vetscan Imagyst®

USER GUIDE

A first–of–its–kind technology, offering AI dermatology, AI faecal analysis, AI blood smear, AI urine and digital cytology image transfer in a single platform

AI=artificial intelligence.

Efficient, expert cytology review

VETSCAN IMAGYST™ accelerates the process for expert clinical pathology review – simply prepare and scan slides and then submit for expert results within hours

01 PREPARE
CYTOLOGY SLIDE

- Prepare a cytology slide using industry best practices
- Using a pencil, label the slide including the patient's ID and date
- Stain all slides with a Romanowsky-type stain (eg. Diff-Quik™) as per manufacturers protocol (dipping method recommended)
- After the slide has been stained and air-dried, place immersion oil on the slide, then cover with 24 x 60 mm coverslip

02 ADD
NEW TEST

- Log in to VETSCAN IMAGYST
- Request a cytology test from any HUB or FUSE connected software or directly from Vetscan HUB or FUSE.
- Choose the correct sample from the Imagyst platform (patient details will be pre-populated) and select **START**
- If no integration is available, from the Imagyst landing page, click the **INBOX (+)** button to **ADD TEST**.
- Enter required information and then select **CREATE**.

03 COMPLETE
PATIENT HISTORY

- Enter the patient's breed, age and gender
- The patient's species is already set (if species is 'other', clearly note the species type in clinical history)
- Include a brief clinical history including medications (this history will be visible on the final report)
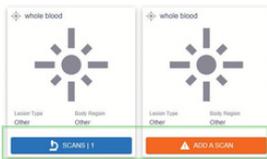
04 ADD
SAMPLE SITES

- Select **ADD FLUID** or **ADD LESION**
- Enter the required information
- Select **CREATE**
- You may enter up to 2 different sample sites with up to 4 slides across these 2 sites
- Select a sample card to open and edit a sample site
- To remove a sample site, open sample site card and select **DELETE (X)**

05 ADD
SCANS

- Select **ADD A SCAN** or **SCAN** to open the scan window
- Select an available scanner
- Select **OPEN TRAY** and place cytology slide on the Imagyst tray, using the locking mechanism to lock it in place

06 CREATE
SCAN AREA

- Select **PREVIEW**
- Review the mask area (multiple mask areas may be suggested)
- Adjust mask area by moving/deleting blue dots OR create a custom mask area by deleting the entire mask then select the **EDIT** pencil to create new mask.
- Select **CONTINUE** when you are satisfied (the pathologist can only review what is in the masked area).
- Limiting the masked area to reduce time may impact the pathologist's ability to interpret
- Once the scan is complete, remove slide immediately

07 SUBMIT
TEST

- To assist the pathologist with their interpretation, attach any blood results or history documents (.pdf) or photos (.jpeg)
- Select **SUBMIT ORDER**

08 REVIEW
TESTS

- When the pathologist's interpretation is complete and is ready to be reviewed, select **READY FOR REVIEW**
- Find the desired test and select **REVIEW**
- Review the findings
- Click on **FINALISE** and the test will move to **TEST HISTORY**

This is a general user guide for Digital Cytology. For specific sample preparation and submission, refer to designated 'How to' videos in the help section on the Imagyst Platform

INCOMPLETE TESTS

- An incomplete or unsubmitted test will display with an **Incomplete Test Order** status in the Inbox
- Select **OPEN** to complete all required fields
- Review steps 3-7

Questions? Zoetis Diagnostics Support 0800 100 109, dxsupport.nz@zoetis.com

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Fast, accurate faecal diagnostics[1]

VETSCAN IMAGYST™ is powered by artificial intelligence (AI) to help veterinarians make accurate and timely intestinal parasitic diagnoses

CHECKLIST

Ensure you have the following materials ready to run a test:

- Stir Stick
- Transfer Loop
- Glass Slide
- Coverslip
- ParaPro Sample Tiube + Scoop
- ParaPro Collection Tube + CAp
- Centrifuge
- Scanner
- Slide Template
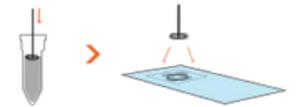
01 COLLECT
FAECAL MATTER

- Unscrew the tube cap from the collection tube
- Add 1 scoop, about 1 g, of faecal matter to the collection tube
- Use the stir stick to remove the matter from the scoop and mix it with prefilled solution
- Screw the sample tube onto the collection tube
- Continue twisting until the tubes are firmly screwed together
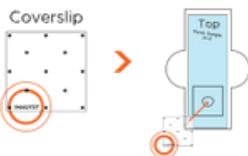
02 PREPARE
FAECAL SAMPLE

- Shake the tubes and then place them in a centrifuge
- Spin the sample for 2 minutes at 500 RCF
- Unscrew the collection tube with the scoop and discard
- Lay the sample tube in a tray

03 ADD SAMPLE
TO SLIDE

- Place slide in the slide template with the name or barcode toward the top
- Pull material from the top of the sample tube using the transfer loop
- Place 2-4 loops of faecal matter around the edge of the target circle on the slide
- On the Imagyst Platform (in the help section), refer to faecal 'How to' video -'step 3: add sample to slide'

04 PLACE
COVERSLIP

- Place the coverslip, with 'IMAGYST' readable in the lower left-hand corner, onto the slide over the targeted area of the slide template

05 INITIATE
TEST

- Choose correct sample and select **SCAN**. Sample information will come pre- populated from any HUB or FUSE- connected software system
- If no integration is available, select **ADD SAMPLE**, enter the sample information, select **CREATE** and then select **SCAN**
- Select a scanner, and make sure the tray is open (select **OPEN TRAY** if necessary)

06 LOAD
AND SCAN SLIDE

- Unlock the slide holder and place the slide (with coverslip) on the slide tray
- Place any label or writing toward the right side of the slide tray and lock the slide holder
- Select **SCAN SLIDE**
- Once the scan is complete, remove slide immediately

07 REVIEW
SLIDE

- Open the sample results, review any captured images and select examples for inclusion in the report
- Add any comments (these comments will be visible on the final report) and select **FINALISE**
- Select **VIEW REPORT** to view a shareable PDF or review results in a FUSE-connected software system

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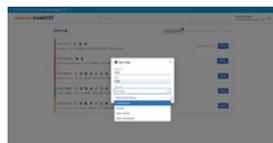# Efficient, accurate blood smear review[2]

VETSCAN IMAGYST™ uses the accuracy of AI to efficiently read blood smears in minutes, so you and your staff don't have to[2]

01 PREPARE BLOOD SMEAR

- Prepare a blood smear slide using industry best practices
- Using a pencil, label the slide including the patient's ID and date
- Stain all slides with a
- Romanowsky-type stain
- (eg. Diff-Quik™) as per
- manufacturers protocol (dipping method recommended)
- After the slide has been stained
- and air-dried, place immersion oil on the slide, then cover with 24 x 60 mm coverslip
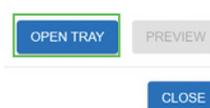
02 ADD NEW TEST

- Log in to VETSCAN IMAGYST
- Request an AI blood smear test from any HUB OR FUSE-connected software or Vetscan HUB or FUSE.
- Choose the correct sample from the Imagyst platform (patient details will be pre-populated) and select **SCAN** If no integration is available, from the Imagyst landing page, click the **INBOX (+)** button to
- **ADD TEST**. Enter required information and then select **CREATE**
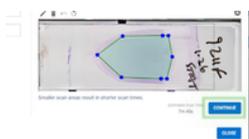
03 COMPLETE PATIENT RESULTS

- Enter the RBC count from the Automated CBC. This is important to ensure the polychromatophils are analysed correctly
- Enter the WBC Count from the automated CBC report. This is important as automated total WBC counts are very accurate and allows WBC differential counts to be applied to determine absolute counts of each WBC.

04 ADD SCANS

- Select an available scanner
- Select **OPEN TRAY** and place blood smear slide on the tray, using the locking mechanism to lock it in place

05 CREATE SCAN AREA

- Select **PREVIEW.** Review mask area and ensure the entire blood smear is selected within the mask
- If the mask does not cover the entire blood smear, delete suggested mask by selecting area and **DELETE (X)**
- Select the **EDIT** pencil to create a new mask around the entire blood smear (ignore the warning icon indicating length of time)
- Select **CONTINUE** when you are satisfied with the mask area
- Once the scan is complete, remove slide immediately

06 REVIEW TESTS

- When a test is ready to be reviewed, select **READY FOR REVIEW** Find the desired test and select REVIEW
- Review the findings Click on **FINALISE** and the test will move to **TEST HISTORY** If you require a pathologist interpretation, request an Add on Expert Review (see step 7)

07 ADD-ON EXPERT REVIEW

- Request an Add On Expert Review from any HUB or FUSE connected software or Vetscan HUB or FUSE. If no integration is available, from the Imagyst landing page, click the **INBOX (+)** button to **ADD TEST**. Enter required information and then select **CREATE**.
- Choose the correct sample from the Imagyst platform and Select
- Test For Expert Review or search for test/patient ID then **SELECT TEST**
- To assist the pathologist with their diagnosis, complete brief **CLINICAL HISTORY**, attach results including CBC (.pdf) or photos (.jpeg)

08 SUBMIT ORDER

- Select **SUBMIT ORDER*** When the pathologist's interpretation is complete and is ready to be reviewed, select **READY FOR REVIEW**
- Find the desired test and select **REVIEW**
- Review the findings
- Click on **FINALISE** and the test will move to **TEST HISTORY**

* Additional costs will apply

INCOMPLETE TESTS

- An incomplete or unsubmitted test will display with an **Incomplete Test Order** status in the Inbox
- Select **OPEN** to complete all required fields
- Review steps 3-6

Questions? Zoetis Diagnostics Support 0800 100 109, dxsupport.nz@zoetis.com

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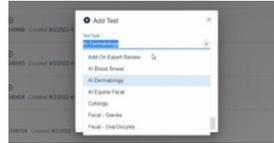# Fast, efficient dermatology analysis

VETSCAN IMAGYST™ quickly and reliably detects yeast, inflammatory cells and bacteria and differentiates between cocci and rods

01 PREPARE DERMATOLOGY SLIDE

- Prepare a dermatology slide using industry best practices
- Using a pencil, label the slide
- including the patient ID and date
- Stain all slides with a Romanowsky- type stain (eg. Diff-quik) using industry best practices (dipping method recommended)
- After the slide has been stained and air-dried, place immersion oil on the slide, then cover with 24 x 60 mm coverslip
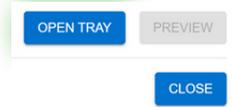
02 ADD NEW TEST

- Log in to VETSCAN IMAGYST
- Request an AI dermatology test from any HUB or FUSE connected software or Vetscan HUB or FUSE.
- Choose the correct sample from the Imagyst platform (patient details will be pre-populated) and select **SCAN**
- If no integration is available, from the Imagyst landing page, click the **INBOX** (+) button to **ADD TEST**.
- Enter required information and then select **CREATE**

03 COMPLETE PATIENT HISTORY

- Enter the Site Name, Location of Sample and Blood Present information

04 ADD SCANS

- Select an available scanner Select OPEN TRAY and place the dermatology slide on the tray, using the locking mechanism to lock it in place

05 CREATE SCAN AREA

- Select **PREVIEW**
- Review the mask area (multiple mask areas may be suggested)
- Adjust mask area by moving/deleting blue dots OR create a custom mask area by deleting the entire mask then select the **EDIT** pencil to create new mask.
- Ensure whole sample area is
- masked (multiple masks may be used to limit white area).
- Note: if an Add on Expert Review is required, a pathologist will only be able to review the masked area (ignore the warning icon indicating length of time)
- Select **CONTINUE** when you are satisfied with masked area. Select **CLOSE**. The scan sample will be analysed
- Once the scan is complete, remove slide immediately

06 REVIEW TESTS

- When a test is ready to be reviewed, select **READY FOR REVIEW**
- Find the desired test and select **REVIEW**
- Review the findings
- Click on **FINALISE**, and the test will move to **TEST HISTORY**
- If you require a pathologist interpretation, request an
- Add on Expert Review (see step 7)

07 ADD ON EXPERT REVIEW

- Request an Add On Expert Review from any HUB or FUSE connected software or Vetscan HUB or FUSE. If no integration is available, from the Imagyst landing page, click the **INBOX** (+) button to **ADD TEST**. Enter required information and then select **CREATE**.
- Choose the correct sample from the Imagyst platform and Select Test For Expert Review then **SELECT TEST**
- To assist the pathologist with their diagnosis complete brief **CLINICAL HISTORY**, attach results including CBC (.pdf) or photos (.jpeg)

08 SUBMIT ORDER

- Select **SUBMIT ORDER***
- When the clinical pathologist's interpretation is complete and is ready to be reviewed, select **READY FOR REVIEW**
- Find the desired test and select **REVIEW**
- Review the findings click on **FINALISE** and the test will move to **TEST HISTORY**

This is a general user guide for AI Derm. For specific sample preparation and submission, refer to designated 'How to' videos in the help section on the Imagyst Platform

* Additional costs will apply

INCOMPLETE TESTS

- An incomplete or unsubmitted test will display with an **Incomplete Test Order** status in the Inbox
- Select **OPEN** to complete all required fields
- Review steps 3-7

Questions? Zoetis Diagnostics Support 0800 100 109, dxsupport.nz@zoetis.com

Consistent urine sediment analysis

Vetscan Imagyst™ offers reliable urine sediment analysis at the point of care, with results in minutes and add–on expert review when needed

01 CENTRIFUGE THE SAMPLE

- Determine if dilution may be necessary*
- Urine must be at room temperature
- Mix the sample well
- Transfer 1, 2, or 3 mLs to the centrifugation tube
- Centrifuge, with a corresponding tube for balance, for 2 minutes at 450–500 RCF
- Allow it to come to a complete stop
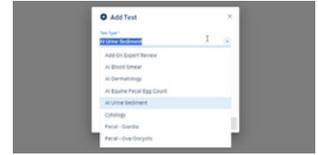
02 PREPARE SAMPLE

- Attach the XactUrine® pipette tip to the micropipette
- Place the pipette, with tip attached, in the tube
- Tilt the tube to pour off the supernatant until no liquid is visualised above the stopper
- Return the tube to vertical
- Complete dilution if necessary*
- Press the pipette 5 times, or until the pellet is resuspended

03 PREPARE SLIDE

- Place a pre-printed slide on the template
- Orient the fiducial circle toward the bottom of template
- Using a pencil, label the slide with patient information on the frosted edge (including patient's ID and date)
- Once pellet is resuspended, place 20 µL in the fiducial circle
- Cover with a 22 x 22 mm coverslip
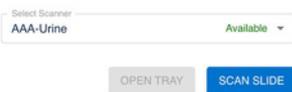
04 PREPARE NEW TEST

- Log in to VETSCAN IMAGYST
- Request an AI Urine test from any FUSE connected software or Vetscan FUSE
- Choose the correct sample from the Imagyst platform (patient details will be pre-populated) and select **SCAN**
- If no integration is available, from the Imagyst landing page, click the **INBOX (+)** button to **ADD TEST**
- Enter required information and then select **CREATE**
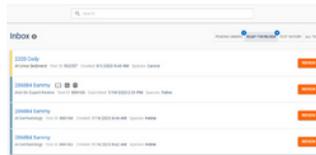
05 COMPLETE SAMPLE INFORMATION

- Select the urine volume used
- Enter the dilution factor, if applicable
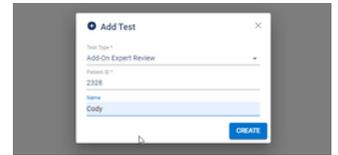- Enter any additional information, including sample colour and clarity

06 SCAN SLIDE

- Place the slide in the tray with the label toward the right
- Close the locking mechanism
- Select **SCAN SLIDE**

07 REVIEW RESULTS

- Select **REVIEW**
- Review any captured images
- Manually select additional images for inclusion in the report, if needed
- For a closer look, select **VIEW SLIDE**
- **FINALISE** the report to move it to **TEST HISTORY**
- Select **SHARE** or download a printable PDF

08 ADD ON EXPERT REVIEW** (OPTIONAL)

- Request Add On Expert Review from any FUSE connected software or Vetscan FUSE. If no integration available, from Imagyst landing page, click **INBOX (+)** button to **ADD TEST**. Enter required information then select **CREATE**.
- Choose the correct sample from the Imagyst platform and select test For Expert Review or search for test/patient ID then **SELECT TEST**
- Complete brief **CLINICAL HISTORY,** attach results including CBC (.pdf) or photos (.jpeg)
- Add stained urine sediment smear or line prep slide. Select **CLOSE**, then **SUBMIT ORDER**
- Find the desired tests and select **REVIEW**

09 CREATE STAINED SLIDE

- Mix the remaining urine sediment well
- Use one drop to create smear or line-prep
- Allow to air-dry

- Stain the slide using a Romanowsky-type stain (e.g. Diff-Quik®)
- Allow to air-dry

- Add one drop of immersion oil
- Place a 24 x 60 mm coverslip used for the Digital Cytology Application

*Refer to Dilution Guide
**Additional costs apply.

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DIAGNOSTICS THAT DRIVE CARE

For assistance, please contact the Zoetis Diagnostic Support Team:
0800 100 109, dxsupport.nz@zoetis.com
www.zoetisdiagnostics.co.nz

References:
1. Nagamori Y, Sedlak RH, DeRosa A, et al. Evaluation of the VETSCAN IMAGYST: an in-clinic canine and feline fecal parasite detection system integrated with a deep learning algorithm. *Parasit Vectors*. 2020;13(1):346. doi:10.1186/s13071-020-04215-x. 2. Data on file, Study No. D870R-US-21-045, 2021, Zoetis Inc.

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