

Vetscan UA

Consistent, rapid, urine analysis



Urinalysis provides us with information on the physical and chemical properties of urine. It is a valuable test in both healthy and sick animals and should be included in any comprehensive evaluation of a pet's health. Urinalysis is routinely used not only to assess the health of the kidneys and urinary system, but also to reveal problems in other organ systems.

A thorough urinalysis includes:

1. Assessing of the appearance of the urine
2. Measuring the density of the urine
3. Measuring the chemical properties of urine
4. Examination of urine sediment

The VETSCAN UA and its UA14 profile can help you perform consistent and rapid chemical urine analysis and provide you with unique measures such as microalbumin and urine protein/creatinine ratio.

MICROALBUMIN:

- ✓ Detection of MA can indicate the presence of early glomerular damage¹
- ✓ Three or more elevations that cannot be attributed to a post-renal cause, assessed at 2-week intervals, are evidence of persistent renal proteinuria²
- ✓ Microalbumin levels can rise before creatinine, SDMA, or UPC increases or USG decreases

Especially beneficial for:

- ✓ Screening for senior pets
 - Dogs more than 6 years old
 - Cats more than 8 years old
- ✓ Pets at risk of early renal disease (hereditary disease)
- ✓ Chronic illness that may be complicated by kidney damage or disease

URINE PROTEIN/CREATININE (UPC) RATIO:

- ✓ Is not affected by change in urine volume or concentration
- ✓ To confirm and/or stage proteinuria caused by renal disease
- ✓ Must be evaluated in the presence of an inactive urine sediment (no inflammation/infection)
- ✓ Quick, cost-effective patient-side results

Especially beneficial for:

- ✓ Evaluation and prognosis of acute and chronic renal disease
- ✓ Monitoring treatment
- ✓ Screening geriatric patients for renal disease
- ✓ Chronic illness that may be complicated by kidney damage or disease

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OCCULT BLOOD:

Indicates presence of haematuria, haemoglobinuria or myoglobinuria. Any positive reaction should be interpreted in conjunction with a urine sediment analysis.

GLUCOSE:

Detectable glucosuria is abnormal and should be interpreted in conjunction with blood glucose level.

Useful for monitoring insulin therapy and animals with PU/PD/pets with diabetes.

KETONES:

Ketonuria is detected when there is excessive fat degradation or impaired use of carbohydrates. Useful to diagnose or monitor pets with diabetes mellitus, anorexia or pregnancy.

pH:

pH may change with diet or presence of infection.

Can be used for the estimation of acid-base status, the prediction of urolith formation, and for monitoring therapy for uroliths.

BILIRUBIN:

Bilirubinuria may precede clinical identification of jaundice or hyperbilirubinaemia and therefore may serve as an early indicator of disease.

Significant regenerative anaemia may indicate that bilirubinuria is caused by haemolysis.

If no anaemia is present, especially if accompanied by elevated serum alkaline phosphatase and GGT, bilirubinuria may be caused by hepatobiliary disease.

Sepsis can decrease bilirubin uptake and cause bilirubinuria.

PROTEIN:

Urine should be free of protein. The potential loss of protein into the urine should be investigated in any hypoproteinaemic animal.

Proteinuria should be interpreted in conjunction with USG and sediment analysis: the presence of protein in poorly concentrated urine is clinically-significant – or assess UPC.

Persistent proteinuria found on screening tests should be confirmed with a UPC.



Vetscan UA Test Instruction

1

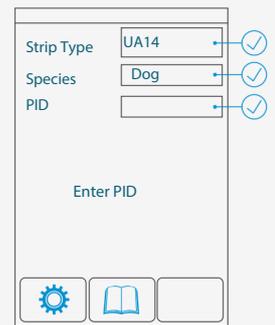
Remove a UA test strip from the tube.



2

Enter test information

- Select Strip Type
- Select Species
- Enter Patient ID



Strip Type UA14 ✓
Species Dog ✓
PID ✓

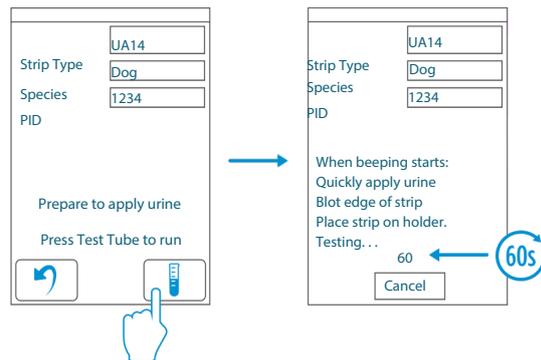
Enter PID

⚙️ 📖

3

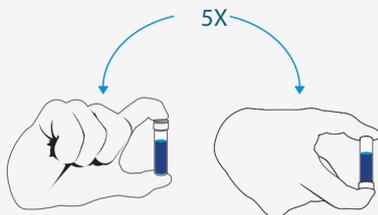
Press test tube icon button and a countdown timer will appear.

Perform the next 4 steps before the timer reaches 35 seconds.



4

Mix urine sample well by gently inverting 5 times.



5

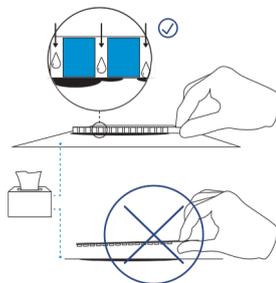
Apply urine to sample strip by flooding with a pipette or dipping into sample. Completely wet every pad.



6

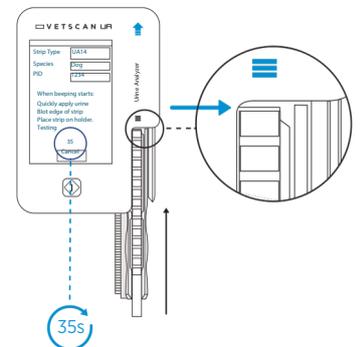
Immediately blot long edge of strip on absorbent paper to remove excess urine.

Do not blot the top surface of the pads. Do not leave urine on pads for more than 2 seconds.



7

Place strip on the UA Strip Tray before the timer reaches 35 seconds.



8

At 35 seconds the UA Strip Tray will slide into the analyser and scan the UA Strip. Results appear on screen when timer reaches zero.

Vetscan UA Reference Guide

Urine sample collection methods

Cystocentesis



Insert a small sterile syringe with needle into the bladder through the abdominal wall to aspirate urine.



Ideal method for collecting samples, requiring at least 2 veterinary professionals.

Catheter



Place a urinary catheter within the urethra and advance it into the bladder. Collect urine using a sterile syringe.



Requires at least 2 veterinary professionals and often sedation of the animal.

Free Catch



Use a sterile collection container and collect a midstream sample.



Most at-risk for contamination and can be difficult to obtain.

Sample preparation



Immediately prior to running sample, invert tube 5 times to mix thoroughly.



Urine samples may be tested immediately after collection for up to 1 hour post-collection, if stored at room temperature.^{1,2}



Samples may be refrigerated in sealed, sterile containers for up to 4 hours.³ Cold samples must be warmed to room temperature before testing. Refrigeration can enhance crystal formation in the urine.⁴



Fresh, room temperature, well-mixed samples are ideal.

Normal urine dipstick results⁶

Ketones	Negative
Bilirubin	Negative
Glucose	Negative
Protein	Negative
pH	5.0 - 7.5
Blood	0 - 10 cells/ μ L
Microalbumin	<25 mg/L ⁷
PRO/CR	<0.2

Some urine dipstick analytes are more commonly used in humans than in veterinary medicine. We recommend switching these off on your analyser:

- Ascorbic acid
- Calcium
- Nitrite
- Urobilinogen
- Creatinine (used to determine urine PRO/CR)

Urine dipsticks tests may not accurately measure the below analytes:

- Colour – assess urine colour visually
- USG – best measured using your refractometer
- Leukocytes – best assessed on a sediment exam

Don't forget to do a urine sediment exam

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1. Harley L, Langston C. Proteinuria in dogs and cats. The Canadian Veterinary Journal 2012;53:631-638 2. Sink CA and Weinstein NM. Specimen Procurement In: Practical Veterinary Urinalysis. Ames, IA: John Wiley & Sons Inc. 2012. pgs. 12-15. 3. Sink CA and Feldman BF. Specimen Collection and Dipstick Analysis In: Laboratory Urinalysis and Hematology for the Small Animal Practitioner. Jackson, WY: Teton NewMedia. 2004. pgs. 3-18. 4. Sink CA, Weinstein NM. Routine Urinalysis: Microscopic Elements. Practical Veterinary Urinalysis. Chapter 5. Ames, IA: John Wiley & Sons Inc. 2012, 55-112. 5. Zoetis Data on File. Study No. TI-04858. 6. Grauer, Gregory. Urinalysis Interpretation. Clinicians Brief. March 2016. 7. Chew, Dennis. How to Interpret Proteinuria Results. Vetscan Tech Bulletin February 2020, TI-05055.

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