

UCD School of Veterinary Medicine Scoil an Leighis Tréidliachta UCD



Prices in this catalogue reflect the direct costs of sample analysis that we charge our veterinary practitioner clients. This does not take into consideration any charges for obtaining samples, consumables used, postage & packing (if applicable) and any additional costs for interpretation by said practices.

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#### **About Us**

The Veterinary Diagnostic Laboratories at the School of Veterinary Medicine, UCD is a leading facility providing comprehensive diagnostic and support services to our internal clinical service, as well as veterinary professionals and researchers nationwide.

Equipped with state-of-the-art technology, our laboratories offer a wide range of diagnostic tests and analyses, including clinical pathology, morphological pathology, microbiology, parasitology, and molecular diagnostics.

Our services provide a crucial role in animal health monitoring, disease prevention, and treatment strategies.

Additionally, our laboratories play a vital role in veterinary education and training, offering students hands-on experience and opportunities to engage in cutting-edge research under the guidance of experienced faculty members and specialised technical staff.

Our commitment to innovation and quality assurance helps advance veterinary science and improve animal health and welfare.







## **Sample Submission**



#### **Submission forms**

Please see pages 34-37 for sample and necropsy submission forms.

#### **Submission Do's**

Submit all **owner** and **animal** details e.g. name, tag number on ALL containers.

Please ensure your **practice name** and **contact details** are clearly displayed on all request forms.

Please ensure handwriting is legible.

Please use correct **blood tubes**, **containers** and appropriate **packaging** for transport.

Ensure all **lids** are secured tightly to prevent leakage in transport.

#### **Submission Don'ts**

No unlabelled or illegible writing on tubes or slides.

Do not sellotape the lids of tubes.

Do not send glass slides or tubes unless suitably protective packaging is used.

If we receive a sample that is of poor quality e.g. haemolysed, we may not be able to complete the required tests. It is in your best interests to use the correct equipment and follow exact SOPs to optimise results.

#### **Protocols**

Please contact us if you require a test protocol that is not displayed in our catalogue.







### **General Information**

#### **Laboratory contact Information**

Biochemistry (01) 7166161 / 63 Cytology (01) 7166161 Endocrinology (01) 7166137 / 61 Haematology (01) 7166161 Microbiology (01) 7166173 Parasitology (01) 7166168 Pathology (01) 7166162 Post mortem (01) 7166126/36/62

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

Opening Hours Mon-Fri 9am to 5pm

#### **Results reporting**

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

#### **Financial information**

Prices in this catalogue reflect the direct costs of sample analysis that we charge our veterinary practitioner clients. This does not take into consideration any charges for obtaining samples, consumables used, postage & packing (if applicable) and any additional costs for clinical interpretation by said practices.

We envisage that all prices displayed will remain current until end 2025. We reserve the right to alter prices at any stage if required, especially external referral and specialised testing.

Payment on all invoices is required within 30 days. Queries with payment should be directed to our **Finance team (01) 7166007** or **vetfinance@ucd.ie** 







## Packaging & Labelling Requirements UN3373 Biological Specimens

#### TRIPLE PACKAGING SYSTEM P650



Diagnostic specimens, assigned to **UN3373**, are animal materials that are being transported only for the purpose of diagnosis or investigation.

They are referred to as **Biological substances Category B.**Such materials include excreta, blood and it's components, as well as other tissues and fluids.

Diagnostic specimens do not include live infectious animals.



#### The packaging should consist of three components:

(i) a leak-proof **primary** receptacle(s);

(ii) a leak-proof secondary packaging; and

(iii) an **outer** <u>rigid</u> packaging of adequate strength for its capacity, mass and intended use, and with at least one surface having minimum dimensions of 100 mm × 100 mm;



For **liquids**, absorbent material in sufficient quantity to absorb the entire contents should be placed between the primary receptacle(s) and the secondary packaging so that, during transport,

any release or leak of a liquid substance will not reach the outer packaging and will not compromise the integrity of the cushioning material;



When multiple fragile primary receptacles are placed in a single secondary packaging, they should be either individually wrapped or separated to prevent contact between them.



#### **Nationwide Courier Service**

Transport bags and UN3373 compliant labels available to order free of charge when registered with our nationwide courier collection service.

(01) 7166136 or ucdvetlab@ucd.ie to register

## Nationwide Veterinary Diagnostic Courier Service





Our courier companies provide a highly efficient and reliable medical specimen and post mortem collection service nationwide.

Please contact us to register your practice

(01) 7166136 ucdvetlab@ucd.ie



Or Post mortem

Diagnostic sample

Post mortem

Max 15kg

#### **Dublin**

Freephone
1800 252 967
Mon-Fri
before 12pm
No charge

Same day delivery

#### **Other county**

Call (01) 7166136 to register your practice

€9 ex vat Next day delivery

#### **Dublin**

Freephone
1800 252 967
Mon-Fri
before 12pm
No charge
Same day delivery

#### Other county

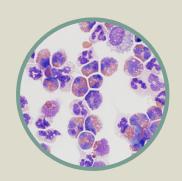
Direct same day collection

Call (01) 7166136 for quotation

- Online booking and tracking
- Temperature controlled vehicles
- Flexible collection times

>15kg weight

No service Call (01) 7166136 for alternative options



#### **Blood tubes**

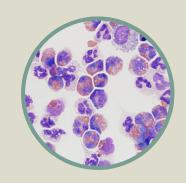
After identifying which laboratory test or panel is required please choose the correct blood tube from the list below. Colours and size will vary depending on which species of animal is being investigated.

Tube Type	Function
EDTA whole blood	Haematology of most species (except reptilian/avian); Lead
Fluoride oxalate	Glucose
Heparin (plasma)	Biochemistry incl. enzymes & potassium
Heparin (whole blood)	Reptilian/avian haematology; GPx
Plain (serum)	General biochemistry; bile acids; copper; endocrinology; serology
Sodium citrate	Clotting times (APTT/OSPT); Von Willebrand's factor antigen

#### **Veterinary Diagnostic Laboratories**

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Biochemistry (01) 7166161 / 63 Cytology (01) 7166161 Endocrinology (01) 7166137 / 61 Haematology (01) 7166161



#### **Common Clinical Pathology tests**

Test	Price € (incl.VAT)
CBC a	28 (17 panel add on)
Clotting times	34
Comprehensive profile	72
Cytology/FNA b	75
Cytology/Fine needle aspirate additional sites c	37.50
Cytology/Fine needle aspirate additional slide	15
Repeat Cytology/Fine needle aspirate	37.50
General Health profile	50
Liver profile (incls CBC)	67
Photomicrographs of stained FNA smear <sup>e</sup>	34
Renal profile (incl UPCR)	50
SDMA	56
Urinalysis <sup>f</sup>	30
Urine Protein: Creatinine ratio	17

a- Includes reticulocytes

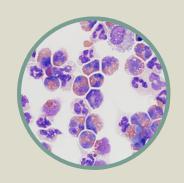
b-1 site, up to 4 slides

c- Per each additional site, Exception: €15 per site for additional lymph node or /joint FNAs when they are of the same tissue type as the first site.

d- Per each additional slide more than 4, in addition to any other charges for number of sites

e- Up to 10 .jpg images characterising the smear. Contact laboratory

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



#### Single parameters/ Focused Panels

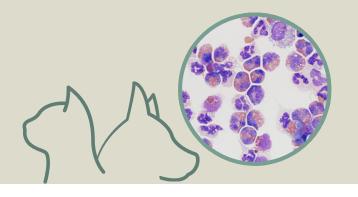
Test	Price € (incl.VAT)
Any 1 single enzyme or metabolite	12
Any 3 single enzymes or metabolites	23
Any 5 enzymes or metabolites	34
Any 10 enzymes or metabolites	45
Bile acids	17
Bile acid stimulation test (BAST)	23
C-Reactive protein	45
Electrolytes	17
Fibrinogen	17
Fructosamine	34
lodine (plasma inorganic) a	155
Ionised calcium (time sensitive)	41
Lipids (triglycerides, cholesterol)	17
Liver enzymes each (ALP, ALT, AST,GLD)	17
Urea & Creatinine	17

a) Time sensitive. Needs to be analysed within 1 hour. Direct courier available. Extra charge.

#### **Veterinary Diagnostic Laboratories**

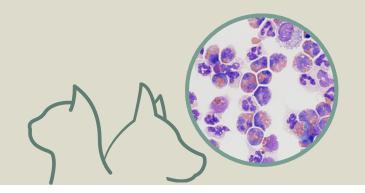
School of Veterinary Medicine UCD Belfield, Dublin 4 D04 W6F6 e: ucdvetlab@ucd.ie

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### **Investigative & Monitoring Panels (Canine/Feline)**

Test	Comprehensive	Health screen	Liver	Renal
A/G	x	x	Х	Х
Alb	X	X	X	Х
ALP	X	X	X	
ALT	X	X	X	
Anion gap	X			Х
AST	X		X	
AST/ALT	X		X	
Bile acids-post			X	
Bile acids-pre			X	
Bilirubin	X	X	X	
Ca	X	X		X
СВС	X	X	X	Х
Cholesterol	X	X	X	Х
СК	X			
CI	X	X		Х
Creatinine	X	X		X
GGT	X		X	
GLD	X		X	
Glob	X	X	X	X
Glucose	X	X	X	X
K	X	X		X
Lipase DGGR	X	X		
Na	X	X		X
P	X	X		X
TCO2	X			X
TP	X	X	X	X
Triglycerides	X		X	
UPC ratio				X
Urea	X	X	X	X
Urinalysis				X
Price € (incl.VAT)	72	50	67	75
Add Urinalysis	97	75	92	75



#### **Investigative & Monitoring Panels (Canine/Feline)**

\*UPC= Urine Protein Creatinine ratio

- a) It is recommended to carry out TLi, Folate and Cobalamin testing.
- b) Please note that urinalysis will be performed at the special discounted rate of €25 if ordered at the same time as the Health Screen, Comprehensive, Liver or Thyroid Panels.

#### Rabies serology testing/Travel Screens

\*For animals travelling outside of the EU, export and/or rabies certificates are generally required. It is the responsibility of the veterinarian to ensure they are complying with the rules of the specific country in which the animal is entering.

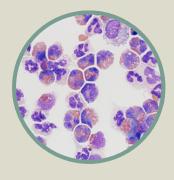
We liaise with several referral laboratories that are accredited for testing samples and producing export certificates for Australia, New Zealand and South Africa. Please contact us directly (01) 7166161 or ucdvetlab@ucd.ie for further information.

#### **Veterinary Diagnostic Laboratories**

School of Veterinary Medicine UCD Belfield, Dublin 4 D04 W6F6 e: ucdvetlab@ucd.ie

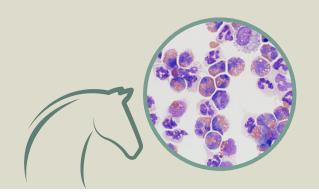
**Biochemistry** (01) 7166161 / 63 **Cytology** (01) 7166161 **Endocrinology** (01) 7166137 / 61 **Haematology** (01) 7166161





## **Investigative & Monitoring Panels Equine**

Test	Comprehensive	Health screen	Liver	Renal
A/G	X	x	Х	Х
Alb	X	X	Х	Х
ALP	X	X	X	
ALT	X	X	X	
Anion gap	X			X
AST	X		X	
AST/ALT	X		X	
Bile acids-post			X	
Bile acids-pre			X	
Bilirubin	X	X	X	
Ca	X	X		X
СВС	X	X	X	X
Cholesterol	X	X	X	X
СК	X			
CI	X	X		X
Creatinine	X	X		X
GGT	X		X	
GLD	X		X	
Glob	X	X	X	X
Glucose	X	X	X	X
K	X	X		X
Lipase DGGR	X	X		
Na	X	X		X
P	X	X		X
TCO2	X			X
ТР	X	X	X	X
Triglycerides	X		X	
UPC ratio				X
Urea	X	X	X	X
Urinalysis				X
Price € incl VAT	72	50	67	75
Add Urinalysis	97	75	92	75



#### **Investigative & Monitoring Panels Equine**

\*UPC= Urine Protein Creatinine ratio

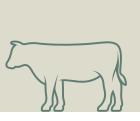
- a) Please note that urinalysis will be performed at the special discounted rate of €25 if ordered at the same time as the Health Screen, Comprehensive, or Liver Panels.
- c) Add **Fibrinogen** for €17

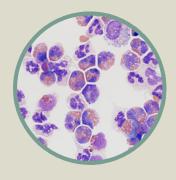
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**Biochemistry** (O1) 7166161 / 63 **Cytology** (O1) 7166161 **Endocrinology** (O1) 7166137 / 61 **Haematology** (O1) 7166161





## **Investigative & Monitoring Panels Ruminants**

Test	Health screen	Mineral profile
A/G	X	
Alb	X	
AST	X	
B-hydroxy butyrate	X	
Ca	X	X
CBC	X	
СК	X	
Creatinine	X	
GGT	X	
GLD	X	
Glob	X	
Glucose	X	
Mg	X	X
P	X	X
TP	X	
Urea	X	
Price € incl VAT	39	30
Add Fibrinogen	56	47

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We provide an in-house Endocrine Service, with twice weekly (Tuesday & Thursday) analyses. Each individual result generated by the Laboratory is specifically interpreted by an accredited Specialist in Endocrinology or Reproduction under the supervision of **Professor Carmel Mooney, RCVS Specialist in Small Animal Medicine** (Endocrinology). STAT samples can be accommodated by contacting the Laboratory directly.

Test	Sample Type	Result time (days)	Comments	Price € incl. VAT
ACTH Stim (cortisol x 2)	1ml serum/plasma	2-3	Protocol page 16; cortisol x 2 (1ml x 2)	54
Anti-Mullerian hormone (AMH)	1ml serum	3-5	Referral test	166
Cobalamin	1ml serum/plasma	2-3		23
Cobalamin & Folate	1ml serum/plasma	2-3		67
Cortisol	1ml serum/plasma	2-3	Basal cortisol	32
Endogenous ACTH	1ml EDTA	Contact lab	Frozen EDTA; Protocol page 16	Contact lab
Folate	1ml serum/plasma	2-3		32
Free T4	1ml serum/plasma	Contact lab		105
LDDS	1ml serum/plasma	2-3	Protocol page 17; cortisol x 3	72
Oestradiol	1ml serum	Contact lab	Referral test	150
Progesterone	1ml serum (not gel)	Same day	Protocol page 19	45
Sex Hormone Alopecia	2 x 1ml serum/plasma	Contact lab		199
Testosterone	1ml serum	Contact lab	Referral test	111
Tli canine	1ml serum	2-3	Serum only	62
Tli feline	1ml serum	Contact lab	Serum only	97
Tli/Folate/Cob	2ml serum	2-3	Serum for Tli	97
Total T4	0.5ml serum/plasma	2-3	Protocol page 17	32
Total T4/ TSH	1ml serum/plasma	2-3	Protocol page 17	68
тѕн	0.5ml serum/plasma	2-3	Protocol page 17	36



### **Thyroid Investigate & Monitoring Panels (Canine/Feline)**

Test Name	Canine Thyroid Panel	Feline Thyroid Panel
A/G	X	X
Alb	X	X
ALP	X	X
ALT	X	X
Bilirubin	X	X
Ca	X	X
СВС	x	x
Cholesterol	X	X
CI	X	X
Creatinine	X	X
Glob	X	X
Glucose	X	X
K	X	X
Lipase DGGR	X	X
СВС	X	X
T4	X	X
тѕн	X	-
Price € incl VAT	96	68

#### **Veterinary Diagnostic Laboratories**

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#### **Endocrinology Protocols**

#### **ACTH Stimulation Test**

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 250mg Synacthen or 125mg if patient is <5kg) or alternatively use 5 mg/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 hypercortisolism 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. Contact laboratory prior to sending to ensure the lab is prepared.



#### **Endocrinology Protocols**

#### 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"O 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 cases. 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.



#### **Endocrinology Protocols**

#### Parathyroid Hormone PTH \* and PTHrP (Canine & Feline)

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.

Special sample handling is required.
Please contact the laboratory (01) 7166161

#### **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.** 



#### **Endocrinology Protocols**

#### **Progesterone assay continued (Canine)**

- 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. Contact the Endocrinology Lab if you need to discuss testing schedule.

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The following information deals with the safe submissiom, receipt and processing of specimens sent to the Diagnostic Bacteriology and Mycology laboratory. Samples are submitted from a variety of internal and external sources, therefore 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	Result time (days)	Price €incl. VAT
Coronavirus (bovine/canine)	Faeces	1	25
Culture blood	Blood	2-7	44 <sup>a</sup>
Culture exotic	Faeces	3	50 <sup>a</sup>
Culture faecal	Faeces	3	39 <sup>a</sup>
Culture faecal incl. Shigella & Yersinia	Faeces	2-3	46 <sup>a</sup>
Culture fluids (BAL, joint etc)	Fluid	2-14	50 <sup>ab</sup>
Culture milk	Milk	2-14	36 <sup>ab</sup>
Culture swab	Swab	2-3	50 <sup>a</sup>
Culture urine	Urine	2-3	44 <sup>a</sup>
Dermatophyte culture	Skin/Swab	Up to 21	28 <sup>c</sup>
Environmental screening	Swab	1-2	17 <sup>a</sup>
Equine infertiity screen	Uterine swab/Flush	2-3	35
Farm visit (milk)	Milk	2-14	19
Gram stain	-	1	14
Malassezia (sellotape strip stain/culture)	Sellotape strip	1-14	17
MRSA culture	Swab etc.	2-3	25 <sup>a</sup>
Parvovirus ELISA (canine/feline)	Faeces	1	25
Rotavirus (multispecies)	Faeces	1	30
SDA fungal culture (Aspergillus spp.; not ringworm)	Nasal swab	2-5	17
Skin profile complete	Skin	2-21	52 ace
Skin scrape/hair pluck microscopy only	Skin	1-2	19 <sup>a</sup>
Skin scrape/hair pluck/skin swab (culture)	Skin	2-3	46



- 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
- e) Includes microscopy, dermatophyte culture, bacterial culture
- f) Includes culture and microscopy

#### **Sample Submission**

- 1. All swabs should be submitted using charcoal transport media swabs, if possible.
- 2. Urine should be submitted in sterile universal containers as soon as possible. Catheterised or samples taken by cystocentesis are less likely to be contaminated.
- 3. Faecal samples should be submitted in screw capped sterile containers.
- 4. Body fluids / aspirates should be submitted in sterile screw capped plain tubes, without delay. Do not overfill containers.
- 5. Contact the laboratory when considering request for blood cultures, as special culture bottles must be used.



#### The VITEK System

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 previous disk diffusion 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.



#### **The VITEK System**

#### Advantages of the VITEK system:

- 1. It is an internationally accepted method.
- 2. Results available approximately 24 hours earlier than with other conventional methods.
- 3. The availability of MIC data will allow the clinician to determine the BP/MIC ratio and assess potency. This may assist with the selection of the most appropriate antibiotic for use.
- 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 (S.I.R)**

Reports state S = susceptible, I = intermediately susceptible, R = resistant as well as the minimum inhibitory concentration (MIC) in  $\mu g/mL$  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.



#### **Antimicrobial Susceptibility Testing**

- 1.In the event of isolation of a highly MDR organism, additional susceptibility testing using disk diffusion may be carried out.
- 2. Susceptibility results to drugs that are reserved exclusively for human use will never be released (e.g. vancomycin, carbapenems).
- 3. Some organisms are intrinsically resistant to a number of antimicrobial agents and thus these agents are never reported for such organisms
- 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.

## Selecting the antimicrobial agent most likely to be effective based on the MIC data provided?

- 1. 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.
- 2. 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.



## Selecting the antimicrobial agent most likely to be effective based on the MIC data provided?

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

Example (below) of a MIC report for a post-surgical wound in a dog infected with a susceptible *Staphylococcus pseudintermedius* 

Agent	Interpretation (S,I,R)	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



## Selecting the antimicrobial agent most likely to be effective based on the MIC data provided?

\* 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.



## Selecting the antimicrobial agent most likely to be effective based on the MIC data provided?

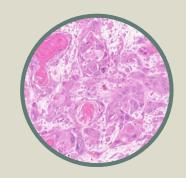
Another factor which may be important in determining antibiotic choice is the route of excretion. For example, if an antibiotic is concentrated in the urine during excretion, it may be effective for treating urinary infections in vivo if, for example, the in vitro MIC result is one dilution above the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

**Veterinary Diagnostic Laboratories** 

School of Veterinary Medicine UCD Belfield, Dublin 4 D04 W6F6 e: ucdvetlab@ucd.ie

Microbiology Contact (01) 7166173

## Morphological Pathology Biopsy analysis Post mortem service



Our Morphological Pathology Service is staffed by a team of board-certified Veterinary Pathologists (Royal College of Pathologists [RCPath] and European College of Veterinary Pathologists [ECVP]) and highly experienced, qualified technical staff.

The laboratory participates in the **VETQAS®** Cellular Pathology Technique UKAS accredited Proficiency Testing scheme run by the The Animal and Plant Health Agency (APHA). We provide a comprehensive biopsy and post mortem service encompassing all animal species nationwide.

#### **Histopathology Biopsy Analysis**

Test Name	Sample Type	Comment	Price € incl. VAT
Biopsy examination	Formalin fixed tissue	Up to 3 biopsies/sites/masses or 5 dermatology skin punch biopsies. Includes special stains	72 <sup>ac</sup>
Diopsy examination	Additional biopsies	Additional biopsies/sites/masses or where samples have extensive or complex margins	23 b
Equine Uterine Biopsy	Biopsy & Swab	Diagnosis of equine endometritis	79
Histopathology on tissues submitted	Formalin fixed	Up to 3 tissue samples	72 <sup>b</sup>
following a necropsy carried out in- practice	tissue	Where additional tissues are submitted	23

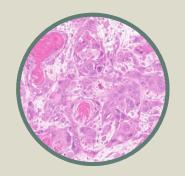
a) Special stains are scheduled at the Pathologists discretion according to the requirements of the case. Does not include immunohistochemical stains.

b) This charge is at the discretion of the Pathologist and is dependant 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.

## **Morphological Pathology**





#### **Tissue Submission Guidelines**

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 histopathology request form (see page 35)**, 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

#### **Equine Endometrial Biopsy Service**

In collaboration with Niamh Lewis and our equine reproduction team, a report will include a pathologist's report and a clinical interpretation by a boarded equine reproduction specialist.

Endometrial biopsies should be taken in early oestrus for maximal diagnostic relevance. Endometrial biopsies together with a swab of the biopsy sample before placing in formalin are known as the **gold standard in diagnosis of endometritis** and can assist in directing treatment strategies as well as providing a prognosis for future fertility.

Please accompany your biopsy with the correct submission form (see page 37)

## **Morphological Pathology**

#### Post mortem service



Post-mortem examination	Price € incl. VAT
Avian (Non commercial cage bird/indoor avian only)	67 <sup>af</sup>
Commercial case	440+ <sup>c</sup>
Companion animal (small domestic e.g. dog/cat/rabbit etc.)	67 <sup>ade</sup>
Farm Animal (bovine/equine/ovine etc.)	O b
Wildlife	67 af

- a The charge of €67 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. No legal cases accepted.
- **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. No legal cases accepted.
- **c** Including suspect vaccine and drug reactions. No legal cases accepted.
- **d** Private cremation (ashes returned) please contact <u>ucdvetlab@ucd.ie</u> for costs.
- **e** Additional private cremation handling charge for small animals >30kg
- **f** See page 30 for Avian influenza post mortem information

#### **Turnaround time**

Please note a **preliminary** post mortem report will be emailed to the referring practice within **10-14 days**.

Full completed report, especially within term time can take approx 10-12 weeks.

Please note that in a small number of cases extra diagnostics may be needed, and the final report may exceed this time frame.

## **Morphological Pathology**

#### Post mortem service



#### **Body Submission**

A concise **clinical history** written by the referring veterinarian should accompany all submissions. See page 35 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 <u>ucdvetlab@ucd.ie</u> if no hardcopy is sent.

Due to Health and Safety restrictions, **bodies submitted for post mortem examination cannot be returned** following post mortem examination. This is a teaching and research institution and as such, samples and anonymised data collected may be used and retained to further our knowledge of diseases in animals.

#### **Important Information - Avian Influenza**

Due to the continued heightened risk posed by avian influenza, we regret to inform you that we are currently temporarily unable to accept waterfowl, poultry, wild birds, and exhibit birds for post-mortem examination. If you require post-mortem examination on such birds, please contact your local Department of Agriculture, Food & the Marine Laboratory at:

Email: <u>info@backweston.agriculture.gov.ie</u>

Telephone: (01) 6157100

Post Mortem Room
Veterinary Diagnostic Laboratories
School of Veterinary Medicine
UCD Belfield, Dublin 4
D04 W6F6
e: ucdvetlab@ucd.ie

Post Mortem Contact
(01) 7166126 Laboratory
(01) 7166136 / 62 General Enquiries

## **Parasitology**



Our Parasitology Laboratory is staffed by two board-certified Veterinary Parasitologists (EVPC European Veterinary Parasitology College) and highly experienced, qualified technical staff. It provides a full parasite diagnostic service capable of diagnosing parasites from domestic and wild animal faeces, blood or tissue samples. Specialist advice on animal parasitic diseases is given to the agricultural industry and veterinary profession. The laboratory also participates in the VETQAS® accredited Proficiency Testing scheme run by the The Animal and Plant Health Agency (APHA)

#### **Parasite Control**

Despite the availability of effective drugs, parasites still remain an important health issue for both domestic farm animals and pets. The common and often indiscriminate use of anthelmintics has led to the development of anthelmintic resistance, which has become a significant problem in all farm animals.

The old approach of repeated blanket treatment to control parasites is no longer sustainable. Changing weather patterns, combined with different housing and grazing systems used in Irish farms, necessitate a more tailored parasite control programme. This involves regular monitoring of parasite exposure in conjunction with a more strategic treatment approach.

#### **Sheep Improvement Scheme (DAFM)**

The **Sheep Improvement Scheme** provides financial support to farmers for taking extra steps to improve the welfare of their flock. The Sheep Improvement Scheme has been introduced to enhance animal health and welfare in the sheep sector and requires farmers to go beyond mandatory standards.

One of the targeted welfare areas includes parasite control involving **Faecal Egg Count** testing. UCD are an approved DAFM Laboratory under this scheme. More information and sample submission kits can be requested by contacting our laboratory **ucdvetlab@ucd.ie** or **(01) 7166168** 

## **Parasitology**



### **Test Guide**

Test Name	Sample Type	Result time (days)	Comments	Price € incl VAT
Anthelmintic efficacy	Fresh faeces	7-14	FECRT %; min 10 animals	277
Angiodetect test (+/- Modified Baermann)	1ml Serum/plasma & 10g fresh faeces	1-2	Angiostrongylus vasorum screen	28
Cryptosporidium (stain)	Fresh faeces <1gm	1-2	Oocyst shedding; all species	11
Cryptosporidium/Giardia antigen	Fresh faeces <1gm	1-2	All species	25
Entamoeba histolytica antigen	Fresh faeces <1gm	1-2	All species	28
Faecal larval culture	Fresh faeces 50gm	10-14	Worm larval ID	56
Faecal egg count	Fresh faeces 5gm	1-2	McMaster; Sensitivity 50epg	11
Faecal egg count mini-FLOTAC	Fresh faeces 5gm	1-2	Sensitivity 5epg	13
Faecal exam Routine (egg count, coccidia, fluke, +/- lungworm)	Fresh faeces min 15gm	1-2		21
Faecal exam Premium (egg count,coccidia,fluke, crypto/giardia antigen, +/- lungworm)	Fresh faeces 15gm	1-2		28
Fluke check	Fresh faeces 5gm	1-2	Rumen & Liver fluke	11
Haemonchus PNA staining	Fresh faeces 5-10gm	2	Min egg count required 1000epg	50
Lungworm screen	Fresh faeces 10gm	1-2	Mod Baermann test All species	10

## **Parasitology**



#### Test Guide

Test Name	Sample Type	Result time (days)	Comments	Price € incl VAT
Neospora caninum antibodies	1ml Serum/plasma	1-2	ELISA All species	39
Parasite identification	Specimen	1-2	Tick, flea etc	56
Skin ectoparasites	Skin/Hair	1-2	Direct microscopy	19
Toxoplasma gondii IgG antibodies	1ml Serum/plasma	1-2	ELISA All species	34
Toxoplasma gondii IgG/IgM	2ml Serum	1-2	IFAT	122
4Dx Tick-borne pathogen screen	1ml Whole blood/serum/ plasma	1-2	Heartworm, Lyme disease, <i>Ehrlichia,</i> <i>Anaplasma</i>	39

Parasitology Laboratory Veterinary Diagnostic Laboratories

School of Veterinary Medicine UCD Belfield, Dublin 4 D04 W6F6

e: ucdvetlab@ucd.ie

#### **Parasitology Contact**

(01) 7166168 Laboratory

(01) 7166136 General Enquiries



#### **Veterinary Diagnostic Laboratories**

#### **Laboratory Submission Form** School of Veterinary Medicine UCD Belfield Dublin Vet Name: \_\_\_\_\_ D04 W6F6 E: ucdvetlab@ucd.ie Practice Name: \_\_\_\_\_ Date sample taken: \_\_\_\_\_ Clinical Pathology (01) 7166161/3/4 Endocrinology (01) 7166137 General Enquiries (01) 7166136 Owner Name: \_\_\_\_\_ Microbiology (01) 7166173 Parasitology (01 7166168 Animal Name: \_\_\_\_\_ Pathology (biopsy & necropsy): (01 7166162/26 Species: **Laboratory Section:** Breed: Clinical Pathology Parasitology Sex: Male Female Neutered: Y N Endocrinology Pathology (separate form) Date of Birth: \_\_\_\_\_ Microbiology Virology Patient History/Relevant medical info: Sample Type Urine Blood Fluid Other Faecal Citrate Catheter CSF ☐ FNA ☐ EDTA Cystocentesis ☐ Swab Fluoride oxalate Free Catch Pleural Swab type \_\_\_\_\_ Heparin Other \_\_\_\_\_ Other \_\_\_\_\_ Scrape Scrape □ Serum Haematology **Biochemistry Health Panels** ■ Blood type ☐ Bile acids Comprehensive Liver panel Clotting times ☐ Bile acids stim test General Health screen Renal panel ☐ Complete blood count (CBC) Creatinine & Urea Other \_\_\_\_\_ Fibrinogen Electrolytes ☐ Slide agglutination test ☐ Total Proteins Urine Fluid/FNA analysis Other \_\_\_ Phenobarb Urinalysis Cytology (1 site up to 4 slides) ☐ CRP Additional site ☐ PLI (canine/feline) SDMA Urine protein: creatinine Urolith analysis (dry stone) Specify site\_\_\_\_\_ Fructosamine Other \_\_\_ **Endocrinology** ACTH Stim test Feline Thyroid Panel Progesterone T4/TSH Canine Thyroid Panel Folate ☐ TLI ☐ Low Dose Dex Suppression ☐ TSH □ Cobalamin Other \_ Microbiology/Mycology/Virology Parasitology Antimicrobial susceptibility Lungworm (Mod Baermann) ☐ FIV/FeLV Angiodetect ☐ Coronavirus (canine/bovine) ☐ FIP Serology Cryptosporidium stain Neospora caninum (canine) Microscopy Parvo SNAP Egg count (worm only) Parasite ID (tick/flea etc.) Faecal exam (routine) Skin ectoparasite check Rotavirus ☐ Routine culture (bacterial) Giardia/Crypto antigen Toxoplasma gondii IgG antibodies Other \_\_\_\_\_ ☐ Liver/Rumen fluke only ☐ 4Dx (Tick borne pathogens) Other \_\_\_\_



#### **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

Lab only_
Date received:
Staff:
Provet number:

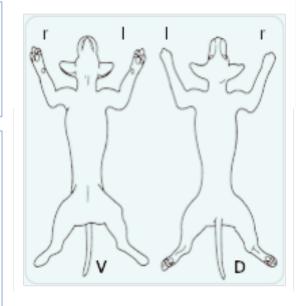
### **Histopathology Submission Form**

/et Name:
Practice Name:
Owner Name:
Animal Name:
ag no.:
pecies:
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. This is a teaching and research institution and as such, samples and anonymised data collected may be used and retained to further our knowledge of diseases in animals.

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 4 D04 W6F6 E: ucdvetlab@ucd.ie

**Pathology (necropsy):** (01) 7166126 **General Enquiries**: (01) 7166162/36

Lab only
Date received:
Staff member:
Provet number:
Frozen: Yes No

### Post mortem Examination Submission Form

Vet Name:Practice Name:
Owner Name:
Animal Name/ID/tag no:
Species:
Breed:
Sex: Male □ Female □
Weight:kg
Date of Birth:
Neutered: Yes □ No □

Died ☐ Euthanased ☐
Method of euthanasia:
Date of death:
Abortion-foetus gestational age:
Placenta submitted: Yes   No

## Body disposal (bodies cannot be returned)

П

Group cremation (no ashes returned)

Private cremation

\*Vessel for ashes: \_\_\_\_\_

\*e.g. Scatter tube or tribute box; Note that ink paw prints must be completed in practice before PME submission.

#### Important information when submitting an animal for necropsy:

- · 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 post mortem 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 post mortem examination cannot be returned following post mortem examination. This is a teaching and research institution and as such, samples and anonymised data collected may be used and retained to further our knowledge of diseases in animals.
- By submitting this form, you, on behalf of the owner, are agreeing to our terms and conditions.

#### The following documents must accompany CATTLE for necropsy examination:

- Blue Animal Passport
- · Herd Number
- · Owner details

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



	Owner Name:					
	Animal Name/ID/tag no:					
eterinary Diagnostic Laboratories Chool of Veterinary Medicine CD Belfield Dublin 4 04 W6F6	Breed:					
ucdvetlab@ucd.ie or niamh.lewis@ucd.ie	Date of Birth:					
athology (necropsy): (01) 7166126 eneral Enquiries: (01) 7166162/36	This is a teaching and research institution and as such,					
Lab only: Date received:	tissue samples and anonymised data collected may be used and retained to further our knowledge of diseases in animals.  Volume of tissue: formalin 1:>10					
Lab no:	Number of sample(s) submitted and location(s):					
Provet number:						
Reproductive history:						
Has the mare had foals previously?	(circle) Yes/No					
If yes: how many						
Date of last foaling:						
Is there history(ies) of any pregnancy placentitis, abortion) Outline details:	or parturition complications (incl early embryonic loss,					
If the mare has had issues conceiving	g:					
How many breeding attempts have the	here been during the infertility period :					
Semen used (fresh/cooled/frozen) : _						
Is the mare used for embryo transfer	or to carry her foal :					
Have there been any diagnosed infections sensitivity, treatment(s) and/or interval.	tions? If yes, please give details (infectious organism, vention(s) attempted:					
	<del></del>					
Does the mare have issues with fluid	around cover (circle) Yes/No					
Has any anatomical defect of the rep	roductive tract been identified If yes,					

**Endometrial Biopsy Submission Form** 

Vet Name: \_\_\_\_\_

Practice Name: \_\_\_\_\_

Have any US changes been detected (variation of echogenicity, heterogenous uterus)

Test Name	Sample	ml/g	Comment	Price €
Acetylcholine receptor Ab	S	1		255
ACTH stim test	HP/S	1	1ml x 2 (pre and post cortisol)	54
Additional biopsy/ complex margins	Biopsy/FFT			23
Albumin	HP/S	0.5		12
Aldosterone single	HP/S		Contact lab 01 7166161	122
Aldosterone stim test	HP/S		Contact lab 01 7166161	188
Alpha-1 AGP	HP/S	1		39
Anaplasma phag. Ab	S	1		78
Anaplasma sp. PCR	EDTA	1.5		89
Angiodetect incl baermann	F/S/HP	0.5	Serum/plasma antigen result plus faecal larvae	28
Anthelmintic efficacy	F		FECRT%; min 10 animals	277
Anti-mullerian hormone	S	1		166
Anti-nuclear antibodies	S	1		101
Aspergillus serology	S	1		100
Avian full profile	LH whole blood		Contact lab 01 7166161	166
Babesia sp. PCR	EDTA	1		89
Bartonella PCR	EDTA	1		89
Bartonella serology	S	1		89
Basal cortisol	HP/S	0.5-1		32
Bence Jones protein	S	1		147
Bile acids	S	1		17

### **Sample Type**

**B**= Blood

E= EDTA

**F**= Faeces

**FIOx**= Fluoride Oxalate

**FI**= Fluid

**FFT**= Formalin Fixed Tissue

**FSC**=Frozen Sodium Citrate

#### **Sample Type**

**HP**= Heparinised plasma

**S**= Serum

**S**\*= Serum not gel

**SC**=Sodium Citrate

**SW**= Swab

**U**= Urine

Test Name	Sample	ml/g	Comment	Price €
Bile acid stim test	S	2	2 x 1ml serum	23
Biopsy	Biopsy/FFT			72
Blood culture	Blood	1+		44
Bordetella PCR	EDTA	1		89
Borrelia antibody	S	1		77
Borrelia sp. PCR	EDTA	1		89
Bovine health screen	EDTA/HP/S	2		39
BRAF mutation	Urine	1+		185
Calicivirus antibody	S	1		199
Canine blood type	EDTA	1		46
Carnitine	EDTA plasma	1		255
CBC	EDTA	1.5		28
CBC add on	EDTA	1.5		17
Centronuclear myopathy	EDTA	1.5		83
Chlamydophila felis PCR	Swab			61
Clotting times	SC	1.5	PT & aPTT	34
Cobalamin	HP/S	0.5-1		23
Complete iron profile	S	1	Total iron TBIC plus % transferrin	105
Comprehensive biochem	HP/S	1.5		50
Comprehensive profile	EDTA/HP/S	1.5		72
Coombs test	EDTA	1.5		56

#### **Sample Type**

**B**= Blood

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**F**= Faeces

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#### **Sample Type**

**HP**= Heparinised plasma

**S**= Serum

**S**\*= Serum not gel

**SC**=Sodium Citrate

**SW**= Swab

**U**= Urine

Test Name	Sample	ml/g	Comment	Price €
Coronavirus antibody	S	1		56
Coronavirus antigen	F	1+	Bovine/Canine	25
C-Reactive protein	S	1		45
Crossmatch	Contact lab		Haematology lab 01 7166161	126
Cryptosporidium stain	F	0.5		11
Culture faecal	F	1		39
Culture faecal incl Shigella/Yersinia exotics	F	1		46
Culture milk	Milk	5+		36
Culture urine	Urine	1+		44
Culture fluids /biopsies	Fluid		CSF, Joint etc	50
Culture swab	Swab		Eye, woumd, ear etc	50
Cyclic neutropenia	EDTA			83
Cyclosporine	EDTA			155
Cystinuria	EDTA			83
Cytology				61
Cytology additional slide				15
Cytology additionall tissue				37.50
D-dimers	SC plasma	1.5		56
Degenerative myelopathy/ radiculomyelopathy	EDTA	1.5		83
Dermatophye/fungal culture	Skin			28

#### **Sample Type**

**B**= Blood

**E**= EDTA

**F**= Faeces

**FIOx**= Fluoride Oxalate

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#### **Sample Type**

**HP**= Heparinised plasma

**S**= Serum

**S\*=** Serum not gel

**SC**=Sodium Citrate

**SW**= Swab

**U**= Urine

Test Name	Sample	ml/g	Comment	Price €
Distemper antibody	S	1		89
Distemper PCR	EDTA	1.5		89
Dry FIP profile	HP	1.5		94
Electrolytes	HP/S	1.5		17
<b>Endogenous ACTH</b>	Contact lab		Canine	172
Endogenous ACTH	Contact lab		Equine	63
Endogenous ACTH	Contact lab		Feline	387
Entamoeba histolytica antigen	F	0.5+		28
Environmental screen	Swab			17
Episodic falling PCR	EDTA	1.5		83
Equine uterine biopsy	Biopsy		submission form page 37	79
Erythropoietin	Contact lab		01 7166161	155
Exercise induced collapse	EDTA	1.5		122
Factor VII or IX	Contact lab			67
Faecal calprotectin	F	1		53
Faecal egg count	F	3	McMaster or mini FLOTAC epg	11
Faecal elastase	F	2		50
Faecal larval culture/ID	F	10+		56
Faecal occult blood	F	50	min 50gm faeces	34
Faecal occult blood canine	F	50	min 50gm faeces	31
Familial nephropathy	EDTA	1.5		83

### **Sample Type**

**B**= Blood

E= EDTA

**F**= Faeces

**FIOx**= Fluoride Oxalate

**FI**= Fluid

**FFT**= Formalin Fixed Tissue

**FSC**=Frozen Sodium Citrate

#### **Sample Type**

**HP**= Heparinised plasma

**S**= Serum

**S**\*= Serum not gel

**SC**=Sodium Citrate

**SW**= Swab

**U**= Urine

Test Name	Sample	ml/g	Comment	Price €
Feline blood group	EDTA	1.5		46
FeLv antigen	S	1		45
FeLv provirus PCR	EDTA	1		89
Fibrinogen	SC	1		17
FIV IFA	S	1-2		111
Flea saliva antibody	S	1		50
Fluke check	F	3	Liver/rumen fluke	11
Foal immunodeficiency syndrome IFS	EDTA	1.5+		83
Folate	HP/S	0.5-1		32
Folate and Cobalamin	HP/S	1		67
Free T4	HP/S	1		105
Fructosamine	HP/S	1		34
Fungal culture-not ringworm	Skin			17
General panel (CBC/biochem)	EDTA/HP/S	1.5/1	Canine/feline	72
Giardia/Cryptosporidium antigen	F	1		25
Glucose tolerance test	FlOx	-	Fluoride oxalate x 9 Contact lab 01 7166161	32
GnRh stimulation	S	1	Oestradiol x 2	177
Gram stain	F	1		14
Health screen	EDTA/HP/S	1.5/1		50
Heartworm (Dirofilaria)	HP/S	1	Antigen testing	78
Herpes serology	S	1		152

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#### **Sample Type**

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Test Name	Sample	ml/g	Comment	Price €
lgF-1	S	1		188
Immunocytochemistry	Slides			199
Immunophenotyping	EDTA	1.5	Leukemia/Lymphoma flow cytometry	289
Immunophoresis	S	1	IgA/IgG/IgM levels	415
Inhibin	S	1		250
Insulin	S	1	Canine	89
Ionised calcium	Lit Hep	1-2	Time sensitive	41
Lawsonia intracellularis	F	1	PCR	78
LDDS	HP/S	1	1ml x 3	72
Lead	EDTA	1.5		78
Leishmania	EDTA	1.5	PCR	89
Leishmania IFAT	S	1	IFAT antibody	89
Lepto antibody	S	1	MAT	111
Leptospira PCR	EDTA/U	1.5		89
Leukocyte adhesion deficiency	EDTA	1.5		83
Lipids	HP/S	1	Triglycerides and cholesterol	17
Liver biochem only	HP/S	1		50
Liver enzymes	HP/S	1		17
Liver profile	EDTA/HP/S	1.5/1	CBC and Biochem	67
Malassezia	Skin		Sellotape strip	17
Mastiactory muscle myositis	S	1+	2M antibodies	255

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Test Name	Sample	ml/g	Comment	Price €
MDR1 gene defect	EDTA	1.5	lvermectin sensitivity	83
Microbiota dysbiosis index	F	-	Contact lab 01 7166161	158
Mini FLOTAC	F	3	Egg count sensitivity 5epg	13
Mod Baermann	F	10	Lungworm larvae all species	10
MRSA screening	Swab			25
Mycobacterium PCR	EDTA	1.5	BAL plain	409
Mycoplasma	EDTA	1.5	BAL	89
Mycoplasma felis PCR	EDTA	1.5		89
Neospora caninum antibodies	HP/S	1	All species	39
Neospora CSF PCR	CSF			89
Nexmune- PAX allergy	S	4+	Complete environmental panel	368
Nexmune allergy	S	4+	Complete food and environmental	504
Nexmune allergy	S	4+	Complete food panel	263
Oestradiol	S	1		150
Oestrone sulphate equine	S	2+		111
Ovulation monitoring canine	S	1	Progesterone	45
Pancreatic lipase canine	S	1		63
Pancreatic lipase feline	S	1		63
Parasite ID	Specimen		Flea, tick etc	56
Parathyroid PTH hormone	Contact lab		Special requirements call 01 7166161	166
Parathyroid related peptide PTHrP	Contact lab		Special requirements call 01 7166161	250

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Paroxysmal dyskinesia	EDTA	1.5		83
Parvo ELISA	F	1+		25
Parvovirus antibody	S	1		83
Parvovirus PCR	Rectal/F swab			78
Phenobarbital	S no gel	1		52
PKD PCR feline	EDTA	1.5		83
Pneumocystis spp. PCR	Nasal swab			83
Post mortem commercial	Body			440+
Post mortem small animal	Body		Not including private cremation	67
Post mortem large animal	Body		See submission form for document details	0
Potassium bromide	S	1		89
Premium faecal exam	F	15		28
Primary ciliary dyskinesia	Contact lab		PCD	83
Pro-BNP	EDTA plasma	1.5		89
Progesterone canine	S	1		45
Progesterone equine	S	1		42
Progressive retinal atrophy	EDTA	1.5	Optigen	83
Progressive retinal atrophy	EDTA	1.5		83
PSSM-Polysaccharide storage myopathy	EDTA	1.5		89
PTH-PThRP	Contact lab		Special requirements call 01 7166161	314
Rabies serology	S	1+	Contact lab for further info 01 7166161	172

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Renal biochem only	HP/S	1		50
Renal profile	EDTA/HP/S/U	1.5/1	CBC Biochem UPCR	67
Renin	Contact lab		01 7166161	343
Reptile comprehensive	Contact lab		01 7166161	133
Resting bile acids	S	1	Fasted	17
Rheumatoid factor	S	1		72
Rickettsia PCR	EDTA	1.5		89
Rocky mountain fever	S	1		32
Rotavirus	F	1+	All species	30
Routine faecal exam	F	15	3-5gm if no lungworm screen is needed	21
Sarcoptes serology	S	1		94
SDMA	HP/S	1		56
Selenium	S	1		32
Serum amyloid A	S	1		34
Serum protein electrophoresis	S	1-2		46
Sex hormone alopecia profile	S	2+		199
Single metabolite/enzyme	HP/S	1		12
Skin ectoparasites	Skin/Hair			19
Skin profile complete	Swab		Direct swab/fungal culture	52
Skin profile plus culture	Swab			46
Skin profile direct KOH	Skin			19

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Test Name	Sample	ml/g	Comment	Price €
Slide agglutination test	EDTA	1.5		6
SNAP 4Dx plus	S	1	Tickborne disease	39
Specific gravity	U	1+		5
Strep equi antibody titre	S	1		67
Strep equi culture	Swab			67
Strep equi PCR	Swab			68
Strep equi PCR/culture	Swab			144
T4	HP/S	1		32
T4/TSH	HP/S	1		68
Taurine	HP/S	1		501
Testosterone	S	1		111
TgAA	HP/S	1		111
Thiamine	EDTA	1.5		31
Thyroid function canine	EDTA/HP/S	1.5/1		96
Thyroid function feline	EDTA/HP/S	1.5/1		68
TLi canine	S	1		62
TLi feline	S	1		97
TLi Folate Cobalamin	S	1		97
Total iron	S	1		25
Total proteins	HP/S	1		17
Toxicology	Contact lab	-		326+

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Toxoplasma IgG	HP/S	1		34
Toxoplasma IgG/IgM	S	2		122
Trichogram	Hair			67
Triglycerides	HP/S	1		12
Triple respiratory profile	Contact lab		Virus isolation FHV PCR/C.felis PCR	100
Tritrichomonas foetus PCR	F	1+	Rectal loop or colonic wash is recommended	78
Troponin	S	1		68
TSH	HP/S	0.5		36
UPCR	U	1	Urine protein creatinine ratio	17
Urea and creatinine	HP/S	1		17
Urinalysis	U	5+		30
Urinalysis add on	U	5+		25
Urine creatinine:cortisol	U	1		61
Urine protein electrophoresis	U	1		50
Urolith	Dry stone	-	Transport charge only	10
Vaccination status	S	2+	Distemper/Adeno/Parvo	160
Vector borne anaemia PCR	Contact lab			172
VITEK additional card				6
Von Willebrands factor	Contact lab		Contact lab 01 7166161	83

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