage and water etc. **For shipping,** the marker illustrated below should be displayed on the external surface of the outer packaging on a background of a contrasting colour and should be clearly visible and legible. **Each side of the diamond should be at least 5cm x 5cm; The smallest external dimension of outer packaging should be not less than 10cm x 10cm**


- Each package should be clearly labelled with the words **"BIOLOGICAL SUBSTANCES".**

- **The secondary or outer packaging must be a rigid container.**

- **For liquids**: the primary receptacle should be leak proof. The secondary packaging should be leak proof. All of the above instructions apply also. The primary receptacle or the secondary packaging shall be capable of withstanding, without leakage, an internal pressure producing a pressure differential of not less than 95 kPa (0.95 bar).

- **For solids**: the primary container should be sift proof. If several primary containers are used and placed in a single secondary container, they should be individually wrapped, separated to prevent contact between them and securely cushioned. The secondary container therefore should be sift proof.

**Note: These regulations should be strictly adhered to. Further information is available from any of the laboratories.**

## Reports & Contact numbers

Each laboratory test has its own turnaround time which can be found quickly in the **A-Z index page 27**. All reports are **emailed** unless otherwise requested.

If you do not receive the required report please contact the relevant laboratory:

**Biochemistry: (01) 7166161/3**
**Cytology: (01) 7166161**
**Endocrinology: (01) 7166137**
**Haematology: (01) 7166161**
**Microbiology: (01) 7166173**
**Parasitology: (01) 7166168**
**Pathology (biopsy & post mortem): (01) 7166162/26**

**Laboratory General Enquiries: (01) 7166136** **Email: ucdvetlab@ucd.ie**

**Opening Hours: Monday to Friday 9am - 5pm.**

## Nationwide Courier Service

**We provide a highly efficient and reliable courier service for the collection of diagnostic samples and delivery to our laboratories. The cut off time for booking our courier is 12pm Monday to Friday. If you require further details please contact (01) 7166136 to create your courier account.**

**Cost: Free of charge within Dublin with same day delivery.**
**€9 (incl vat) per collection outside Dublin with next working day delivery.**
**Please call to discuss post mortem collections (max weight 15kg).**

**See page 23 for instructions on how to use this service.**

## Financial Information

We envisage that all prices given in this catalogue will remain current until end 2024. We reserve the right to alter the price at any stage if required, especially referral testing.

Payment on all invoices is required within 30 days. Any queries with payment should be directed to our **Finance Team** on **(01) 7166007/6262** or email vetfinance@ucd.ie

## Haematology/Biochemistry & Cytology

### *Which Blood Tube To Use

After identifying which laboratory test is required, please choose the correct blood container from the list below. Colours may vary depending on which supplier you order them from. We do not provide blood tubes due to the variability in colours and sizes. Please contact us if you require the name of a supplier.

| Type of Tube | Function |
|---|---|
| **Plain (serum)** | General biochemistry; bile acids; copper; endocrinology, serology. |
| **Heparin (plasma)** | Biochemistry incl. enzymes and potassium. |
| **Heparin (whole blood)** | Reptilian/avian haematology; GPx. |
| **EDTA (whole blood)** | Haematology of most species (except avian/reptilian); lead. |
| **Fluoride Oxalate** | Glucose |
| **Sodium Citrate** | Clotting Times (APTT/OSPT); Von Willebrand's factor antigen. |
| **Zinc Free** | Zinc & other trace elements |

**NB:** Please see the **A- Z index** if unsure what blood tube to use

**Packaging Samples**

**See page 4**

**Send to:**
**Clinical Pathology Laboratory**
**School of Veterinary Medicine**
**UCD**
**Belfield**
**Dublin 4**
**D04W6F6**

## Contact Information

**Haematology**: (01) 7166161
**Biochemistry**: (01) 7166161/3
**Cytology**: (01) 7166161
**Endocrinology**: (01) 7166137
**Email:** ucdvetlab@ucd.ie

## General Clinical Pathology Prices

| Test | Price € inclusive of VAT |
|---|---|
| CBC [a] | 26[a] (16 as panel add on) |
| Clotting times (each) | 16 |
| Comprehensive profile | 68 |
| Cytology/Fine needle aspirate [b] | 58[b] |
| GI-pancreas profile | 63 |
| Health screen | 47 |
| Liver profile | 63 |
| Photomicrographs of stained smear of FNA[c] | 32[c] |
| Renal profile (incl UPCR) | 63 |
| SDMA | 53 |
| Urinalysis [d] | 26[d] ( 21 as panel add on) |
| Urine Protein: Creatinine ratio | 16 |

a) Includes reticulocytes

b) 1-4 slides same case (+€11 per additional slide); c) up to 10 .jpg images characterising the smear. Contact laboratory.

d) Urinalysis includes: gross evaluation, dipstick test, specific gravity, wet mount exam of sediment.

## Single Parameters and Focused Biochemistry Panels

| Test | Price € inclusive of VAT |
|---|---|
| Bile Acids | 16 |
| Bile acid stimulation test | 21 |
| Electrolytes | 16 |
| Fibrinogen | 16 |
| Hyperglycemia (glucose & fructosamine) | 16 |
| Iodine (plasma inorganic) | 35 |
| Ketosis (β-hydroxy-butyrate) | 11 |
| Lipids (triglycerides, cholesterol) | 16 |
| Liver enzymes (ALT, AST, GLD, ALP) | 16 |
| Pancreatic enzymes (DGGR-lipase, amylase) | 16 |
| Proteins (TP, Alb, Glob and A/G) | 16 |
| Se-deficiency (GPx) | 16 |
| TLi, Folate and Cobalamin (canine) | 93 |
| Urea and Creatinine | 16 |
| Single enzyme (ALT, AST, GLD, GGT, ALP, DGGR-lipase etc.) | 11 |
| Single metabolite (Triglycerides, Chol, TP, Alb, Ur, Cr, Gluc, Ca etc.) | 11 |
| Any 3 of the above Single enzymes or Single metabolites | 21 |
| Any 5 of the above Single enzymes or Single metabolites | 32 |
| Any 10 of the above Single enzymes or Single metabolites | 42 |

## Investigative & Monitoring Panels for Canine and Feline

| | Health screen | Comprehensive | GI-Pancreas [b] | Liver | Renal |
|---|---|---|---|---|---|
| **CBC [a]** | X | X | X | X | X |
| **TP** | X | X | X | X | X |
| **Alb** | X | X | X | X | X |
| **Glob** | X | X | X | X | X |
| **A/G** | X | X | X | X | X |
| **Na** | X | X | X | | X |
| **K** | X | X | X | | X |
| **Cl** | X | X | X | | X |
| **Corrected Cl** | X | X | X | | X |
| **$TCO_2$** | | X | X | | X |
| **Anion Gap** | | X | X | | X |
| **Ca** | X | X | | | X |
| **P** | X | X | | | X |
| **Bilirubin** | X | X | | X | |
| **Bile Acids – pre** | | | | X | |
| **post** | | | | X | |
| **Cholesterol** | X | X | X | X | X |
| **Triglycerides** | | X | X | X | |
| **Glucose** | X | X | X | X | X |
| **Fructosamine** | | | X | | |
| **GLD** | | X | | X | |
| **ALT** | X | X | | X | |
| **AST** | | X | | X | |
| **AST/ALT** | | X | | X | |
| **ALP** | X | X | | X | |
| **GGT** | | X | | X | |
| **CK** | | X | | | |
| **Lipase (DGGR)** | X | X | X | | |
| **Urea** | X | X | X | X | X |
| **Creatinine** | X | X | | | X |
| **Urinalysis [c]** | c | c | c | c | X |
| **UPC ratio*** | | | | | X |
| **Price € incl. VAT** | **47** | **68** | **63 [b]** | **63** | **63** |
| **No CBC** | **-** | **-** | **47** | **47** | **47** |
| **Add urinalysis [c]** | **68** | **89** | **84** | **84** | **-** |

*UPC= urine protein creatinine ratio

[a)] There will be a reduction of €16 in the price of the GI-Pancreas, Liver and Renal Panels if a CBC is not required.
[b)] It is recommended to carry out TLi, Folate and Cobalamin ($B_{12}$)
[c)] Please note that urinalysis will be performed at the special discounted rate of €21 if ordered at the same time as the Health Screen, Comprehensive, GI-Pancreas, Liver or Thyroid Panels.

***See page 6 for correct blood tube.**

**See A-Z index if the test you require is not displayed.**

## Investigative & Monitoring Panels for Equine

| | Health screen | Comprehensive | GI-Pancreas | Liver | Renal |
|---|---|---|---|---|---|
| **CBC** [a] | X | X | X | X | X |
| **TP** | X | X | X | X | X |
| **Alb** | X | X | X | X | X |
| **G** | X | X | X | X | X |
| **A/G** | X | X | X | X | X |
| **Na** | X | X | X | | X |
| **K** | X | X | X | | X |
| **Cl** | X | X | X | | X |
| **Corrected Cl** | X | X | X | | X |
| **$TCO_2$** | | X | X | | X |
| **Anion Gap** | | X | X | | X |
| **Ca** | X | X | | | X |
| **P** | X | X | | | X |
| **Bilirubin** | X | X | | X | |
| **Bile Acids – pre** | | | | X | |
| **post** | | | | X | |
| **Cholesterol** | X | X | X | X | X |
| **Triglycerides** | | X | X | X | |
| **Glucose** | X | X | X | X | X |
| **GLD** | | X | | X | |
| **AST** | | X | | X | |
| **ALP** | X | X | | X | |
| **GGT** | | X | | X | |
| **CK** | | X | | | |
| **Lipase (DGGR)** | X | X | X | | |
| **Urea** | X | X | X | X | X |
| **Creatinine** | X | X | | | X |
| **Urinalysis** | - | - | - | - | X |
| **UPC ratio** | | | | | X |
| **Price € incl. VAT** | **47** | **68** | **63** | **63** | **63** |
| **No CBC** | **-** | **-** | **47** | **47** | **47** |
| **[b] Add urinalysis** | **68** | **89** | **84** | **84** | **-** |

UPC= urine protein creatinine ratio

[a)] There will be a reduction of €16 in the price of the GI-Pancreas, Liver and Renal panels if a CBC is not required.
[b)] Please note that urinalysis will be performed at the special discounted rate of €21 if ordered at the same time as the Health Screen, Comprehensive, GI-Pancreas or Liver Panels.
[C)] Add Fibrinogen for €16

**See A-Z index if the test you require is not displayed.**

***See page 6 for the correct blood tube**

## Investigative & Monitoring Panels for Cattle

| | Health Screen [a] | Minerals | Mineral/Trace Elements |
|---|---|---|---|
| **CBC** | X | | |
| **TP** | X | | |
| **Alb** | X | | |
| **Glob** | X | | |
| **A/G** | X | | |
| **Mg** | X | X | X |
| **Ca** | X | X | X |
| **P** | X | X | X |
| **Copper** | | | X |
| **Se-deficiency (glutathione peroxidase)** | | | X |
| **B-hydroxy-butyrate** | X | | |
| **Glucose** | X | | |
| **GLD** | X | | |
| **AST** | X | | |
| **GGT** | X | | |
| **CK** | X | | |
| **Urea** | X | | |
| **Creatinine** | X | | |
| **Price € incl. VAT** | **37** | **21** | **32** |
| **Add Fibrinogen [a]** | **53** | **-** | **-** |

[a)] Fibrinogen is a useful additional test that can be added on for €16

**See A-Z index if the test you require is not displayed.**

***See page 6 for the correct blood tube**

**Note:** Avian, Rodent and Reptilian Panels please contact the laboratory for information (01) 7166161

## Endocrinology

We provide a twice weekly in-house endocrine service. Results are interpreted individually by specialist staff members, under the supervision of **Prof. Carmel Mooney RCVS Specialist in Small Animal Medicine (Endocrinology).** Emergency (STAT) samples can be accommodated by contacting the laboratory.

| Test Name | Sample Type | Price € incl VAT | Result Time (days) | Comments |
|---|---|---|---|---|
| **ACTH Stim (Cortisol x 2)** | 0.5ml serum/ plasma (x2) | 52 | 2-3 | See Protocol page 12 |
| **Anti-Mullerian Hormone (AMH)** | 1ml serum | 158 | 3-5 | |
| **Cobalamin** | 0.5ml serum/plasma | 21 | 2-3 | |
| **Cortisol** | 0.5ml serum/plasma | 30 | 2-3 | |
| **Endogenous ACTH (canine/feline)** | EDTA | 163/368 | Contact lab | See protocol page 12 Frozen EDTA plasma |
| **Folate & Cobalamin** | 1ml serum/plasma | 47 | 2-3 | |
| **Free T4** | 0.5ml serum/ plasma | 100 | Contact lab | Referral test |
| **Folate** | 0.5ml serum/plasma | 26 | 2-3 | |
| **LDDS (cortisol x 3)** | 0.5ml serum/ plasma x 3 | 68 | 2-3 | See Protocol page 13 |
| **Oestradiol** | 0.5ml serum | 142 | Contact lab | Referral test |
| **Progesterone (canine ovulation monitoring)** | 1ml serum (not gel) | 42 | Contact lab | See Protocol page 13 |
| **Sex Hormone Alopecia** | 2 x 0.5ml serum/ plasma | 189 | Contact lab | Referral test |
| **Testosterone** | 0.5ml serum | 105 | Contact lab | Referral test |
| **cTLI (canine)** | 1ml serum | 59 | 2-3 | |
| **TLI (feline)** | 1ml serum | 93 | Contact lab | Referral test |
| **cTLI/Folate/Cobalamin (canine)** | 2ml serum | 93 | 2-3 | |
| **Total T4** | 0.5ml serum/ plasma | 30 | 2-3 | See Protocol page 13 |
| **cTSH** | 0.5ml serum/ plasma | 34 | 2-3 | See Protocol page 13 |
| **Total T4/cTSH** | 1ml serum/ plasma | 64 | 2-3 | See Protocol page 13 |

## Canine and Feline Thyroid Panels

| | Canine Thyroid Panel | Feline Thyroid Panel |
|---|---|---|
| **CBC** | X | X |
| **TP** | X | X |
| **Alb** | X | X |
| **Glob** | X | X |
| **A/G** | X | X |
| **Na** | X | X |
| **K** | X | X |
| **Cl** | X | X |
| **Ca** | X | X |
| **P** | X | X |
| **Bilirubin** | X | X |
| **Cholesterol** | X | X |
| **Triglycerides** | X | X |
| **Glucose** | X | X |
| **ALT** | X | X |
| **ALP** | X | X |
| **Lipase (DGGR)** | X | X |
| **Urea** | X | X |
| **Creatinine** | X | X |
| **T4** | X | X |
| **TSH** | X | - |
| **Price € incl VAT** | **91** | **64** |

## Endocrinology Protocols

### ACTH Stimulation Test (Canine)

This assay is used to confirm hypo (Addison's) - or hypercortisolism (Cushing's) and assessing response to therapy in hypercortisolism *

**This test must be carried out 4 hours after trilostane therapy.*

1. Withdraw 3-5 ml of blood into a heparinised plasma or serum tube for cortisol measurement.
2. Mark tube "Pre ACTH".
3. Administer synthetic ACTH i/m or i/v (one vial 250µg Synacthen or 125µg if patient is <5kg) or alternatively use 5 µg/kg.
4. Collect a second sample 1-hour post administration.
5. Mark tube "Post ACTH".

### Endogenous ACTH Assay (Canine)

*NB: low temperature dependent assay. This assay differentiates pituitary dependent HAC from an adrenal tumour.

1. Withdraw blood into a chilled syringe and place blood into a chilled plastic EDTA tube. Do not use glass blood tubes.

2. Centrifuge immediately preferably using a refrigerated centrifuge.
3. Remove plasma with a pipette or decant by hand into a chilled plain plastic tube.
4. Freeze immediately. The sample must arrive in the lab frozen.
5. Ring prior to sending to ensure the lab is prepared.

### Low Dose Dexamethasone Suppression Test (LDDS Canine)

This test is used to diagnose Cushing's disease (hypercortisolism) and differentiate pituitary dependency from adrenal tumours.

1. Withdraw 3-5 ml of blood into a heparinised tube for cortisol measurement.
2. Mark tube "0 hour".
3. Administer soluble dexamethasone: 0.015-mg/kg i/v.
4. Take a second blood sample 3 hours post and a third sample 8 hours post.
5. Mark the tubes "3 hours post and 8 hours post".

### Thyroid Function Profiles (Canine and Feline)

The minimum requirement for diagnosing **hypothyroidism in dogs** involves assessing Total T4 and cTSH values. If the result is ambiguous, measurement of free T4 and thyroglobulin autoantibodies (TGAA) may be useful. A serum sample is preferred but heparinised plasma can also be submitted.

To diagnose **hyperthyroidism in cats** Total T4 is measured but adding TSH may be helpful in early cases. A free T4 measurement may be added in ambiguous results. A serum sample is preferred but heparinised plasma can also be submitted.

To monitor **thyroid hormone replacement therapy,** please collect the sample 6 hours post pill.

**Important:** *Certain drugs, particularly steroids, potentiated sulphonamides and phenobarbitone, are known to decrease Total T4 concentrations; therefore they should be withdrawn, if possible, 3-6 weeks prior to testing for hypothyroidism. Some of these e.g. potentiated sulphonamides also increase cTSH concentrations and can mimic results expected in primary hypothyroidism. If the drugs cannot be withdrawn please provide details on dosage and duration so that this may be taken into account for interpretation.*

### Parathyroid Hormone *PTH* * and PTHRrP (Canine & Feline)

*Referral test

This test is used to investigate persistent hypo or hypercalcaemia.
NB: low temperature dependent assay.

1. Collect blood into a chilled syringe and place into a chilled plastic EDTA tube.
2. Centrifuge immediately.
3. Decant plasma into a cold plain plastic tube.
4. Freeze immediately as sample must arrive at the lab frozen.

A serum sample is required also for calcium measurement. It is preferable that ionised rather than total calcium is measured. Special sample handling is required. Please contact the laboratory.

### Progesterone assay (Canine)

Progesterone can be used to determine **optimum time of breeding in bitches** by predicating timing of ovulation. Blood sampling can commence as soon as the bitch has started pro-oestrus (in other words is

bleeding). On average this period will take 9 days with a spread of 3-18 days. After pro-oestrus the bitch will continue into oestrus at the start of which she will ovulate.

Pre-ovulatory luteinisation as well as ovulation will cause progesterone concentrations in the blood to rise and therefore will allow for prediction of ovulation (and breeding) time. More than one sample might be required to pinpoint the optimum breeding time.

Progesterone determinations also can be useful for diagnosis of **ovarian remnant syndrome**.

1. Withdraw 3-5 ml of blood into a plain serum tube (**do not use gel tubes**).
2. Label the tube with the number of days since the start of bleeding/spotting.
3. Ensure that the sample is delivered by 2pm on the day of testing. STAT samples can be accommodated by contacting the laboratory.
4. To make sure you will determine the optimum breeding time, the sample should be taken on the day of testing or the previous day. (Before 11 am to allow time for courier collection and delivery).
5. Contact us for courier delivery instructions on (01) 7166136 (General Enquiries).
6. Ring the Endocrinology Lab if you need to discuss testing schedule.

## Packaging & Addressing Your Sample(s)

**Important**: Package all samples by following the packaging guidelines on page 4.
**Important:** All endocrinology samples should be addressed as follows:

**Endocrinology Laboratory**
**School of Veterinary Medicine**
**UCD**
**Belfield**
**Dublin 4**
**D04W6F6**

**Nationwide Courier**

**Mon-Fri Before 12pm**

**See page 23**

## Contact for Endocrinology Information

**Laboratory:** (01) 7166137/ (01) 7166161
**General Enquiries:** (01) 7166136

**Email:** ucdvetlab@ucd.ie

## Pathology (Biopsy & Post-mortem Examination)

We provide a biopsy and post-mortem examination service for the University Veterinary Hospital and to veterinary surgeons in general practice. The laboratory participates in the Cellular Pathology Techniques Quality Assurance Scheme run by **Animal Health and Veterinary Laboratories Agency (AHVLA), UK**

### Histopathology Service

| Test type | Sample Type | Price incl VAT € | Comment |
|---|---|---|---|
| **Biopsy examination** | Formalin fixed tissue | 68 | Up to 3 biopsies/sites/masses or 5 dermatology skin punch biopsies. Includes special stains[ac] |
| | Additional biopsies/sites/ masses or where samples have extensive or complex margins | 21 extra[b] | |
| **Histopathology on tissues submitted following a post-mortem exam carried out in a veterinary practice** | Formalin fixed tissue | 68 | Up to three tissue samples |
| | | 21 extra[b] | Where additional tissues are submitted |

[a] special stains are scheduled at the Pathologists discretion according to the requirements of the case. This does not include immunohistochemical stains.

[b] this charge is at the discretion of the Pathologist and is dependent on the complexity of the submission.

[c] additional supportive and confirmatory immunohistochemical diagnostics are provided through collaboration and outsourcing of samples to external veterinary diagnostic laboratories. Prices are listed in the A-Z index.

### Tissue Submission:

- Place tissue in 10% buffered formalin immediately after biopsy or post mortem examination.
- Ratio of tissue : formalin ( 1: >10) 1 part tissue : > 10 parts formalin
- Do not wash or freeze tissue prior to fixation.
- Use wide-necked screw capped plastic containers to contain the tissue.
- Before posting, the primary container should be placed inside a UN approved secondary container and marked **"Biological Substance Category B"**. (See packaging instructions page 4)
- A completed pathology request form (see page 23), detailing the relevant clinical history (*species, breed, sex, age, brief description of lesion and reason for sampling*), signed by the referring veterinarian should accompany all submissions. Providing a detailed history allows for better histological interpretation which will ultimately enhance the diagnostic outcome.

## Post-mortem Examination Service

| Post-mortem examination | Price incl. VAT € |
|---|---|
| **Cage bird/poultry (non-commercial)** | 63 [a] |
| **Small domestic animal (dog/cat/rabbit)** | 63 [ade] |
| **Laboratory/Exotic/Wildlife animal** | 63 [a] |
| **Adult bovine/equine/camelid** | 0 [b] |
| **Foal** | 0 [b] |
| **Pig/Sheep/Calf** | 0 [b] |
| **Commercial case** | 400+ [c] |

[a] The charge of €63 is currently discounted from €150. This discount is currently covered by the teaching budget of the School of Veterinary Medicine. Group cremation-no return of the body or ashes. Private cremation required please see [d] below.
[b] There is currently no charge for these post-mortem examinations (discounted from €200). Costs are subsidised by the teaching budget of the School of Veterinary Medicine and at the discretion of the Pathologist.
[c] Including suspect vaccine and drug reactions.
[d] Private cremation (ashes returned to owner) - please contact ucdvetlab@ucd.ie for costs.
[e] Additional private cremation handling charge for small animals >30kg

## Body Submission:

- A concise clinical history written by the referring veterinarian should accompany all submissions. See page 24 for submission form.
- Animals for post mortem examination should be delivered to the post mortem room at the UCDVH as soon as possible after death.
- Do not freeze body if submitting in less than 5 days. **Contact lab if it will be longer than this.**
- Please email clinical history to **ucdvetlab@ucd.ie** if no hardcopy is sent.
- **Due to Health and Safety restrictions, bodies submitted for postmortem examination cannot be returned. Selected tissues may be retained for the purposes of teaching and research unless the owner has specifically requested otherwise. See website for further info on tissue retention.**

## Addressing Your Sample Package(s)

**Pathology Laboratory**
**School of Veterinary Medicine**
**UCD**
**Belfield**
**Dublin 4**
**D04W6F6**

**or**

**Post-mortem Room**
**UCD Veterinary Hospital**
**UCD**
**Belfield**
**Dublin 4**
**D04W6F6**

## Pathology Contact Information

**Histopathology Laboratory:** (01) 7166162
**Post mortem room:** (01) 7166126
**General Enquiries:** (01) 7166136

**Email:** ucdvetlab@ucd.ie

## Parasitology

The Parasitology Laboratory is staffed by two board-certified Veterinary Parasitologists (European Veterinary Parasitology College EVPC) and highly experienced, qualified technical staff. It provides a full parasite diagnostic service capable of identifying and quantifying parasites from domestic and wild animal faeces, fluid and tissue samples.

| Test Name | Sample Type | Price € incl VAT | Result Time (days) | Comments |
|---|---|---|---|---|
| **Angiodetect test (+/- Modified Baermann)** | 0.5ml Serum/plasma & 10g fresh faeces | 26 | 1-2 | *Angiostrongylus vasorum* screen |
| ***Cryptosporidium* (stain only)** | Fresh faeces 0.5g | 10 | 1-2 | Oocyst shedding |
| ***Cryptosporidium*/ *Giardia* antigen** | Fresh faeces < 1g | 23 | 1-2 | All species |
| ***Entamoeba histolytica* antigen** | Fresh faeces <1g | 23 | 1-2 | All species |
| **Faecal larval culture** | Fresh faeces | 53 | 10 days | Worm larval ID |
| **Faecal egg count (McMaster)** | Fresh faeces 5g | 10 | 1-2 | Sensitivity 50epg |
| **Faecal egg count (mini-FLOTAC)** | Fresh faeces 5g | 12 | 1-2 | Sensitivity 5epg |
| **Faecal exam Routine (egg count, coccidia, fluke +/- lungworm)** | Fresh faeces 15g | 20 | 1-2 | McMaster egg count |
| **Faecal exam Premium (egg count, coccidia, fluke, crypto/giardia antigen +/-lungworm)** | Fresh faeces 15g | 26 | 1-2 | McMaster egg count |
| **Fluke check** | Fresh faeces 5g | 10 | 1-2 | Rumen & Liver fluke |
| **Lungworm screen** | Fresh faeces 10g | 10 | 1-2 | Modified Baermann test. All species |
| **Parasite ID** | Specimen | 53 | 1-5 | Specimen e.g. flea |
| ***Neospora caninum* antibodies** | 0.5 ml serum | 37 | 1-2 | Canine/Bovine IgG ELISA |
| **Skin ectoparasites (KOH technique)** | Skin sample | 18 | 1-2 | Scrape, pluck etc. |
| ***Toxoplasma gondii* antibodies IgG ELISA** | 0.5 ml serum | 32 | 1-2 | For IgG/IgM testing see Index |
| **4Dx (tick borne pathogen screen)** | Whole blood/serum or plasma | 37 | 1-2 | **Heartworm** (*Dirofilaria*), **Lyme disease**, ***Ehrlichia*** *canis/ewingii*, ***Anaplasma*** *phagocytophilum /platys* |
| **Anthelmintic efficacy** | Contact lab | 263 | 7-14 | **FECRT** |

## Packaging & Addressing Your Sample(s)

**Important**: Package all samples by following the packaging guidelines on page 4

**Important:** All parasitology samples should be addressed as follows:

**Nationwide Courier**

**Mon-Fri**
**Before 12pm**

**See page 23**

**Parasitology Laboratory**
**School of Veterinary Medicine**
**UCD**
**Belfield**
**Dublin 4**
**D04W6F6**

## Contact for Parasitology Information

**Laboratory:** (01) 7166168

**General Enquiries:** (01) 7166136

**Email:** ucdvetlab@ucd.ie

## Bacteriology/Mycology

The following information deals with the safe submission, receipt and processing of specimens sent to the Diagnostic Bacteriology and Mycology laboratory. Samples are sent from a variety of internal and external sources and it is imperative that they are handled in a safe manner to ensure limitation of risks to operating staff, in addition to ensuring sample preservation.

| Test Name | Sample Type | Price € incl VAT | Result Time (days) |
|---|---|---|---|
| **Coronavirus (bovine/canine)** | Faeces | 23 | Same day |
| **Culture (blood)** | Blood | 41 | 2-3[a] |
| **Culture (exotic)** | Faecal | 47 | 3[a] |
| **Culture (faecal)** | Faeces | 37 | 3[a] |
| **Culture (faecal) – incl. *Shigella* and *Yersinia*** | Faeces | 44 | 2-3[a] |
| **Culture fluids (BAL, joint fluid etc.)** | Fluid | 45 | 2-14[ab] |
| **Culture (milk)** | Milk | 34 | 2-14[ab] |
| **Culture (swab )** | Swab | 47 | 2-3[a] |
| **Culture (urine)** | Swab | 41 | 2-3[a] |
| **Dermatophyte culture** | Skin | 26 | Up to 21[c] |
| **Equine infertility screen** | Uterine swab/ flush | 33 | Max 5 days |
| **Environmental screening** | Swab | 16 | 1-2[a] |
| **Farm visit (milk)** | Milk | 18 | 2-14 |
| **Gram stain** | - | 13 | Same day |
| ***Malassezia* (sellotape strip stain)** | Sellotape | 16 | 5-14 |
| **MRSA culture** | Swab etc. | 23 | 2-3[a] |
| **Parvovirus detection (canine & feline)** | Faeces | 23 | Same day |
| **Rotavirus testing (multispecies)** | Faeces | 28 | 1-2 |
| **SDA fungal culture (*Aspergillus* spp.; not ringworm)** | Nasal | 16 | 2-5 |
| **Skin profile complete (microscopy, dermatophyte culture, bacterial culture)** | Skin | 49 | 2-21[ac] |
| **Skin scrape/hair pluck/skin swab (culture and microscopy)** | Skin | 39 | 2-3[a] |
| **Skin scrape/hair pluck microscopy** | Skin | 18 | Same day |
| **Vitek ID only / (AST MIC only)[d]** | Isolates | 13-16 | Same day |

**a) Includes antimicrobial susceptibility test results where relevant**
**b) Mycoplasma takes up to 14 days**
**C) Fungal/dermatophyte culture up to 21 days**
**d) Additional Vitek cards >3 isolates= €6 supplement**

## Sample Containers

- All **swabs** should be submitted using charcoal transport media swabs, if possible.
- **Urine** should be submitted in sterile universal containers as soon as possible. Catheterised or samples taken by cystocentesis are less likely to be contaminated.
- **Faecal** samples should be submitted in screw capped sterile containers.

- **Body fluids / aspirates** should be submitted in sterile screw capped plain tubes, without delay. Do not overfill containers.
- Contact the laboratory when considering request for **blood cultures,** as special culture bottles must be used.


The **VITEK System** (BioMérieux) is an automated system which can be used to rapidly identify bacterial organisms. Antimicrobial susceptibility testing can also be carried out using this equipment and provides quantitative results (minimum inhibitory concentrations (MIC) of the antibiotics for the organisms tested), as opposed to the qualitative results obtained with the current system (resistant vs. susceptible). Once the organism has been isolated and is available for testing, results from the VITEK System are available in as little as 2 hours. Currently, identification and susceptibility testing requires overnight incubation, i.e. a further 18 hours following isolation.

### Advantages of the VITEK system:

1. It is current international best standard
2. Results available approximately 24 hours earlier than at present
3. The availability of MIC data will allow the clinician to combine this data with pharmacokinetic data (available on the package insert or from a textbook) and thus calculate antimicrobial dosage more accurately. This results in dosage regimens that are more efficacious and ultimately more cost effective than simply utilising the labelled doses.
4. The use of appropriate antibiotics at effective dose levels also helps reduce antimicrobial resistance.
5. The data generated will enhance the quality of research papers requiring such results.
6. Adoption of this automated test system will result in faster turnaround and more consistent results.

### Antimicrobial susceptibility testing

Reports state **S = susceptible, I = intermediately susceptible, R = resistant** as well as the minimum inhibitory concentration (MIC) in µg/mL for each organism and antimicrobial agent tested

To encourage prudent prescribing practice and as per standard practice in human hospitals, reporting comprises a 2- tier system:

- Susceptibility results will be reported for a primary list of antibiotics that will include first choice agents for the particular organism / condition in question.
- Only if there is resistance resulting in there being no suitable product for treatment on the primary list, will susceptibility results to agents on the secondary list be released.
- In the event of isolation of a highly MDR organism, additional susceptibility testing using disk diffusion may be carried out.
- Susceptibility results to drugs that are reserved exclusively for human use will never be released (e.g. vancomycin, carbapenems).
- Some organisms are intrinsically resistant to a number of antimicrobial agents and thus these agents are never reported for such organisms - commonly =
    - **Enterococci are intrinsically resistant to all cephalosporins and potentiated sulphonamides**
    - ***E. coli* is intrinsically resistant to clindamycin**
    - ***Pseudomonas aeruginosa* is intrinsically resistant to many antimicrobial classes and thus the choice of antimicrobials is very limited**
- Clinical breakpoints for antimicrobial agents used **topically** have not been defined. Therefore the susceptibility results reported for organisms isolated from ear and eye samples relate only to antimicrobials administered systemically. Results cannot be extrapolated for topical use.

### How do I select the antimicrobial agent most likely to be effective based on the MIC data provided?

The actual MIC given on the report can be compared to the clinical breakpoint for each agent. If the MIC of the test organism is less than or equal to the clinical susceptibility breakpoint for a particular antimicrobial, the organism is deemed to be clinically susceptible to that agent. If it is greater than the susceptibility breakpoint, it is resistant to that agent.
If there is more than one agent to which the organism is susceptible and the agents are licensed for use and available for the animal you wish to treat, you can use the MIC to help decide which is likely to be *most effective* antibiotic in the clinical case.

The following example shows how MIC values can be used to select what may be the most effective agent:

### Example MIC report for a post-surgical wound in a dog infected with a susceptible *Staphylococcus pseudintermedius*

| Agent | Interpretation (R, I, S) | MIC (µg/ml) | Clinical Susceptibility Breakpoints (µg/ml)* |
|---|---|---|---|
| **Amoxycillin clavulanate** | S | <=2 | <=8 |
| **Cefalotin** | S | <=2 | <=2 |
| **Gentamicin** | S | <=0.5 | <=4 |
| **Clindamycin** | S | 0.25 | <=0.5 |
| **Doxycycline** | S | <=0.5 | <=4 |
| **Trimethoprim-sulphamethoxazole** | S | <=10 | <=40 |

* If the MIC is at or below this breakpoint, the isolate is susceptible. Note: MICs are tested using doubling dilutions of the antimicrobial in question, i.e. 0.5, 1,2,4,8,16, 32, 64 and so on.

Based on our **UCDVH prescribing guidelines** and the susceptibility pattern above, the following agents could be used to treat this dog.
Clindamycin, Cefalexin, Amoxicillin/clavulanate, Trimethoprim/sulphonamide

In general, the clinical breakpoint/ MIC ratio can be used as an indicator of potential efficacy of an antimicrobial when used clinically. The BP/MIC ratio for these 4 drugs =
Clindamycin: MIC = 0.25 and BP = 0.5. BP/MIC = 0.5/0.25 = 2
Cefalexin: (use cefalotin as a guide as it is also a 1st generation cephalosporin) BP/MIC = 2/2 = 1
Amoxicillin/clavulanate BP/MIC = 8/2 = 4
Trimethoprim/sulphonamide BP/MIC = 40/10 = 4

Therefore, based on this parameter, either amoxiclav or trim/sulph are potentially the most effective agents as they have the highest BP/MIC ratios. They are most likely to reach adequate concentration in the tissues.
Cefalexin has a ratio of 1 which means that the tissue concentration is only just sufficient to treat the infection. Any variation in dosing, bioavailability, tissue penetration or bacterial susceptibility could lead to lower **actual** tissue concentrations than **predicted** by the in vitro test and possible treatment failure.

Although such comparisons may be overly simplistic as they do not account for all factors, they can be useful as a guide to antimicrobial choice. In this case trimethoprim/sulpha is not active in the presence of pus (this is an infection by a pyogenic organism) and so amoxycillin/clavulanate would be the better choice.

Another factor which may be important in determining antibiotic choice is the route of excretion. For example, if an antibiotic is concentrated in the urine during excretion, it may be effective for treating urinary infections *in vivo* if, for example, the *in vitro* MIC result is one dilution above the susceptibility breakpoint. This is because the drug accumulates in urine to levels well above those achieved in plasma.

**Contact for Bacteriology/Mycology Information**

**Laboratory: (01) 7166173**
**Email: ucdvetlab@ucd.ie**

**Bacteriology/Mycology Laboratory**
**School of Veterinary Medicine**
**UCD**
**Belfield**
**Dublin 4**
**D04 W6F6**

# UCD Diagnostic Laboratories
# Courier Service

**DIAGNOSTIC SAMPLE OR POST MORTEM**

## Diagnostic sample

**Which county**

### Dublin
Freephone
1800 252 967

Mon-Fri before 12pm

**No charge**
Same day delivery

### Other county
Call 01 7166136 to register your practice

**€9 collection**

Next day delivery

**URGENT** direct collection can be accommodated call 01 7166136

## Post mortem max 15kg

**Which county**

### Dublin max 15kg
Freephone
1800 252 967

Mon-Fri before 12pm

**No charge**
Same day delivery

### Other county max 15kg
Direct same-day collection only

Call us 01 7166136 for quotation

**>15kg weight**
No service available. Call 01 7166136 for alternative companies

FAST DELIVERY

Tracked


Temperature controlled medical vehicles

FREE CALL

**Veterinary Diagnostic Laboratories**
**School of Veterinary Medicine**
**UCD Belfield**
**Dublin 4**
**D04 W6F6**
**E: ucdvetlab@ucd.ie**
General Enquiries: (01 7166136)
Pathology (biopsy): (01 7166162)
Pathology (necropsy): (01 7166126)

# Histopathology Submission Form

**Lab only**
Date received:

Staff:

Provet number:

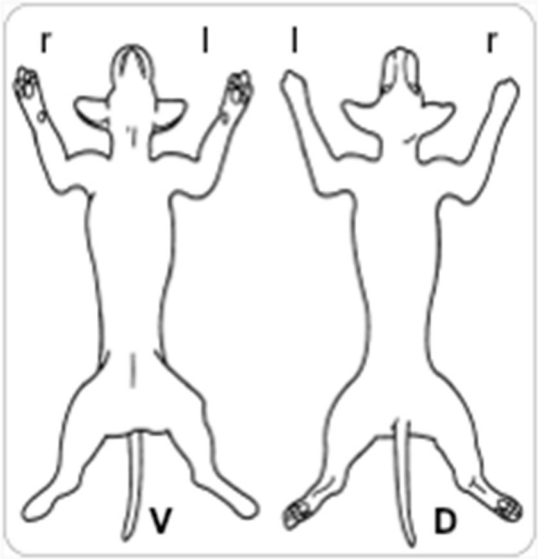
**Vet Name:** _____
**Practice Name:** _____
**Owner Name:** _____
**Animal Name:** _____
**Tag no.:** _____
**Species:** _____
**Breed:** _____
**Sex:** _____
**Date of Birth:** _____
**Neutered:** Yes ☐ No ☐
**Date taken:** _____

**Tissues to be submitted in 10% formalin, 1:10 ratio of tissue volume to formalin. Do not put large tissues into small pots. Please see page 4 of our catalogue for correct packaging instructions.**

**Tissues may be retained for the purposes of teaching and research unless the owner has specifically requested otherwise.**

**Samples submitted (list below and mark biopsy location on diagram)**

**Clinical History (including clinical signs, lab and/or imaging data, current medications etc.). Please do not leave this box blank.**




**Include photos of site of the lesion if possible**

**Gross Lesion Description (location, distribution, size, consistency etc.)**

**Veterinary Diagnostic Laboratories**
**School of Veterinary Medicine**
**UCD Belfield**
**Dublin D04 W6F6**
**E: ucdvetlab@ucd.ie**

Clinical Pathology (01 7166161/3/4)
Endocrinology (01 7166137)
General Enquiries (01 7166136)
Microbiology (01 7166173)
Parasitology (01 7166168)
Pathology (biopsy & necropsy): (01 7166162/26)

# Laboratory Submission Form

**Vet Name:** _____
**Practice Name:** _____
**Date sample taken:** _____

**Owner Name:** _____
**Animal Name:** _____
**Species:** _____
**Breed:** _____
**Sex: Male ☐ Female ☐ Neutered: Y ☐ N ☐**
**Date of Birth:** _____

**Laboratory Section:**

| | | | |
|---|---|---|---|
| Clinical Pathology | ☐ | Parasitology | ☐ |
| Endocrinology | ☐ | Pathology (separate form) | |
| Microbiology | ☐ | Virology | ☐ |

**Patient History/Relevant medical info**:

**Sample Type**

| **Blood** | | **Urine** | **Fluid** | **Other** | |
|---|---|---|---|---|---|
| ☐ Citrate | ☐ Serum | ☐ Catheter | ☐ Abdominal | ☐ Faecal | ☐ Smear |
| ☐ EDTA | | ☐ Cystocentesis | ☐ CSF | ☐ FNA | ☐ Swab |
| ☐ Fluoride oxalate | | ☐ Free catch | ☐ Pleural | ☐ Hair pluck | ☐ Swab (type) |
| ☐ Heparin | | ☐ Other _____ | ☐ Other_____ | ☐ Scrape | _____ |
| ☐ Serum | | | | | |

**Haematology (page 6-10)**
☐ Blood type
☐ Clotting times
☐ Complete blood count (CBC)
☐ Fibrinogen
☐ Slide agglutination test

**Biochemistry (page 6-10)**
☐ Bile acids
☐ Bile acid stim test
☐ Creatinine & Urea
☐ Electrolytes
☐ Total Proteins

**Health Panels (page 8-10)**
☐ Comprehensive ☐ Liver panel
☐ General Health screen ☐ Renal panel
☐ Other _____

**Urine**
☐ Urinalysis
☐ Urine protein:creatinine
☐ Urolith analysis (dry stone)
☐ Other _____

**Fluid/ FNA analysis**
☐ Cytology (up to 4 slides)
☐ Other _____

**Other _____**
☐ CRP ☐ Phenobarb
☐ cPLI ☐ SDMA
☐ Fructosamine

**Endocrinology (page 11-14)**

| | | | |
|---|---|---|---|
| ☐ ACTH Stim test | ☐ Feline Thyroid Panel | ☐ Progesterone | ☐ T4/TSH |
| ☐ Canine Thyroid Panel | ☐ Folate | ☐ T4 | ☐ TLI |
| ☐ Cobalamin | ☐ Low Dose Dex Suppression | ☐ TSH | ☐ Other _____ |

**Microbiology/Mycology/Virology (page 19-22)**
☐ Antimicrobial susceptibility ☐ FIV/FeLV
☐ Coronavirus (canine/bovine) ☐ FIP Serology
☐ Microscopy ☐ Parvo SNAP
☐ Mycology (fungal skin/resp) ☐ Rotavirus
☐ Routine culture (bacterial)
☐ Other _____

**Parasitology (page 17)**
☐ Angiodetect ☐ Lungworm (Mod Baermann)
☐ Cryptosporidium stain ☐ *Neospora caninum* (canine)
☐ Egg count (worm only) ☐ Parasite ID (tick/flea etc.)
☐ Faecal exam (routine) ☐ Skin ectoparasite check
☐ Giardia/Crypto antigen ☐ *Toxoplasma gondii* IgG antibodies
☐ Liver/Rumen fluke only ☐ 4Dx (Tick borne pathogens)
☐ Other _____

Veterinary Diagnostic Laboratories
School of Veterinary Medicine
UCD Belfield
Dublin 4
D04W6F6
E: ucdvetlab@ucd.ie
Pathology (necropsy): (01 7166126)
General Enquiries: (01 7166136)

# Post mortem Examination Submission Form

Lab only
Date received:

Staff member:

Provet number:

Frozen: Yes ☐ No ☐

Vet Name: _____
Practice Name: _____

Owner Name: _____
Animal Name/ID/tag no: _____

Species: _____
Breed: _____
Sex: _____
Weight: _____

Date of Birth: _____
Neutered: Yes ☐ No ☐

Died ☐ Euthanased ☐ Method of euthanasia_____
Date of death: _____

Abortion-foetus gestational age: _____
Placenta submitted: Yes ☐ No ☐

Legal case: Yes ☐ No ☐
(Additional charges apply; please contact us to discuss procedure)

Body disposal (bodies cannot be returned)

Group cremation (no ashes returned) ☐

Private cremation ☐

*Vessel for ashes: _____

*Scatter tube or tribute box; Note that ink paw prints must be done in own practice before PME submission.

**Important information when submitting carcasses**

- Notification must be received in advance that an animal is being submitted (contact details above).
- It is preferable to refrigerate rather than freeze bodies. Bodies should only be frozen if refrigeration is expected to be >5 days.
- The postmortem report will be sent directly to named practitioner above who is responsible for notifying owner of necropsy results.
- Due to Health and Safety restrictions, bodies submitted for postmortem examination cannot be returned following postmortem examination. Selected tissues may be retained for the purposes of teaching and research unless the owner has specifically requested otherwise. See website for further info on tissue retention.

**The following documents must accompany CATTLE for necropsy examination**

- Blue Animal Passport
- Herd Number
- Owner details

Clinical History Page 1/2: (include date of onset/duration of illness, clinical signs, treatments, vaccinations and dates etc.) or email history to ucdvetlab@ucd.ie

# A-Z Test Index

**(*referral tests may be subject to price change in 2023/24)**

| Test Name | Sample Type | € incl. vat | Turnaround time | Comments |
|---|---|---|---|---|
| **ACETLYCHOLINE RECEPTOR ANTIBODY** | 1ml serum | 242 | Contact lab | |
| **ACTH STIM TEST (CORTISOL X 2)** | 0.5ml serum/plasma (pre & post) | 52 | 2-3 days | See Protocols page 12 |
| **AHT (ANTI THROMBIN 111)** | Contact lab | 68 | Contact lab | Contact 01 7166161 |
| **ALBUMIN** | 0.5ml serum/plasma | 11 | Same day | |
| **ALDOSTERONE Single/Stim** | Contact lab | 59/179 | Contact lab | Contact 01 7166161 |
| **ALP** | 0.5ml serum/plasma | 11 | Same day | |
| **ALT** | 0.5ml serum/plasma | 11 | Same day | |
| **ANGIODETECT incl. MOD.BAERMANN** | 0.5ml serum/plasma &10g faeces | 26 | 1 – 2 days | *Angiostrongylus vasorum* screen |
| **ANTI-MULLERIAN HORMONE** | 1ml serum | 158 | Contact lab | |
| **ASPERGILLUS fungal culture** | Nasal swab/biopsy | 16 | 2-5 days | |
| **ASPERGILLUS SEROLOGY** | 0.5ml serum | 95 | 7 days | |
| **AVIAN PROFILE** | Contact lab | 158 | 2-3 days | Contact 01 7166161 |
| **BILE ACID STIMULATION** | 2 x 1ml serum | 21 | Same day | Pre and Post Prandial |
| **BILE ACIDS (1 sample)** | 1ml serum | 16 | Same day | |
| **BIOPSY** | Fixed Tissue | 68 | 5-7 days | Up to 4 blocks/case; Form page 24 |
| **BLOOD GROUPING (Feline)** | 1ml EDTA | 43 | Same day | |
| **BLOOD TYPE (Canine)** | 1ml EDTA | 43 | Same day | |
| **CALCIUM** | 0.5ml serum/plasma | 11 | Same day | |
| **CALICIVIRUS ISOLATION** | Swab | 53 | Contact lab | In viral transport medium |
| **CANINE OVULATION TEST** | 1ml serum (not gel) | 42 | Same day | Progesterone testing |
| **CBC (includes Retics)** | 1ml EDTA | 26 | Same day | *€16 as a panel add on |
| **CHLORIDE** | 0.5ml serum/plasma | 11 | Same day | |

| | | | | |
|---|---|---|---|---|
| **CHOLESTEROL** | 0.5ml serum/plasma | 11 | Same day | |
| **CK (CREATININE KINASE)** | 0.5ml serum/plasma | 11 | Same day | |
| **CLOTTING TIMES (PT & aPTT)** | 1ml sodium citrate | 16 | Same day | €16 each |
| **COBALAMIN** | 0.5ml serum/plasma | 21 | 2-3 days | |
| **COOMBS TEST** | 1ml EDTA | 53 | Contact lab | Contact (01) 7166161 |
| **CORONAVIRUS (bovine/canine)** | 1gm Faeces | 22 | Same day | |
| **CORONAVIRUS ANTIBODY** | 1ml serum | 53 | Contact lab | |
| **CORTISOL** | 0.5ml serum/plasma | 30 | 2-3 days | |
| **C- REACTIVE PROTEIN** | 0.5 ml serum | 42 | Same day | |
| **CREATININE** | 0.5ml serum/plasma | 11 | Same day | |
| **CROSS MATCH** | Contact lab | 84 | Same day | (01) 7166161 |
| **CRYPTOSPORIDIUM (stain)** | 0.5gm faeces | 10 | Same day | |
| **CRYPTOSPORIDIUM/GIARDIA ANTIGEN** | 1gm faeces | 23 | Same day | All species |
| **CULTURE (BLOOD)** | Blood | 41 | Contact lab | See page 19 |
| **CULTURE (EYE, WOUND, EAR etc.)** | Swab | 47 | 2-3 days | See page 19 |
| **CULTURE (Exotic faecal )** | Faecal | 47 | | |
| **CULTURE (FAECAL)** | Fresh faeces | 37 | 3 days | See page 19 |
| **CULTURE (FAECAL) incl. *Shigella* & *Yersinia*** | Fresh faeces | 47 | 3 days | See page 19 |
| **CULTURE (MILK)** | Fluid | 34 | 2-14 days | See page 19 |
| **CULTURE FLUIDS (BAL,CSF,JOINT etc.)** | Fluid/aspirate | 47 | 2-14 days | See page 19 |
| **CULTURE (SWAB)** | Swab | 47 | 2-3 days | See page 19 |
| **CULTURE URINE** | Urine | 41 | 2-3 days | See page 19 |

| CYTOLOGY (FNA + FLUID ANALYSIS) | 1ml EDTA | 58 | Approx. 1 week | Contact lab for STAT samples |
|---|---|---|---|---|
| DERMATOPHYTE CULTURE | Skin | 26 | Up to 21 days | Dermatophytes/Deo media |
| DISTEMPER ANTIBODY | 1ml EDTA | 84 | 7-14 days | |
| ELECTROLYTES | 1ml serum/plasma | 16 | Same day | |
| ENDOGENOUS ACTH | 1ml EDTA | 163/368 | Contact lab | €163 canine/ €368 feline |
| ENTAMOEBA HISTOLYTICA | 1g fresh faeces | 23 | 1-2 days | Antigen testing |
| ENVIRONMENTAL SCREENING | Swab | 16 | 1-2 days | |
| EQUINE INFERTILITY SCREEN | Swab | 33 | Max 5 days | |
| ERYTHROPOIETIN | 1ml frozen serum | 147 | 4 weeks | |
| EXERCISE INDUCED COLLAPSE | 1ml EDTA | 116 | Contact lab | |
| FAECAL CULTURE (parasite larvae) | Fresh faeces | 53 | 10 days | Parasite larval ID |
| FAECAL EGG COUNT | 5g fresh faeces | 10 | 1-2 days | McMaster Technique (sensitivity 50 eggs per gram) |
| FAECAL EGG COUNT | 5g fresh faeces | 12 | 1-2 days | Mini-FLOTAC (sensitivity 5 eggs per gram) |
| FAECAL EXAMINATION PREMIUM | min 20g fresh faeces | 26 | 1-2 days | Full parasite check incl. antigen testing |
| FAECAL EXAMINATION ROUTINE | min 15g fresh faeces | 20 | 1-2 days | Full parasite check minus antigen testing |
| FAECAL OCCULT BLOOD EQUINE | Large quantity of faeces (~50g) | 36 | 1-2 days | |
| FDP (FIBRIN DEGRADATION PRODUCTS) | 1ml sodium citrate | 20 | 14-21 days | Frozen NaCit plasma |
| FELV ANTIGEN | 1ml serum/plasma | 42 | Same day | |
| FELINE PANCREATIC LIPASE | 1ml serum | 105 | Same day | |
| FIBRINOGEN | 1ml serum/ plasma | 16 | Same day | |
| F.I.S.H | Formalin fixed tissue | 275 | 6 weeks | Fluorescent In Situ Hybridization |
| FIV/FELV | 1ml serum | 36 | Same day | |
| FLUKE (Rumen/Liver) | 3g fresh faeces | 10 | 1-2 days | |
| FOLATE + COBALAMIN | 1ml serum/plasma | 47 | 2-3 days | |
| FOLATE | 0.5ml serum/plasma | 26 | 2-3 days | |

| | | | | |
|---|---|---|---|---|
| **FOOD ALLERGY SCREEN** | 2ml serum | 167 | | |
| **FREE T4** | 0.5ml serum/plasma | 100 | Contact lab | |
| **FRUCTOSAMINE** | 0.5ml serum | 32 | Same day | |
| **GIARDIA ANTIGEN** | 1g fresh faeces | 23 | 1-2 days | |
| **GLOBULIN** | 0.5ml serum/plasma | 11 | Same day | |
| **GLUCOSE** | 0.5ml fluoride oxalate | 11 | Same day | |
| **GLUCOSE TOLERANCE TEST** | Fluoride oxalate x 9 | 30 | Same day | |
| **GPx** | 1ml heparinised plasma | 16 | 7 days | |
| **GRAM STAIN** | | 13 | Contact lab | |
| **HAEMOBARTONELLA PCR** | 1ml EDTA | 84 | Contact lab | |
| **HEARTWORM ANTIGEN** | 1ml serum/plasma | 74 | Contact lab | |
| **HERPES VIRUS PCR-CANINE** | Contact lab | 84 | Contact lab | |
| **IgE TESTING (Skin Allergy)** | >4ml serum | 307 | Contact lab | |
| **IGF-1** | 1ml serum | 179 | Contact lab | |
| **IMMUNOHISTOCHEMISTRY (mast cell tumour tests)** | Contact lab | 90-190 | 7-10 days | Ki67 C-Kit staining |
| **IMMUNOHISTOCHEMISTRY (tumour phenotype marker)** | Contact lab | 70 | 7-10 days | Per antigen per block |
| **IMMUNOHISTOCHEMISTRY (infectious agent)** | Contact lab | 70 | 7-10 days | Per antigen per block |
| **IMMUNOPHENOTYPING** | Contact lab | 158 | | |
| **INHIBIN** | Contact lab | 238 | Contact lab | |
| **INSULIN (Canine/Equine)** | 1ml serum | 84 | Contact lab | |
| **IODINE (plasma inorganic)** | 1ml serum | 147 | Contact lab | |
| **IRON** | 0.5ml serum | 23 | Contact lab | |
| **JOHNES PCR** | 1ml serum | 48 | | |
| **LDDS (Cortisol X 3)** | 0.5ml serum or plasma x 3 | 68 | 2-3 days | See protocol page 13 |
| **LEAD** | 1ml EDTA whole blood | 74 | Contact lab | |
| **LEPTOSPIRA (DNA) PCR** | 1ml serum | 84 | Contact lab | |
| **LUNGWORM SCREEN** | Fresh faeces | 10 | 1-2 days | Modified Baermann test |
| **LYME DISEASE** | 0.5ml serum/plasma/WB | 37 | Contact lab | 4Dx tick borne pathogen screen |
| **LYMPHOCYTE CLONALITY TESTING (PARR)** | Contact lab | 168 | 7-10 days | |

| | | | | |
|---|---|---|---|---|
| **MAGNESIUM** | 1ml serum | 11 | Same day | |
| **MALASEZZIA** | Skin/sellotape strip | 16 | 5-14 days | |
| **MASTIACATORY MUSCLE MYOSITIS** | 1-2ml serum | 242 | Contact lab | |
| **MDR1 GENE DEFECT** | 1ml EDTA | 79 | | Ivermectin sensitivity |
| **MRSA SCREENING (External)** | Swab etc. | 23 | 2-3 days | |
| **NEOSPORA CANINUM ANTIBODY** | 0.5ml serum | 37 | 1-2 days | |
| **OCCULT BLOOD (Equine)** | 50 gm faeces | 32 | Same day | |
| **OESTRADIOL** | 0.5ml serum | 142 | Contact lab | |
| **OHP-17-OH-PROGESTERONE** | 1ml serum/plasma | 137 | Contact lab | |
| **PANCREATIC LIPASE** | 1ml serum | 105 | Same day | Canine Pancreatic Lipase cPL |
| **PARTIAL THROMBOPLASTIN TIME** | 1ml sodium citrate | 16 | Same day | |
| **PARVOVIRUS SNAP** | 2g faeces | 23 | Same day | Canine & Feline |
| **PHENOBARBITAL** | 0.5ml serum (**no gel tubes**) | 49 | Contact lab | |
| **PHOSPHOROUS** | 0.5ml serum/plasma | 11 | Same day | |
| **POST MORTEM LARGE/FARM ANIMAL** | Carcass | 0 | Contact lab | Contact Lab in Advance (01) 7166126/36 |
| **POST MORTEM COMMERCIAL** | Carcass | >400 | Contact lab | Contact Lab in Advance (01) 7166126/36 |
| **POST MORTEM SMALL ANIMAL (private cremation extra)** | Carcass | 63 | Contact lab | Contact Lab in Advance (01) 7166126/36 |
| **POTASSIUM** | 0.5ml serum/plasma | 11 | Same day | |
| **POTASSIUM BROMIDE** | 1ml serum | 84 | Contact lab | |
| **PRO BNP FELINE** | EDTA | 80 | Contact lab | |
| **PROGESTERONE** | 1ml serum (not gel) | 42 | Contact lab | Canine ovulation; Protocol page 13 |
| **PROTEINS TOTAL** | 0.5ml serum | 16 | Same day | |
| **PROTHROMBIN TIME** | 1ml Sodium citrate | 16 | Same day | |
| **PTH PLASMA** | Frozen EDTA plasma | 158 | Contact lab | Contact Lab in Advance |
| **PTH RELATED PEPTIDE** | Frozen EDTA plasma | 299 | Contact lab | Contact (01) 7166161 |
| **RABIES TEST incl CERTIFICATE** | 3ml serum | 163 | Contact lab | Contact (01) 7166161 |
| **RHEUMATOID FACTOR** | 1ml serum | 68 | Contact lab | |

| | | | | |
|---|---|---|---|---|
| **(Canine/Feline)** | | | | |
| **ROTAVIRUS** | Faeces | 28 | 1-2 days | Multispecies test (farm and small) |
| **SARCOPTES SEROLOGY** | 1ml serum | 89 | Contact lab | |
| **SDMA** | 1ml serum/plasma | 53 | | |
| **SERUM PROTEIN ELECTROPHORESIS** | 1ml serum | 44 | Contact lab | |
| **SEX HORMONE ALOPECIA PROFILE** | 2 x 0.5ml serum | 189 | Contact lab | Contact (01) 7166161 |
| **SKIN ECTOPARASITES (Direct KOH)** | Scrape/pluck | 18 | Same day | |
| **SKIN PROFILE COMPLETE (Direct/swab/fungal culture)** | Skin | 49 | 2-21 days | |
| **SODIUM** | 1ml serum/plasma | 11 | Same day | |
| **TESTOSTERONE** | 0.5ml serum | 105 | Contact lab | |
| **TICK BORNE PATHOGENS 4Dx SNAP** | 1ml whole blood/serum/plasma | 37 | 1-2 days | Heartworm/Lyme/Ehrlichia/Anaplasma |
| **TLI CANINE** | 1ml serum only | 59 | 2-3 days | |
| **TLI FELINE** | 1ml serum only | 93 | Contact lab | |
| **TLI, FOLATE & COBALAMIN (Canine)** | 2ml serum | 93 | 2-3 days | |
| **TOTAL T4** | 0.5ml serum/plasma | 30 | 2-3 days | |
| **TOXICOLOGY GENERAL** | Contact lab | ~195 | 3-5 days | (01) 7166161 |
| **TOXICOLOGY + ETHYLENE GLYCOL** | Contact lab | ~220 | 3-5 days | |
| **TOXICOLOGY + ORGANIC COMPOUND** | Contact lab | ~295 | 3-5 days | |
| **TOTAL T4/TSH** | 1ml plasma/serum | 64 | 2-3 days | |
| **TOXOPLASMA IgG/IgM** | 1ml serum | 116 | Contact lab | |
| **TOXOPLASMA ANTIBODIES IgG** | 0.5ml serum/plasma | 32 | 1-2 days | SNAP test |
| **TRIGLYCERIDES & CHOLESTEROL (LIPIDS)** | 0.5ml serum | 15 | Same day | |
| **TRITRICHOMONAS PCR** | 2g fresh faeces | 74 | Contact lab | Contact lab (01) 7166161/68 |
| **TROPONIN** | 0.5ml separated serum | 64 | Contact lab | No gel tubes |

| | | | | |
|---|---|---|---|---|
| **TSH** | 0.5ml plasma/serum | 34 | 2-3 days | |
| **UREA** | 0.5 ml serum/plasma | 11 | Same day | |
| **UREA AND CREATININE** | 0.5ml serum/plasma | 16 | Same day | |
| **URINALYSIS** | >2mls fresh urine | 26 | Same day | €21 as a profile add-on |
| **URINE CREATINE/CORTISOL RATIO** | Urine | 58 | Same day | |
| **URINE PROTEIN ELECTROPHORESIS** | 1ml urine | 47 | Contact lab | |
| **URINE SPECIFIC GRAVITY** | 2ml urine | 5 | Same day | |
| **URINE: PROTEIN/CREATININE RATIO** | 5ml urine | 16 | Contact lab | |
| **UROLITH ANALYSIS** | Urolith (dry stone) | 0 | 4 weeks | Email ucdvetlab@ucd.ie for submission form |
| **VACCINATION STATUS** | 2ml serum | 152 | Contact lab | |
| **VITAMIN E TEST** | 1ml serum | 62 | Contact lab | |
| **VITEK AST/MIC ONLY** | Bacterial isolates | 13 | Same day | |
| **VITEK ID only** | Bacterial isolates | 16 | Same day | |
| **VON WILLEBRANDS FACTOR** | Sodium citrate plasma on ice | Contact lab | Contact lab | (01) 7166161 |
| **VON WILLEBRANDS PCR** | 1ml EDTA | Contact lab | Contact lab | Plus additional courier charge |
| **ZINC** | 0.5ml separated serum | 11 | Contact lab | *See page 6 for correct tube |