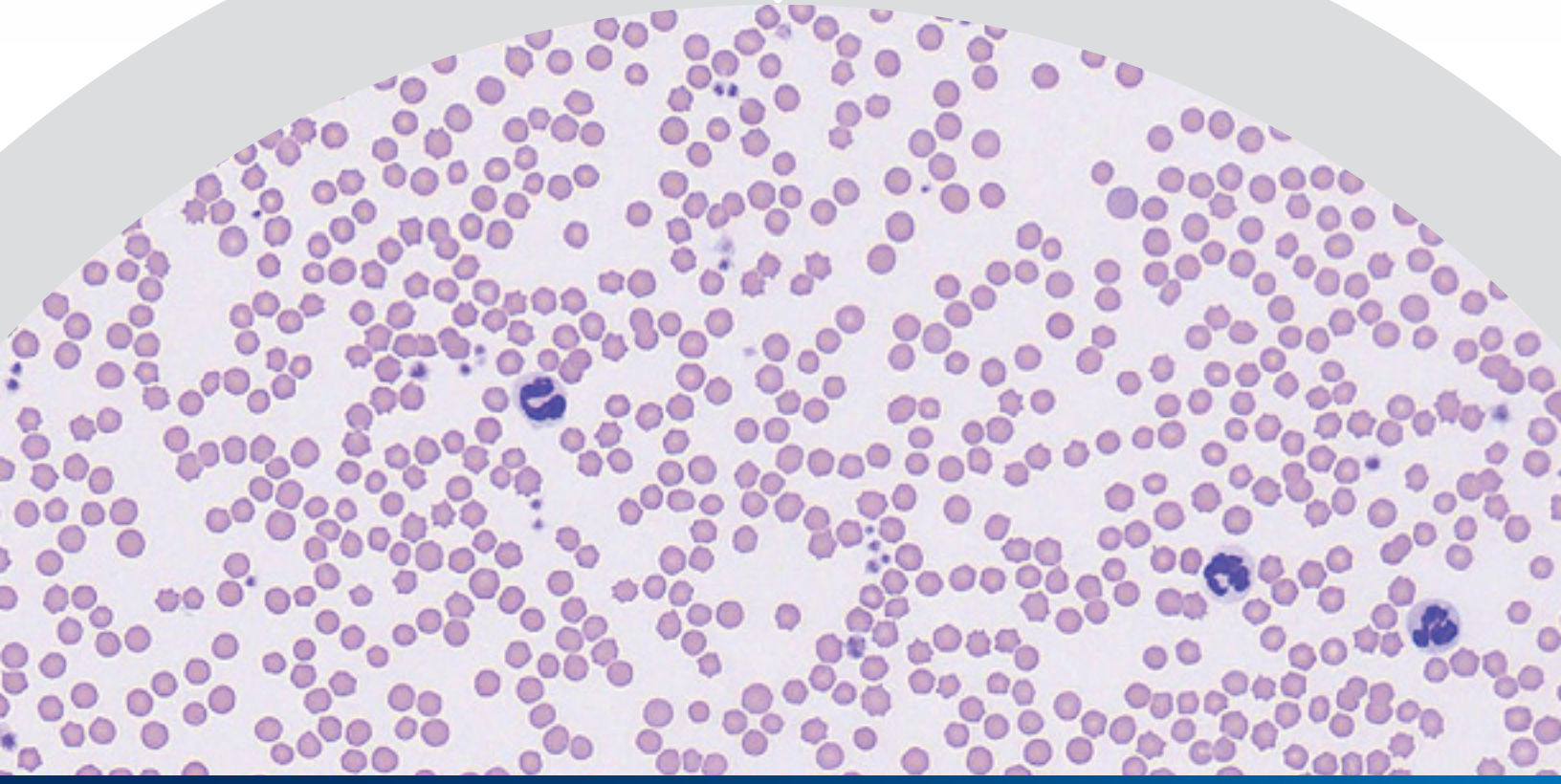
vetscan Imagyst®

AI BLOOD SMEAR

USER GUIDE



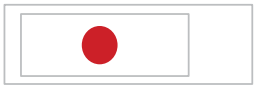
VETSCAN IMAGYST™ delivers efficient, expert-level blood smear results

vetscanimagyst.com

COMPLETING A BLOOD SMEAR TEST

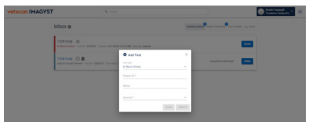
The blood smear application provides accurate[1-3], AI-driven analysis of blood smears to supplement CBC results

01 PREPARE BLOOD SMEAR



- Prepare a blood smear slide with a Romanowsky-type stain using industry best practices
- Place a drop of immersion oil on the smear and then place a 24 x 60 mm coverslip on the slide
- Include a label or handwritten note on the slide to identify the patient
- See additional details on subsequent pages

02 ADD NEW TEST

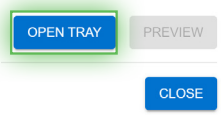


- Log in to VETSCAN IMAGYST™
- Choose the correct sample and select **SCAN**. Sample information will come prepopulated from any HUB or FUSE-connected software system
- If no integration is available, select **Add Test (+)**
- Enter all required information and then select **CREATE**

03 COMPLETE PATIENT HISTORY

- Enter the RBC count from the Automated CBC. This is important to ensure the polychromatophils are analyzed 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

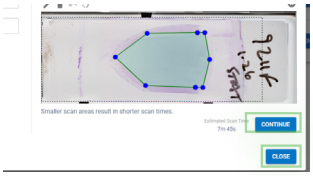


- Select an available scanner
- Select **OPEN TRAY** and place blood smear slide on the tray, locking it in place

05 CREATE SCAN AREA

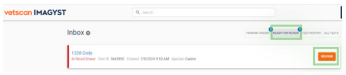
- Select **PREVIEW** and review the suggested scan area
- Accept the suggested scan area or create a custom scan area to reduce the scan time.
- Select **DELETE (X)** to remove a scan

06 SUBMIT ORDER



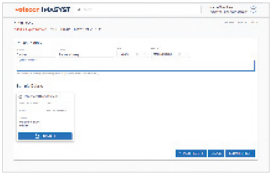
- Select **CONTINUE** when you are satisfied with the scan area
- Select **CLOSE**. The scan sample will be analyzed.

07 REVIEW TESTS



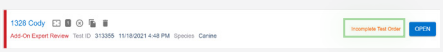
- When a test is ready to be reviewed, select **READY FOR REVIEW**
- Find the desired test and select **REVIEW**
- Review the findings
- Click on **FINALIZE** and the test will move to **TEST HISTORY**
- Once AI is complete, submit results for additional pathologist review, if needed (see step 8)

08 ADD-ON EXPERT REVIEW



- Select **Add New Test (+)** to submit image for expert review by a clinical pathologist
- Choose the sample that needs to be reviewed
- To assist the pathologist with their diagnosis, attach history documents (.pdf) or photos (.jpeg)
- Find the desired test and select **REVIEW***

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

*Additional costs may apply.

1. Study Report No. DHX6Z-US-23-205 TI-10955
2. Study Report No. DHX6Z-US-23-206 TI-11263
3. Study Report No. DHX6Z-US-23-209 TI-11149

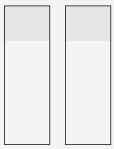
Contact your Zoetis representative for assistance.

PREPARING A BLOOD SMEAR SLIDE

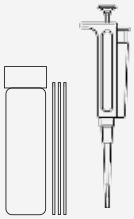
CHECKLIST

Ensure you have the following materials ready:

Fresh blood sample in EDTA tube filled to manufacturer's recommended fill line



2 to 3 new and clean frosted microscope slides*



Microhematocrit capillary tube or micropipette for dropping blood on slide

Pencil to mark ID on frosted area

Stain Materials

Immersion Oil

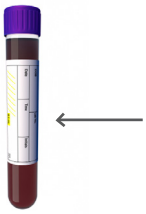
24 x 60 mm Coverslip

*Ideally with sandblasted frosted writing area at one end.

01 BLOOD COLLECTION

- Select the largest vein and appropriate needle for blood collection
- Use minimum amount of alcohol and let dry prior to venipuncture, as alcohol can cause sample hemolysis
- Minimize suction on the syringe and do not draw it back too quickly

02 BLOOD STORAGE

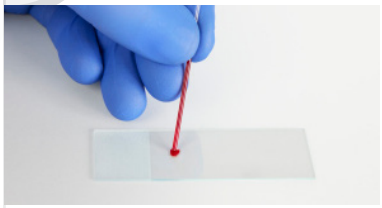


- After blood is collected from patient, it should be transferred to EDTA sample collection tube
- Remove needle from syringe and remove cover from blood tube for transfer if not using a BD Vacutainer® system
- Fill tube to manufacturer's recommended fill line

03 LABEL SLIDES

- Using a pencil, label the slides with the patient's ID and date
- Markers and pens should be avoided, as they will wash off in the staining process

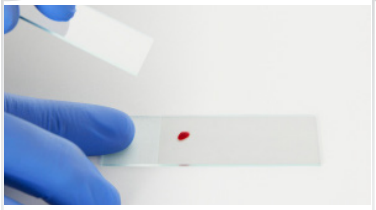
04 PREPARE THE SLIDE



- Mix the EDTA anticoagulated blood
- Use a microhematocrit capillary tube or precision pipette to draw blood from the tube that has just been mixed, and gently place a drop onto the labeled slide
- Care should be taken not to tap the tube against the slide
- A wooden stick should not be used for this blood transfer—platelets and white blood cells tend to adhere to the stick

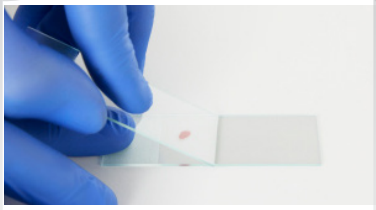
PREPARING A BLOOD SMEAR SLIDE (cont'd)

05 PLACE
SPREADER SLIDE



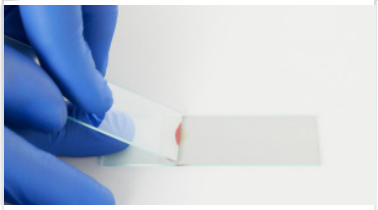
- Place the spreader slide on top of the labeled slide in front of the blood droplet and hold at a 30° to 45° angle

06 SPREAD
THE BLOOD



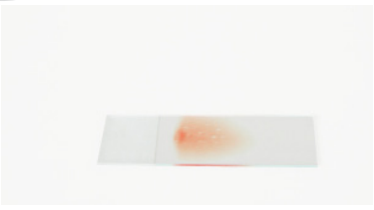
- Draw the spreader slide back until it makes contact with the blood droplet
- Capillary action will draw the sample toward the edges of the slide
- Do not allow the blood to reach the edges of the slide

07 COMPLETE
THE SPREAD



- Before the blood reaches the edges of the slide, with a smooth, stable and fluid motion, push the spreader slide away from the sample blood drop across the bottom slide. Maintain the same angle throughout the motion, and do not apply downward pressure. This should produce a uniform blood film covering approximately ½ to ⅔ of the slide
- Let the slide air-dry to avoid air-drying artifacts (DO NOT HEAT FIX THE SLIDE)

08 INSPECT
SLIDE



- After the blood smear is made, visually inspect the slide to ensure that ½ to ⅔ of the slide is covered
- The smear should look like a thumbprint and exhibit a visible feathered edge at its end

09 STAIN
SLIDE

- Using a Romanowsky-type stain (eg, Diff-Quik™), closely adhere to manufacturer's instructions for processing:
  1. Fixative
  2. Red stain
  3. Blue stain
  4. Water rinse
  5. Air-dry
- Regularly replace the stain according to the manufacturer's recommendation or when the stain has been compromised

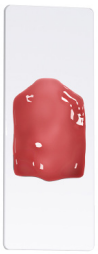
10 PLACE
COVERSLIP

- After the slide has been stained and air-dried, place a drop of immersion oil on the smear
- Then place a 24 x 60 mm coverslip on the slide
- The immersion oil will allow the coverslip to adhere to the slide
- The slide is now ready to be scanned by the VETSCAN IMAGYST™

COMMON ERRORS TO AVOID

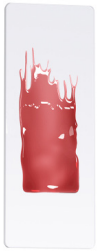
To avoid common errors, compare your blood smear with the following examples, which show how a blood smear should NOT look

A DELAY



- Time delay, the blood already began to dry prior to spreading

B CHIPPED

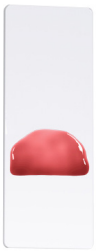


- Chipped or rough edge on spreader slide
- Do not lift the spreader slide before it reaches the end of slide

C HESITATION

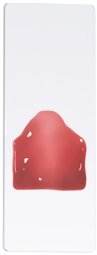
- Hesitation in forward motion

D TOO QUICKLY



- The smear is too short
- Spreader slide pushed too quickly

E SMALL BLOOD DROP

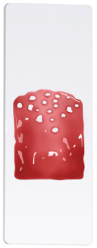


- Smear is too short or too thin
- Drop of blood is too small

F SPREAD

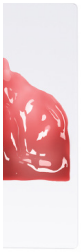
- Drop of blood not allowed to spread across the width of slide
- Start the spreader slide movement later during the capillary action of the blood

G DIRTY SLIDE



- Dirt/grease/fingerprint on the slide
- Make sure to use a clean slide

H UNEVEN PRESSURE



- Uneven pressure on the spreader slide

PERFECT SLIDE

- Slide is clean
- Even pressure applied to the spreader slide
- Uniform blood film that is not too thick or thin
- All slide edges are smooth and there are no streaks

Get a more complete hematologic picture with

vetscan IMAGYST™

Contact your Zoetis representative for assistance.

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