

Quality Starts In The Clinic

A Best Practice Guide for Sample Collection

1

Choose the right tube

- Pick the correct size tube, ensuring it has the correct preservative for the tests required
- Fill the tube to the minimum fill line (marked on the tube)
- Invert the tube 10 times to mix well



2

Take care of the cells

- Use the largest possible gauge needle as small needles can rupture fragile cells
- Use a vacuum tube (avoid applying pressure as the sample is drawn in by the vacuum)

3

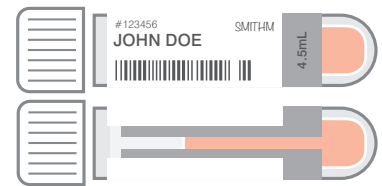
Handle with care

- Keep samples refrigerated until the courier arrives (excluding blood smears as they will be damaged by condensation)
- Allow plain serum tubes to clot before centrifugation

4

Don't forget to label the sample

- Mark the tube clearly with the patient details
- When labelling the sample ensure that any adhesive label is oriented vertically and does not cover the expiration date on the tube



If you have any questions regarding submission of specimens or require supplies call us on **1300 44 33 99**

IDEXX Specimen Containers



NOTE:

1. Ensure containers and collection devices are in date with no obvious defects prior to sample collection
2. Check the preservative in the specimen tube before collecting a sample as colour is not the only indicator of container type.

Type of Testing	Specimen	Container	Contents	Protocol	Storage
Chemistry, Immunology, Endocrinology including progesterone and therapeutic drug-monitoring (digoxin, phenobarbital)	Serum		Clot Activator	To obtain better results, centrifuge after the clot has fully formed at 2,500 rpm for 10-15 minutes. Remove serum from clot and transfer to a red topped tube or clear screw topped tube.	Refrigerate
Chemistry, Immunology, Endocrinology	Serum		Gel to separate serum from clot (during centrifugation) and a clot activator	Let specimen clot for 15–20 minutes, centrifuge at 2,500 rpm for 10–15 minutes. DO NOT use SST for progesterone or therapeutic drug monitoring (digoxin, phenobarbitone).	Refrigerate
Haematology	Whole blood		Anticoagulant EDTA	Fill tube as much as vacuum will allow to obtain proper blood to-anticoagulant ratio. Invert gently several times after filling.	Refrigerate; DO NOT freeze
Coagulation (PT, aPTT and quantitative fibrinogen)	Citrated plasma		Anticoagulant sodium citrate	Before sample collection, be sure to check expiry and preservative on container tube. Correct blood-to-anticoagulant ratio is very important. Fill tube to indicated black line on the tube's label to get the proper ratio. Invert gently several times after filling. To obtain better results, centrifuge immediately at 1,500 rpm for 15 minutes. Transfer plasma to plastic tube and label as citrated plasma for submission. Freeze sample as soon as spinning is complete and ship on ice.	Keep frozen (refrigeration OK if received at laboratory within five hours)
Avian Blood and Miscellaneous Chemistries				See Avian and Exotic specimen submission guidelines in this section. Check individual test listing.	
Urinalysis, Urine Culture	Urine (sterile collection highly preferred)		No additives (empty/sterile)		Refrigerate and prevent UV/sunlight exposure
Stone Analysis	Urolith		No additives (empty/sterile)	Do not place into formalin or other liquid; stones may dissolve.	Room temperature

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IDEXX Cytology Collection Guidelines

ACCURATE RESULTS DEPEND ON QUALITY SPECIMENS. PLEASE FOLLOW THESE GUIDELINES

- Perform sampling by fine-needle aspiration or non-aspiration biopsy, scrapings or imprints.
- Prepare slides in-clinic using either a “squash” preparation or blood-smear technique. **Call 1300 44 33 99** if you have questions about slide preparation.
- Please **DO NOT** submit syringes with needles.

Patient history and clinical findings contribute to an accurate result

Please label containers and slides (with pencil) and include:

- Patient's name
- Site/Source

Use VetConnect® PLUS to easily generate your lab request and form

Select the Test
required and then
add specimen
details.

Indicate the
sample location
and remember
to provide clinical
details in the pop
up window.

When submitting aspirates and impressions

- Submit one to three air-dried slides, preferably at least one unstained slide
- Store at room temperature and protect from temperature extremes
- Protect from moisture and insects
- **DO NOT** spray with hairspray or other fixatives
- **DO NOT** expose to formalin fumes
- **DO NOT** ship slides for cytology in the same bag as a formalin-containing biopsy jar.

When submitting fluids and washes

- Prepare slides immediately to preserve cytomorphology (most fluids are stable for only a few hours at room temperature).
- Fluid in EDTA tube with slides is the recommended specimen for cytologic evaluation, especially of cellular or bloody specimens. If a culture is required, submit additional fluid in a sterile yellow top container.
- Enclose unaltered fluid in a plain tube (yellow-topped tube), EDTA tube (purple-topped tube), along with air-dried slides.
- **DO NOT** submit fluids in a red topped tube (RTT), in a syringe, or as cover-slipped and wet preparations.
- Submission of fluid in a RTT (red topped tube) can interfere with accurate cytologic evaluation due to the presence of clotting activators.

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IDEXX Histopathology Collection Guidelines

ACCURATE RESULTS DEPEND ON QUALITY SPECIMENS. PLEASE FOLLOW THESE GUIDELINES

Histopathology tiers and price guidelines

IDEXX operates a tiered histopathology pricing structure. All samples are manually assessed to provide you confidence in your results every time.

If you are unsure of how to code (or charge), your sample please **call 1300 44 33 99** and ask to talk to the pathologist on duty to discuss your case. This will ensure a clear understanding of your needs, and will help you to select the correct samples for histopathological examination, as well as identify any need for samples for other testing (e.g. bacteriology, virology, serology, toxicology).

Turnaround Time

Most evaluations will be completed within 3 business days of receipt in our laboratory (unless otherwise indicated). Additional fixation or decalcification will take longer. We will notify you if an unusually long delay is anticipated.

Collection Technique

- Samples are collected for histological examination by standard surgical techniques or at postmortem examination.

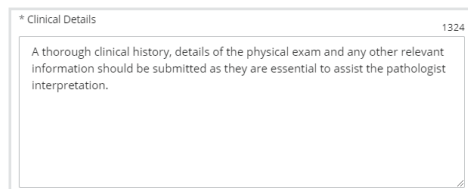
Labelling Criteria

Please ensure all specimen jars are labelled with

- Patients name, date
- Type of specimen, (Site / Source)

Requisition Information

It is easy to add clinical history and details of the physical exam in the Specimen Details pop up window.



Fixation Guidelines

Tissue samples should be fixed in 10% buffered formalin.

Did You Know The 10:10:10 Rule? For optimum fixation and sectioning use 10% formalin; 10:1 ratio; and a biopsy size 10mm cubed.

- Place specimens in a wide necked container (approved for use with formalin), with the ratio of formalin to tissue > 10:1.
- Submit entire lesions and tumours with adjacent excised tissue.
- For rapid fixation of larger lesions and tumours, cut a section 0.5-1cm wide through the centre of the specimen - please ensure this is through the epidermal surface on cutaneous lesions. Make impression smears from the cut surface of tumours and submit for cytology in a separate bag.
- Open hollow organs, such as intestine, prior to placing them in fixative.
- Small fragile specimens (bone marrow, Tru-cut liver or kidney) can be wrapped in a gauze envelope so that they do not disintegrate during transport.
- High priority samples can be dispatched on the day of collection as they will fix on their way to the laboratory.
- Samples of lower priority can be fixed for 24 hours at clinic prior to dispatch to the laboratory.

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IDEXX Histopathology and Microbiology Collection Guidelines

Histopathology

Transport Guidelines

- All samples should be placed in a well sealed leak proof bag containing enough absorbent material for the volume of formalin.
- Fixed tissue which is to be mailed may be placed in a leak proof plastic bag or container with a formalin soaked gauze to keep the tissue moist. (Ensure adequate fixation has occurred prior to transportation)

Histopathology Fee Policies

- Fees are determined by number of sites, lesions or organs indicated on the requisition form.
- Surgical margin analysis is complimentary on request.

Cancellation Fee

- No fee is applied if cancellation is requested prior to processing. If we have started processing the sample, a fee of will be charged to cover costs incurred, refer to the Directory of Products and Services for fee.

Necropsy Samples

- IDEXX no longer offers in-laboratory necropsy service, but there are a variety of options for submitting necropsy samples. (Please call customer service for a list of other laboratories offering this service).

Additional Notes

- Margins are complimentary if requested.
- Cage Birds include budgerigars, pigeons, finches and small birds from zoological gardens or fauna parks.
- Large birds from zoological gardens or fauna parks such as waterfowl, poultry, ostriches or emus are not considered cage birds.
- IDEXX Histopathology Reports contain the following report sections: Gross Pathology, Histopathology, Diagnosis, Comments and Margin Analysis.
- If a specific pathologist is requested, we will do our best to meet your request. If the specified pathologist is unavailable, we will contact you to give you the option of waiting or having another pathologist read the case to prevent any delay in processing.

Microbiology

Normal Flora, Predictable Susceptibility Patterns and Non-pathogenic Organisms

Coupled to our years of veterinary microbiology experience and our adherence to the Australian Standards, the IDEXX microbiology department offers best practice techniques and access to state-of-the-art technology.

Sterile Tubes

- Use glass or plastic tubes with no additives. Tubes with clot activator are not acceptable for cultures because clot activator binds bacteria, which inhibits growth. EDTA tubes are not acceptable as they inhibit bacteria.
- Fluids, urine and tissue must be submitted in sterile containers (moisten tissue samples with sterile saline to prevent drying and loss of viability).

Fluids

Make sure all collection devices containing fluids are sealed and leak proof before submitting. Note: Specimens that are >48 hours old are not suitable for culture, and loss of viability should be expected.










Culture

- Aerobic and anaerobic cultures are performed on all blood cultures. A preliminary report is available within 24-48 hrs.
- Dry swabs are not recommended for culture, swabs in gel transport medium are preferred. The gel medium helps to keep the bacteria alive.
- Dry swabs are used for PCR testing, gel swabs cannot be used for PCR testing.



Please DO NOT submit syringes with needles.

IDEXX Specimen Containers (Microbiology Specific Guide)

Type of Source	Collection Device	Specimen Preparation and Collection	Test to Request
Abscess or Wound		Aseptically prepare collection site. Aspirate fluid or pus from pustules or vesicular wounds and abscesses.	Aerobic and Anaerobic Culture
Blood		Aseptically prepare collection site. Draw up to 10 mL into sterile syringe. Change needle and inoculate a blood culture bottle and mix well. Leave at room temperature.	Blood Culture
Bone Marrow		Aseptically prepare collection site.	Aerobic and Anaerobic Culture
Central Nervous System		Collect CSF fluid by a standard aseptic collection technique. If the sample has a good flow, it is best practice to discard of the first few drops of fluid to ensure contamination is avoided. If the patient is small and there is only a small amount of CSF fluid to be collected, do not discard of any of the sample.	Aerobic and Anaerobic Culture
Ears		Cytology providing organism morphology is an important adjunct to culture. Note: Posterior pharyngeal cultures may also reveal organisms causing otitis media.	Aerobic Culture
Eyes		Use swab to collect suppurative material from cul-de-sac or medial canthus. Note: Topical anaesthetic may inhibit bacterial growth.	Aerobic Culture
Faeces		Avoid contamination with urine and soil. For <i>C. perfringens</i> and <i>C. difficile</i> enterotoxin ELISA testing, send 3–5 g fresh faeces.	Faecal Culture
Nail, Skin or Hair Culture (Fungal)	RTT or other sterile container; envelope preferred for hair	Use sterile blade or swab to collect material from infected nail. Swab or scrape active border of skin lesions. Use envelope for hair or yellow top container.	Fungal and/or Aerobic Culture
Sinus		Aspirate from maxillary, frontal or other sinuses. Note: Chronic sinusitis often involves anaerobic bacteria.	Aerobic and Anaerobic Culture
Tissue		Place tissue in sterile tube with small amount of sterile saline to keep specimen hydrated.	Aerobic and Anaerobic Culture
Urine	Syringe transferred to Sterile Container	Cystocentesis is strongly recommended (except in large animals). Avoid contamination with faeces. Keep refrigerated. Indicate collection method.	Urine Culture
Screws/Plates	Sterile Container		Aerobic and Anaerobic Culture

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IDEXX Avian and Exotic Collection Guidelines

Blood samples should be collected aseptically from veins, most commonly the jugular vein in companion birds. Ulnar veins or tibiotarsal veins can be used in some species. Nail clipping is NOT a suitable method for collecting blood samples.

Biochemistry Only

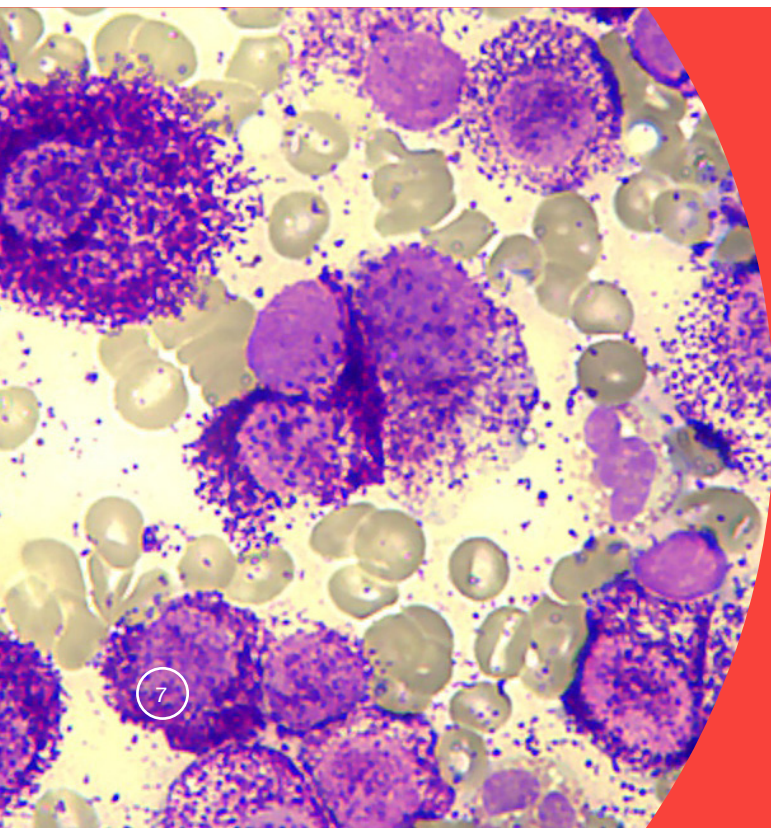
- Submit sample in lithium heparin tubes (green top). Gel separator tubes can be used. Gel tubes can be spun before submission, and this will reduce storage artefacts.
- Plain serum tubes can also be used, but result in a smaller sample for analysis, and may reduce the number of measurements that can be performed.
- Small sample volume may limit the number of biochemistry tests that can be performed. ***If submitting a small sample, please note your required tests in order of preference on the submission form.***

Haematology Only

- Submit slide(s) and whole blood.
- Make slides immediately after collection, using blood that has not been exposed to anticoagulant. Preferably make two slides, one by the usual slide-and-slide method, one by a coverslip-and-slide method. Air dry slides immediately, but do not fix or stain.
- Submit the whole blood in lithium heparin. Gel separator tubes can be used but must NOT be spun down.
- EDTA can also be used for most birds (excluding ratites, crows and ravens), but is not the preferred sample. EDTA should not be used for reptile blood, use of lithium heparin is recommended.

Haematology and Biochemistry Required

- Submit blood films (see haematology above) and blood in lithium heparin. Do NOT spin gel separator lithium heparin tubes if only a single tube is submitted. At least one unspun lithium heparin tube must be submitted.
- Small sample sizes may limit the number of biochemistry tests that can be performed. ***If submitting a small sample, please note your required tests in order of preference on the submission form.***



Accurate results start with quality samples

- Courier & customer services • Reference laboratories
- Veterinary pathologists • Internal medicine consultants

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The Complete Diagnostic Solution™