

SediVue Dx* Urine Sediment Analyzer

Operator's Guide



IDEXX

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Getting started

Welcome!

Congratulations on your recent purchase of the SediVue Dx* Urine Sediment Analyzer. The SediVue Dx will seamlessly integrate with your IDEXX VetLab* ecosystem along with your other IDEXX in-house analyzers, IDEXX VetLab* Station, VetConnect* PLUS, all IDEXX practice management software, as well as multiple other leading practice management software.

The SediVue Dx analyzer uses proprietary neural network algorithms and machine-learning capabilities to identify and classify elements within urine sediment. Using SmartService* Solutions, the SediVue Dx leverages the collective learnings of millions of patient images to guide confident medical decisions to bring you unparalleled accuracy and reliability. Only with IDEXX can one SediVue Dx customer benefit from the collective learning of all. Leveraging the images and neural network algorithms is unique to IDEXX and is critical in advancing machine-learning capabilities so we can identify the rarest of cases, enhance our offering, and expand our test menu.

Introduction

The SediVue Dx Urine Sediment Analyzer is a semiautomated urine microscopy system that performs a urine sediment analysis from only 165 μ L (4–5 drops) of fresh, uncentrifuged urine in approximately 3 minutes. It uses a gentle, low-speed, on-board centrifuge for 30 seconds to preserve the integrity of the sediment and takes 70 high resolution digital images (equivalent to 45 high power fields (HPF) of view) for every sample run. The SediVue Dx then leverages proprietary cutting-edge convolutional neural network technology and machine learning to identify, classify, and prioritize clinically significant formed elements within the sediment to increase the reliability, speed, and accuracy of detecting renal and urinary tract abnormalities. In addition, IDEXX uses advanced bacteria detection, an advanced proprietary method for confirming the absence or presence of bacteria in a patient's sample to help you quickly determine your next steps and course of action. The SediVue Dx provides reproducible and sensitive analysis of the following sediment-forming particles in native urine samples:

Blood cells	Epithelial cells	Bacteria	Casts	Crystals
<ul style="list-style-type: none">• Red blood cells (RBCs)• White blood cells (WBCs)	<ul style="list-style-type: none">• Squamous• Nonsquamous (e.g., transitional cells, renal tubular cells)	<ul style="list-style-type: none">• Rods• Cocci	<ul style="list-style-type: none">• Hyaline• Nonhyaline (e.g., cellular casts, granular casts)	<ul style="list-style-type: none">• Struvite• Calcium oxalate dihydrate• Ammonium Biurate• Bilirubin• Unclassified (all other crystals)

SediVue Dx results

The SediVue Dx analyzer provides results in the following concentration levels:

Element type	Parameter	Image tag	Reported results					
			None detected	<1/HPF	Quantitative numerical result/HPF	>50/HPF		
Blood cells	WBC	WBC	None detected	<1/HPF	Quantitative numerical result/HPF	>50/HPF		
	RBC	RBC						
Bacteria [†]	Rods	N/A [†]	None detected	Suspect presence	Present			
	Cocci							
Epithelial cells	Squamous	sqEPI	None detected	<1/HPF	1–2/HPF	3–5/HPF	6–10/HPF	>10/HPF
	Nonsquamous	nsEPI						
Casts	Hyaline	HYA	None detected	Suspect presence	>1/LPF			
	Nonhyaline (e.g., granular, waxy)	nhCST						
Crystals	Unclassified (all other crystals)	CRY	None detected	<1/HPF	1–5/HPF	6–20/HPF	21–50/HPF	>50/HPF
	Calcium oxalate dihydrate	CaOxDi						
	Struvites	STR						
	Ammonium biurate	AmmBi						
	Bilirubin	BILI						

[†]Image tags not available.

The SediVue Dx analyzer is for veterinary use only.

None detected—This indicates that an element has not been detected, or there are not enough recognizable features to classify.

<1/HPF—This indicates that there are some features found in the sample; however, the features are rare and below the clinical reporting threshold.

Suspect presence—This indicates that there are some recognizable features of an element (cocci, rods, casts) present; however, there are not enough features, or quantity, to report as “present.”

Present—There is high confidence in the presence of bacteria in the sample.

SediVue Dx images

The SediVue Dx Urine Sediment Analyzer takes 70 high-resolution digital images for every patient run. These images are equivalent to 45 high-power fields of view using a 40x objective. Using a proprietary neural network algorithm, each of the 70 images is scanned to identify, classify, and count the formed elements. Each image is given a score based on the absence or presence of formed elements and the clinical significance for each found. The images are then sorted, with the highest scoring images displayed first and lowest scoring images displayed last. The top three images are automatically retained by the SediVue Dx and transmitted to VetConnect* PLUS.

Image review

Similar to manual microscopy, the sample images should be reviewed with every sample run in order to arrive at consensus of the results. This process can take as little as a few seconds. The value in reviewing the images is to validate the numerical data provided and potentially supplement the SediVue Dx analysis, if needed.

Image tags

Image tags are abbreviated labels for the reported parameters that appear on the formed elements found in the sample. Image tags may not be available:

- If the image is flagged for dilution.
- If the sample is from an invalidated species or fluid.
- For bacteria results.

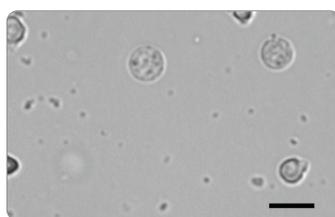
Image tags can be toggled on and off.

Convolutional neural network

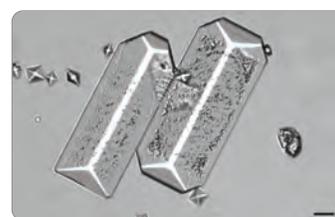
SediVue Dx's convolutional neural network is a proprietary pattern-recognition algorithm that works similar to facial recognition software. The Neural Network leverages a veterinary-specific image library that is used to train and grow the algorithm over time. It is what drives the identification, classification, and count of each of the formed elements.



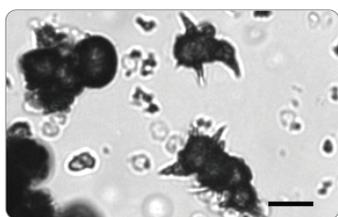
Bacteria; rods with white and red blood cells



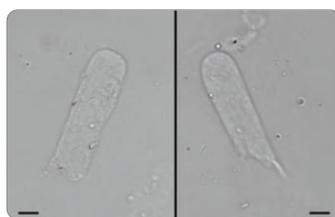
Bacteria; cocci with white blood cells



Large struvite crystals



Ammonium biurate (thorn apple) crystals



Hyaline cast



Bilirubin crystal with RBCs and WBCs

Compatible species

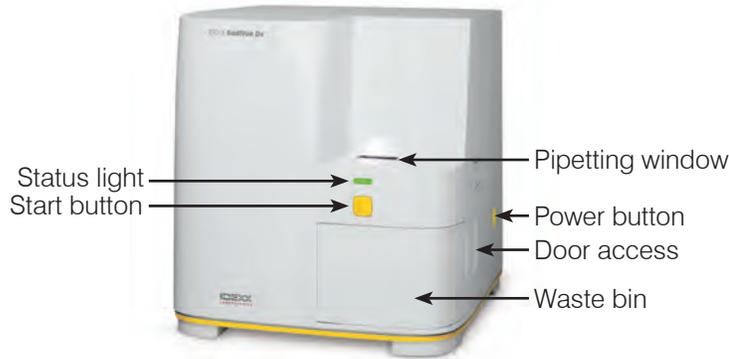
The SediVue Dx analyzer has been validated on canine and feline urine samples.

Note: Urine from other species or other fluid types may be run on the analyzer; however, only images will be included in the report.

SediVue Dx components

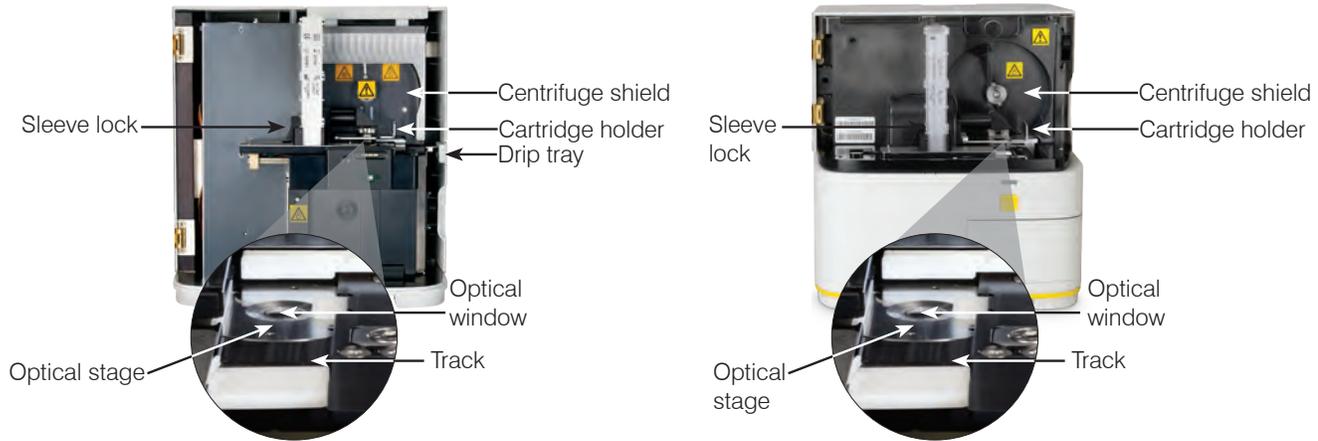
Note: Your analyzer may look slightly different from the photos shown below.

Front of the analyzer



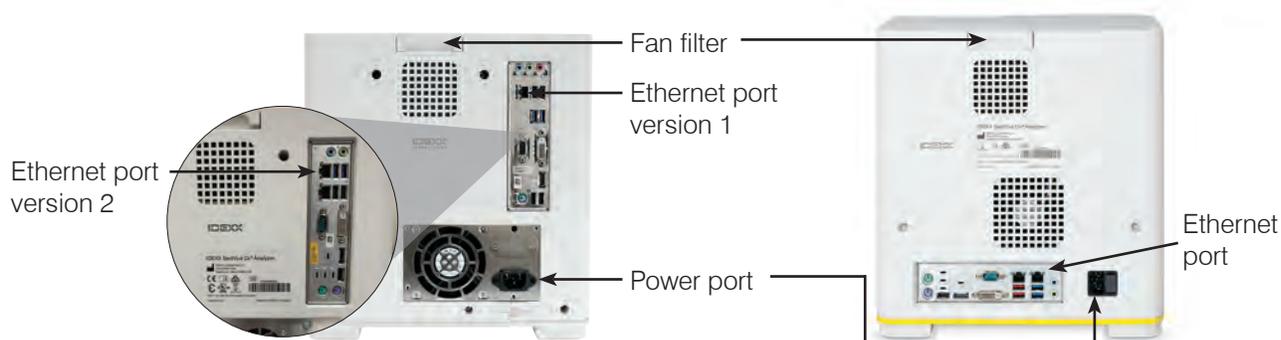
Inside of the analyzer

Match the inside of your analyzer to the applicable image below.



Back of the analyzer

Match the back of your analyzer to the applicable image below.



SediVue Dx supplies

IDEXX proactively monitors your usage of SediVue Dx supplies via your SmartService connection. You can call IDEXX Technical Support to place an order or order them online.†

Supplies available:

- Cartridges†
- Pipette tips†
- SediVue Bacteria Confirmation Kit†
- QC fluid†
- Syringe tips
- Cleaning supplies (alcohol prep pads and optical tissues)

†**Note:** In North America, certain supplies will be sent automatically when your inventory is low.

Pay per Run

Pay per Run for the SediVue Dx Urine Sediment Analyzer is an innovative test billing and inventory management system that increases cash flow by allowing you to bill your clients in advance of paying for the sample analysis. Pay per Run works in conjunction with your SmartService* Solutions connection to monitor patient runs on your SediVue Dx analyzer and bill for those runs on a monthly basis:

Runs are invoiced on a monthly basis according to your localized standard payment terms.

- The first patient run that provides semiquantitative results and/or images in a 24-hour period‡
- The first quality control (QC) run for each level of QC in a 24-hour period‡

‡For specific details on what runs are invoiced for your region, call IDEXX Technical Support.

Note: If your SmartService Solutions is accidentally disconnected, the data for any runs that were completed (or supplies used) during the outage will be corrected once the connection is reestablished.

Analyzer status

The light on the front of the SediVue Dx analyzer indicates the analyzer's status.

Note: You can also view the analyzer status by viewing its icon on the IDEXX VetLab* Station Home screen.

When light displays this color...	The analyzer is...
Steady green	Ready to process a sample.
Steady yellow	Processing a sample.
Flashing yellow	Waiting for you to inject sample in a cartridge in the pipetting window.
Flashing red	Experiencing an issue or requires maintenance.

Including physical/chemical urinalysis results with your SediVue Dx results



The IDEXX VetLab Station includes a UA icon  on the Select Instruments screen that allows you to enter physical and chemical urinalysis results so that they can be included with your SediVue Dx results for a comprehensive urinalysis.

By default, this icon displays in the patient's job status area when the SediVue Dx icon is selected. If you would like to modify the setting, follow these steps:

1. Tap the **SediVue Dx** icon on the IDEXX VetLab Station Home screen.
2. Tap **Settings**.
3. If you do not want to automatically include the UA icon with the SediVue Dx icon in the patient's job status area, clear the **Automatically add UA physical record icon to SediVue Dx runs** check box.

OR

If you want to automatically include the UA icon with the SediVue Dx icon in the patient's job status area, select the **Automatically add UA physical record icon to SediVue Dx runs** check box.

Running a sample on the analyzer

Installing/replacing the cartridge sleeve

You'll receive a message on the IDEXX VetLab* Station when the cartridge sleeve is almost empty. You can choose to be reminded again after the next run or when the cartridge sleeve is empty.

1. Tap the **SediVue Dx** icon on the IDEXX VetLab Station Home screen.
OR
Tap **Replace Cartridges** in the alert message.

2. Scan or enter the case-sensitive bar code located on the plastic wrapping on the new cartridge sleeve.

Note: If the bar code is still not accepted, discard the sleeve and try a new cartridge sleeve. If the problem continues, or you need to adjust inventory, call IDEXX Technical Support.



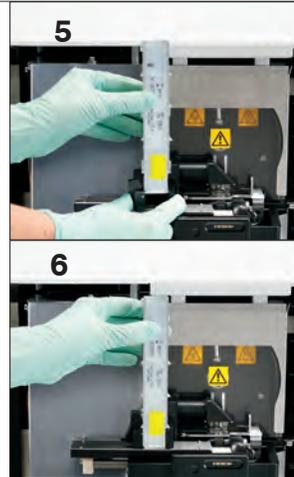
3. Tap **Continue**.

Note: If the Continue button is not enabled, not all of the bar code characters have been entered.

4. Open the analyzer door.
5. Pinch the sleeve lock to release it and then pull the old cartridge sleeve up to remove it.
6. With the product labeling on the new sleeve facing toward you, push down on the sleeve until it locks into place and then remove the tape from the bottom of the sleeve.

IMPORTANT: Do not remove the tape from the sleeve until it is locked into place.

7. Close the analyzer door.
8. Tap **OK** to confirm that the loading process is complete.



Note: When handling cartridges, remember:

- Never touch unused cartridges—contamination may interfere with microscopic evaluation.
- Never refill a sleeve with dropped cartridges. Discard the sleeve and install a new cartridge sleeve. Call IDEXX Technical Support to adjust your inventory quantity.
- Never manually remove cartridges from the cartridge sleeve.

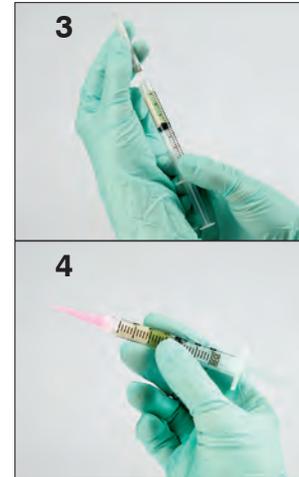
Preparing samples

Urine samples that are run on the SediVue Dx* analyzer can be obtained via cystocentesis, catheterization, or free catch method. For best results, analyze urine samples within **30 minutes** of collection. Otherwise, store the sample in the refrigerator for up to 2 hours.

Note: Storing urine samples in the refrigerator may introduce the *in vitro* formation of crystals and crystalline debris.

If the sample is in a syringe:

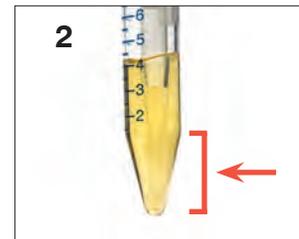
1. Ensure there is at least 0.5 mL of sample in a 1 mL–5 mL syringe.
2. Draw 0.5 mL of air into the syringe.
3. Replace the needle with a SediVue* syringe tip.
4. Gently invert the syringe 10 times to mix the sample.
5. Immediately after inversion, purge all of the air from the syringe and inject 165 μ L of urine into the cartridge fill port.



If the sample is in a container:

1. Cap the container and invert it 10 times to mix—a well-mixed sample is essential to obtaining accurate results.
2. Immediately after inversion, use the SediVue* Pipette to aspirate 165 μ L from the bottom third of the sample, ensuring there are no bubbles in the sample, and immediately inject 165 μ L of urine into the cartridge fill port.

IMPORTANT: Crystals start to settle immediately after inversion. Be sure to aspirate from the bottom third of the sample. Then remove excess urine on the outside of the tip with a lint-free wipe.

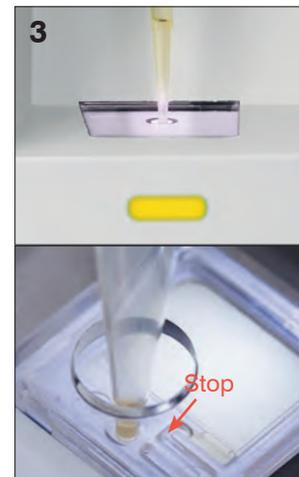


Analyzing a sample

1. Initiate the sample run on the IDEXX VetLab Station (for more information, see the *IDEXX VetLab Station Operator's Guide*).
2. After you've confirmed the patient information on the Select Instruments screen, select the **SediVue Dx** icon, select the fluid type if it is not already listed, and then tap **Run**.
3. Once the analyzer has placed a cartridge in the pipetting window, invert the sample 10 times and then immediately inject 165 μ L of urine into the cartridge fill port using either the SediVue Pipette or a syringe with a SediVue Syringe Tip attached.

IMPORTANT—When injecting sample into the cartridge:

- a. Use only IDEXX-supplied pipette tips and syringe tips. They are made specifically for the SediVue Dx analyzer and designed to reduce the risk of spills, leaks, and inappropriately filling the cartridge.
- b. Hold the pipette or syringe vertically to ensure the sample is injected only into the cartridge. Make sure the pipette/syringe tip is firmly seated into the fill port on the cartridge.
- c. Using light downward pressure, slowly and steadily fill the cartridge window to avoid air bubbles. If using the pipette, only depress plunger to the first stop.



- d. Ensure the sample fills the cartridge window but does not fill the entire overflow channel. If the cartridge is overfilled, complete the cleaning procedure on page 24 **before** pressing the Start button.
 - e. Lift the pipette tip from the fill port before you release the plunger.
 4. Press the **Start** button on the front of the analyzer. A progress bar displays next to the icon in the patient's job status area on the IDEXX VetLab Station Home screen, indicating the percentage of the run that has completed.

Understanding your results

In addition to determining results, the SediVue Dx* convolutional neural network verifies image and result quality with each run. If the image quality cannot be verified or if confirmatory methods should be considered, a message will appear at the bottom of your results indicating possible next steps.

Dilutions

When a urine sample is crowded and the edges of the elements overlap, the SediVue Dx convolutional neural network may have difficulty discerning the elements from one another. Diluting the urine sample will help spread the elements apart for easier identification and classification.

This section will help you identify when dilutions may be necessary both preanalysis and postanalysis and provide you with insight to help reduce additional dilution work-flow steps.

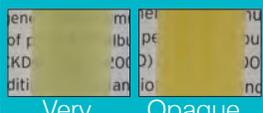
Note: Diluting a urine sample may affect the pH and osmolality of the sample and lead to changes in cellular appearance and the presence of crystals.

Preanalysis dilutions

There are times during the physical evaluation of the **clarity** and **color** of urine samples when it's obvious that samples will be crowded with cells, bacteria, debris, or crystals (e.g., gross hematuria). This evaluation will aid in determining if a dilution should be considered preanalysis.

Use the guidelines below to determine if the sample should be diluted prior to running it on the SediVue Dx analyzer.

Note: It's always good practice to remove an aliquot of the original sample in case additional testing is needed.

	<p>Does the clarity of the sample suggest high amount of cells, bacteria, crystals, or debris?</p>	<p>Does the color of the sample suggest evidence of hematuria?</p> <table border="0"><tr><td></td><td></td><td></td></tr><tr><td>Red</td><td>Dark red</td><td>Brown</td></tr></table>				Red	Dark red	Brown
								
Red	Dark red	Brown						

Consider a 1:5 dilution with 0.9% normal saline, remix the diluted sample, and rerun.

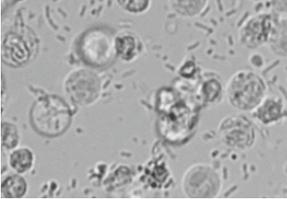
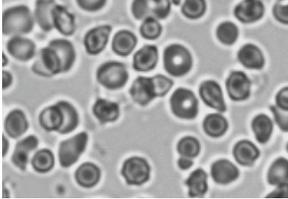
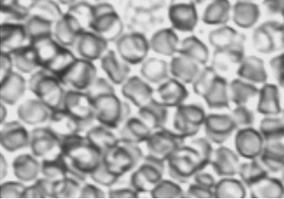
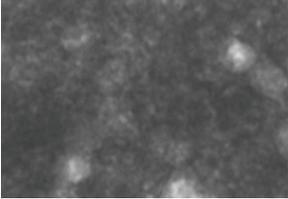
Postanalysis dilutions

When a “crowded” sample is run on the SediVue Dx analyzer, your semiquantitative results may be suppressed and you will be prompted to consider a dilution. When this occurs, an image review is essential to determine the appropriate next steps.

- If the images provide clinical insight, a simple annotation to the patient record may be applied and you may be able to move on without a dilution.¹
- If the images do not provide clinical insight, diluting the urine sample will help to spread the elements apart for more accurate analysis. The dilution ratio will vary depending on the severity of the crowding in the sample. Follow the guidelines below to determine if a postanalysis dilution may be helpful.

Do the images provide clinical insight?

If you are prompted to consider a dilution but you can obtain clinical insight from the images, a dilution is unnecessary.²

Yes	No		
Image provides clinical insight (bacteriuria and pyuria evident)	Slightly dense—some background (obvious hematuria; bacteria may be hidden)	Moderately dense—little background (obvious hematuria; other formed elements may be hidden)	Extremely dense—no background (overlapping cells make it impossible to discern elements without dilution)
			
No dilution required	Consider dilution: 1 part urine and 1 part saline ³ (1:2)	Dilute: 1 part urine and 4 parts saline ⁴ (1:5)	Dilute: 1 part urine and 9 parts saline ⁴ (1:10)

Minimal crowding Extreme crowding

¹ Dilution flags may also result from excessive bubbles and/or fibers from dirty optics.

² Only the first run for each sample type for the same patient in a 24-hour period will be invoiced. Multiple runs from the same patient that include one or more dilutions and do not provide semiquantitative results will not be invoiced.

³ It may be helpful to confirm bacteria with an air-dried, stained preparation ("dry prep"), rather than a dilution.

⁴ Higher concentrations of diluent will affect the pH and osmolality of the sample and lead to changes in cellular appearance and the presence of crystals.

How to dilute a sample

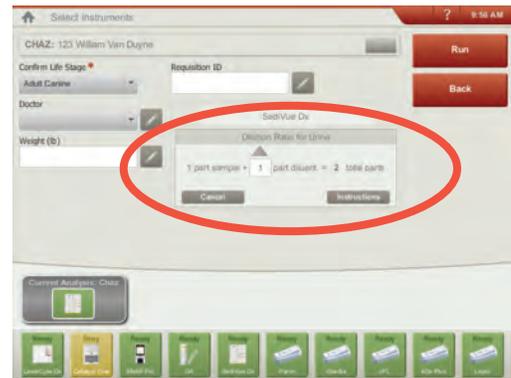
1. Initiate the sample run on the IDEXX VetLab Station.
OR

If the patient has already been run once, select the patient from the In-House Test Results list, tap **Add Test**, and then tap the SediVue Dx icon.

2. Tap **Run Dilution**.
3. Use the up/down arrows to specify the desired dilution factor (total parts).
4. Tap **Run** or **Append Results**.
5. In a test tube, dispense 165 μ L of the well-mixed urine sample. Add the selected parts of 0.9% normal saline and invert the sample 10 times to mix.
6. **IMPORTANT:** Aspirate 165 μ L from the bottom third of the diluted sample and then immediately inject it into the cartridge fill port.
7. Press the **Start** button on the analyzer. The results will be adjusted by the dilution factor and noted that the sample was diluted.

If the dilution does not yield semiquantitative results, repeat the process using a higher dilution factor.

Note: Diluting a urine sample may affect the pH and osmolality of the sample and lead to changes in cellular appearance and the presence of crystals.



Enter the dilution information in the center of the Select Instruments screen.

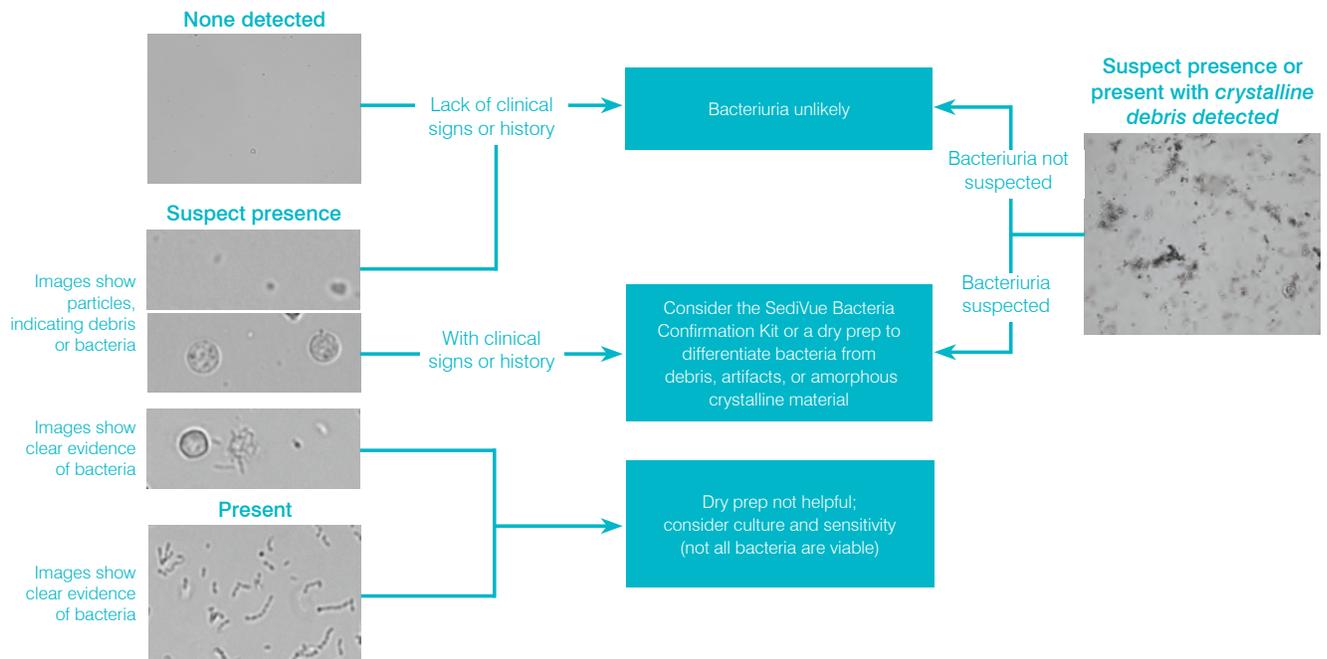
Out of focus

When the *Review images to confirm results* message appears, the convolutional neural network cannot verify the quality of focus in the images. This may occur when the sample does not have enough sediment to confirm the quality of focus or if the images are out of focus. If this message appears in several consecutive samples with sediment present, the optical window may require cleaning.

Bacteria

Bacteria results will be reported as None detected, Suspect presence, or Present. Bacteria can be difficult to differentiate from amorphous and crystalline debris. When the bacteria result is “suspect presence,” the report indicates that further differentiation is recommended with the following sample message: *Confirm bacteria with one of the following: image review, SediVue Bacteria Confirmation Kit, air-dried, stained cytological preparation ('dry prep'), or urine culture. We strongly recommend starting with a visual review of the images. If the absence or presence of bacteria can be confirmed through visual review, move on and consider adding a comment to the patient record.*

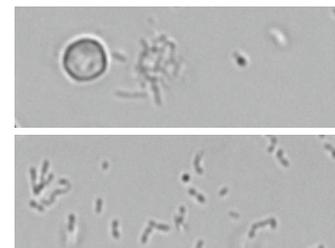
In cases where images do not show clear evidence of bacteriuria, it may be necessary to perform additional confirmatory steps to differentiate bacteria from debris or crystalline material. Additionally, when crystalline debris is detected, a *Crystalline debris detected* message appears, indicating that you should be more discerning of the bacteria result given that debris can confound bacteria results.



Here are some important things to remember when it comes to bacteriuria:

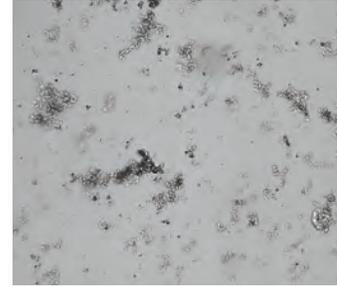
Rods occur 2X more frequently than cocci³

- Bacteria can be present—even in significant numbers—with or without white blood cells (WBCs).⁴
- Most UTIs are the result of ascending bacteria from rectal or fecal contamination or from the distal urogenital tract.⁵
- 14% of dogs will experience a urinary tract infection (UTI) in their lifetime.⁶



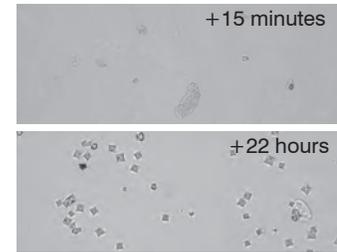
Many things look like small dots

- Even university laboratory technicians have difficulty visually identifying bacteria. It's the leading reason that only 40% of positive samples examined using manual microscopy are confirmed by culture.¹
- Lipid droplets, amorphous crystals, cellular debris, or artifacts may be mistaken for cocci.²
- When a rod is standing on end and is perpendicular to the focal plane, it can appear as a coccus.
- Do not rely on Brownian motion to identify bacteria as all small particles have it. *Proteus mirabilis* is the only common UTI pathogen that is motile.



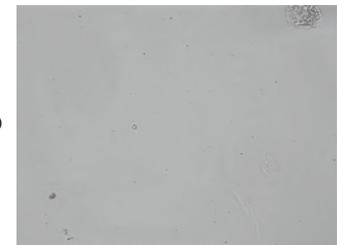
Fresh is best

- Bacteria populations can double every 20 minutes.⁷
- Urine is not an ideal habitat for bacteria. Over time, bacteria can die or be phagocytized by the WBCs, making a positive sample appear negative by the time it reaches the reference laboratory.



Bacteria (None detected)

Bacteria has not been detected or there are not enough recognizable features to classify as such. If visual review of images is negative and the patient has no clinical signs or history, bacteriuria is unlikely and no further action is necessary.



Bacteria (Suspect presence)

When the *Confirm with one of the following: image review, SediVue Bacteria Confirmation Kit, air-dried, stained cytological preparation ("dry prep"), or urine culture* message appears, bacteria may be present in the sample. The images should be reviewed to determine if there is sufficient evidence of bacteriuria by identifying uniformly sized structures or if the small structures are in the form of chains or doublets. If the absence or presence of bacteria cannot be visually confirmed in the images, we recommend using the SediVue Bacteria Confirmation Kit. Other options to consider would be an air-dried, stained cytological slide and/or a urine culture.



References

1. Swenson CL, Boisvert AM, Gibbons-Burgener SN, Kruger JM. Evaluation of modified Wright-staining of urine sediment as a method for accurate detection of bacteriuria in dogs. *JAVMA*. 2004;224(8):1282-1289.
2. Swenson CL, Boisvert AM, Gibbons-Burgener SN, Kruger JM. Evaluation of modified Wright-staining of dried urinary sediment as a method for accurate detection of bacteriuria in cats. *Vet Clin Pathol*. 2011;40(2):256-264.
3. Reference laboratory data, n = 412,000 samples, canine and feline only. Data on file at IDEXX Laboratories, Inc. Westbrook, Maine USA.
4. Rizzi TE, Valenciano A, Bowles M, et al. *Atlas of Canine and Feline Urinalysis*. Ames, IA: Wiley-Blackwell; 2017:157-158.
5. IDEXX Laboratories, Inc. Diagnostic update, April 2017: Diagnosis and management of bacterial urinary tract infections in dogs and cats. <https://www.idexx.com/files/urinalysis-dx-update-april-17.pdf>. Published April 2017. Accessed February 14, 2020.
6. Ling GV. Therapeutic strategies involving antimicrobial treatment of the canine urinary tract. *JAVMA*. 1984;185(10):1162-1164.
7. Haugan MS, Hertz FB, Charbon G, et al. Growth rate of *Escherichia coli* during human urinary tract infection: implications for antibiotic effect. *Antibiotics*. 2019;8(3):92. doi: 10.3390/antibiotics8030092.

To use the SediVue Bacteria Confirmation Kit

The proprietary reagents in the SediVue* Bacteria Confirmation Kit are designed to chemically dissolve blood cells and crystals that interfere with bacteria identification so that you can more confidently confirm the absence or presence of bacteria in a patient's sample.

IMPORTANT: When handling the reagents, always wear general laboratory PPE (such as gloves, eyewear, etc.) to protect yourself from skin and/or eye irritation.

1. Select the patient from **In-House Results** on the IDEXX VetLab* Station Home screen and then tap **Add Test**.
2. Tap the **SediVue Dx** icon.
3. Tap **Confirm Bacteria**.
4. Tap **Append Results**.
5. Using the SediVue* pipette and a new pipette tip, aspirate 165 μ L of well-mixed urine and dispense it into a new sample tube (provided in the kit).

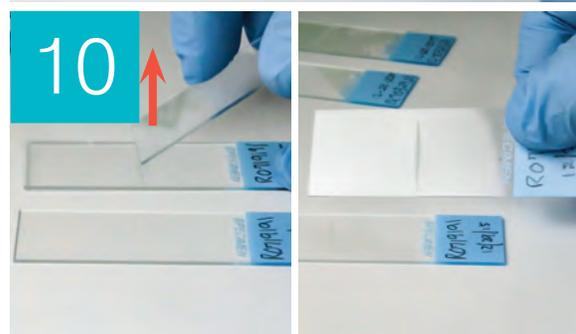
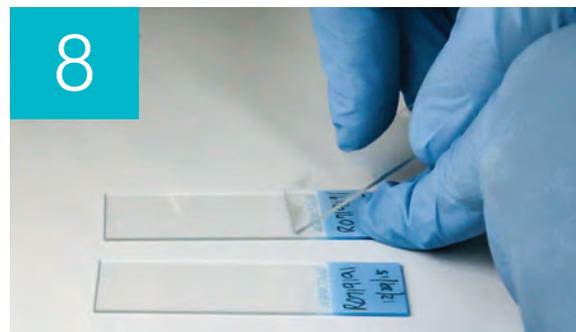
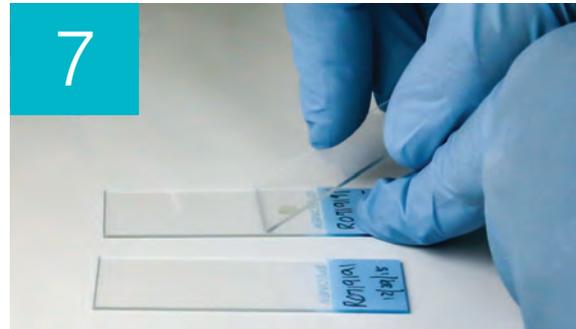
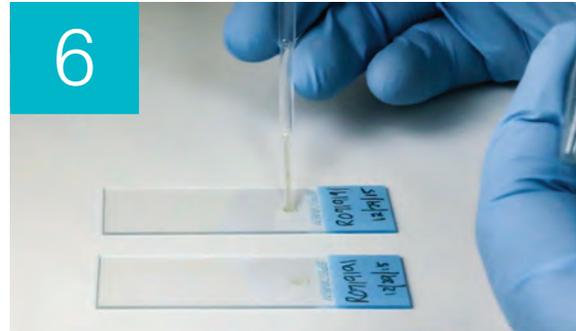
Note: For best results, use uncentrifuged urine within 2 hours of collection.

6. Add 1 drop of Reagent 1 (red) to the same tube.
7. Cap the tube and invert it 5 times to mix.
8. Add 1 drop of Reagent 2 (blue) to the same tube.
9. Cap the tube and invert it 5 times to mix.
10. Aspirate 165 μ L of the prepared sample and inject it into a cartridge in the pipetting window on the SediVue Dx* Urine Sediment Analyzer.
11. Press the **Start** button on the front of the analyzer.
12. Interpret the results:
 - Results for cocci and rods will be reported as either "None detected" or "Present."
 - **IMPORTANT: In rare instances, when the sample is overly crowded with cells, sperm, epithelial cells, or debris, it may be difficult to dissolve the elements enough to clearly identify bacteria. If this occurs, the results will be suppressed and the following message will appear on the report: *The SediVue Bacteria Confirmation Kit did not dissolve enough non-bacterial sediment and/or debris.* If you receive this message, do one of the following:**
 - **Review the images again to determine if further action is needed.**
 - **Perform an air-dried, stained cytological preparation ("dry prep").**
 - **Perform a urine culture.**

To perform a dry prep

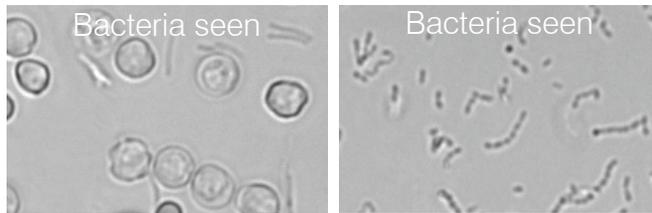
Performing a dry prep is an extremely cost-effective means of confirming the presence or absence of bacteria, of differentiating between cocci and short rods, and for characterizing various cellular elements in the urine sample.

1. Label your slides appropriately.
2. Fill a centrifuge tube with well-mixed, fresh urine taken from the bottom of the sample tube.
3. Centrifuge the sample (and a balance tube) on the **Urine** setting (or 400 g).
Note: If your centrifuge does not have a Urine setting, refer to its operator's manual for centrifugation settings and times.
4. After centrifugation, a concentrated pellet of formed elements should be visible at the bottom of the tube. Gently aspirate the supernatant down to the pellet, leaving an extremely small amount of urine in which to resuspend the pellet.
Note: If the sample is extremely hypocellular, it may be very difficult to see the pellet.
5. Lightly flick the bottom of the tube multiple times with your finger to gently resuspend the formed elements.
6. Using a new pipette, dispense a drop of sample on a glass slide, similar to preparing a blood film.
7. Place a clean glass spreader slide on your labeled slide, at approximately 30°–40°, in front of the drop of urine.
8. Back the spreader slide into the drop allowing the material to spread along the edge of the spreader slide.
9. Move the spreader slide toward the end of the specimen slide, keeping the two in contact with each other.
10. In the middle of the slide, abruptly stop spreading the urine sample and lift the spreader slide straight up to form a line of material.
11. Air dry thoroughly and then stain the slide using your routine hematology/cytology stain (e.g., Diff-Quik®).
Note: If there is very little sediment in the sample, it is acceptable to heat-fix the slide, but only when evaluating the presence of bacteria.
12. Review microscopically.



Bacteria (present)

When the *Consider urine culture and sensitivity* message appears, bacteria is present in the sample. When this occurs, consider a culture to confirm the bacteria are viable and to provide additional evidence of bacteriuria.



When urinalysis and culture results do not align

If the SediVue Dx analyzer reports that a specimen is positive for bacteria and the culture result from the laboratory says negative, it is possible that both are correct. Even when best practices are followed, discordance between microscopic evaluation and culture results may occur.

Results of “no growth” on culture when bacteria are seen in the urine sediment may occur for the following reasons:

- Bacteria may have been visualized microscopically but may be dead (nonviable), especially if the animal is currently on antibiotics or had previously or recently been treated with antibiotics at the time of sample collection. Other factors that may inhibit or prevent bacteria growth in culture include:
 - Exposure of the sample to temperature extremes.
 - Extremes of urine pH (≤ 4 or ≥ 9).
 - Inhibition by white blood cells (in urine with “too numerous to count” white blood cells).
- The organisms identified with microscopy could have been crystalline or amorphous debris in the urine that was misidentified as bacteria, called pseudobacteria (particularly with unstained urine sediment examination).
- Random motion of small colloidal particles, known as Brownian motion, can falsely appear to be cocci bacteria (particularly with unstained urine sediment examination).
- Rarely, anaerobic bacteria may be visualized on urinalysis but not grown in aerobic cultures.
- If the urine sample was stained in clinic prior to manual microscopic examination, the stain may have been contaminated with bacteria. Stains should be changed regularly.
- Positive results on a culture when bacteria are not identified during the urine sediment analysis may be because:
 - Bacterial colony counts are too low to be visualized on sediment analysis (for example, in very dilute urine, following incomplete or unsuccessful antibiotic therapy or in the case of localized pyelonephritis)
 - In situations where the clinical history is suggestive of urinary tract infection or an active urine sediment is present, urine culture should be considered even in the absence of bacteriuria on urinalysis.

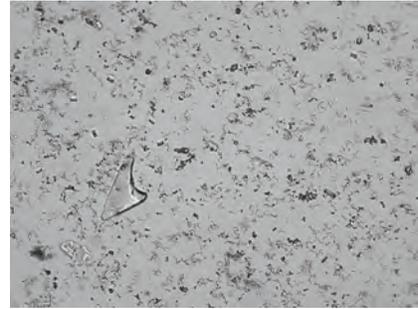
Crystals

Crystals can come in a variety of different shapes, sizes, and presentations. Urine pH, specific gravity, sample preparation and handling, and drugs can all play a part in crystal formation. The following sample message is designed to provide further clinical insight into the presence of crystalline debris.

Crystalline debris detected

Crystalline debris can be abundant and variable in size and presentation in some samples. Due to background density, the presence of large amounts of crystalline debris can affect the identification of other formed elements in the sample.

The message *Crystalline debris detected* is displayed when crystalline debris has been detected by the algorithm. The neural network algorithm has been trained to exclude crystalline debris from the unclassified crystal (CRY) category. When this message is present, users will be notified so they can be more discerning of the bacteria result as very small particles of debris can resemble bacteria.



Urine protein:creatinine (UPC) ratio

When the *Consider evaluation of urine protein:creatinine ratio* message appears, the urine chemical results indicate the presence of protein. A UPC ratio can be used to quantify protein loss in the urine as it is unaffected by urine volume or concentration. It has been incorporated into the IRIS Guidelines on Staging and Treatment of Chronic Kidney Disease (CKD) as an important monitoring tool at all stages. A UPC should be performed after urinalysis with sediment examination. It is not recommended for use if there is an “active sediment” as inflammatory conditions in the urinary tract will increase protein and negate the usefulness of the ratio.

What if there is active sediment?

When active sediment is detected, the *Recommend reevaluate proteinuria after resolution of active sediment* message appears.

First, resolve the infection. Once the sediment becomes inactive, consider running a UPC to quantify protein loss.

Accessing results

Viewing and printing test results

Analyzer results are automatically returned to the IDEXX VetLab* Station and recorded in the appropriate patient's record. The diagnostic results report is a comprehensive report of all the test results specified in a laboratory request for that patient on a specific day.

Patient test results can be printed automatically each time a set of results is returned, or you can manually print the results when needed.

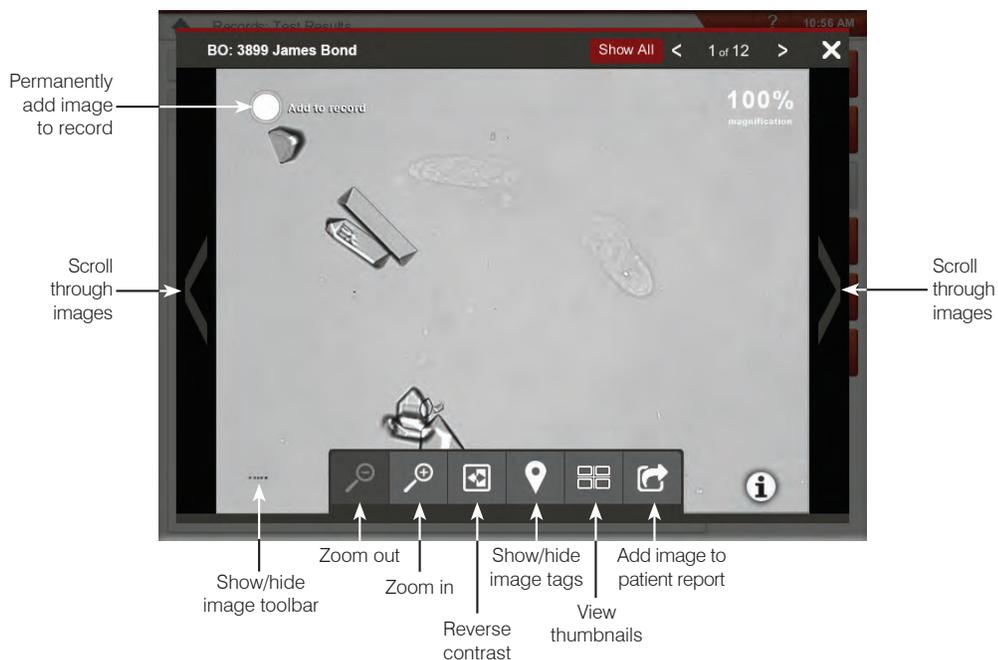
For more information about how to view and print test results, see the *IDEXX VetLab Station Operator's Guide*.

Reviewing and selecting images

By default, the first three images display alongside the results on the Records: Test Results screen. You can use the View Images feature to add up to three additional images, change the magnification of an image, and show image tags next to identified sediment.

Note: The View Images feature will display 12 of the 70 images captured during analysis. If additional images are required to confirm results, tap **Show All** to view the remaining 58 images.

1. On the SediVue Dx tab of the Records: Test Results screen, tap **View Images**.
2. Tap the image that you want to view. Then you can:



IMPORTANT: Image tags will appear on results that are above the “none detected” threshold and will not appear for bacteria results.

3. To select which images should be permanently retained and displayed next to the results on the Records: Test Results screen:
 - In full-screen view, tap **Add to Record** in the upper-left corner of the image.
 - In the thumbnail view, tap the circle in the upper-left corner of the image.
4. If you want to view another image, select it from the screen. Otherwise, tap the X in the upper-right corner of the screen to return to the Records: Test Results screen.

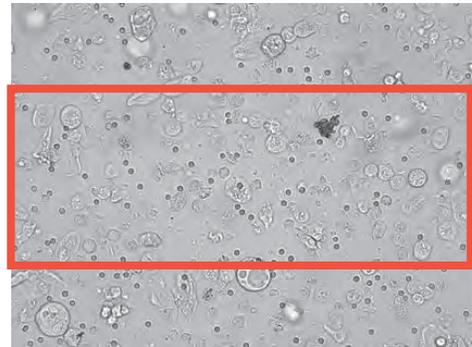
Tip: You can also tap one of the three images on the Records: Test Results screen to view a larger version of that image.

Adding comments to results

1. On the SediVue Dx tab of the Records: Test Results screen, tap **Add Comments**.
2. In the Comments area, enter the comments that you want to display in the Notes section on the Records: Test Results screen and on the patient report (e.g., *presence of bacteria confirmed by image review*).
3. Tap **Save**.

Printing images on the patient report

By default, the center portion of the highest priority image prints automatically if there is any sediment identified in the sample. You can override this setting or manually add an image to the patient's printed report as well as to the PDF that's sent to your compatible practice management system.



To add an image to the patient report:

1. On the SediVue Dx tab of the Records: Test Results screen, tap **View Images**.
2. Tap the image that you want to view and then use the image toolbar at the bottom of the screen to control the magnification, adjust the contrast, display or hide image tags, and more.
3. Once the image appears as you want it to on the report, tap .
4. Drag the crop box to the area of interest.
5. Tap  to generate the patient report with the image included and send a PDF version of the report to your compatible practice management software.
6. To close the viewer, tap  in the toolbar on the bottom of the screen or tap the X button in the upper-right corner to exit the View Images feature.

To modify the default image printing preferences:

1. Tap the **SediVue Dx** icon on the IDEXX VetLab Station Home screen.
2. Tap **Settings**.
3. If you want to include the highest priority SediVue Dx image on the printed report, in the Printing Image on Report group box, select the **Automatically include SediVue Dx image on report** check box. If you want to only include an image if sediment is present, select the **Only if sediment is present** check box.

OR

If you do not want to include a SediVue Dx image on the printed report, clear the **Automatically include SediVue Dx image on report** check box.

Quality control

Overview

The purpose of quality control is to verify the integrity of your results and to verify that your analyzer is functioning optimally. We recommend that you perform quality control once per month.

Running quality control

Note: Keep SediVue* QC in the refrigerator until the expiration date or at room temperature for up to 30 days. DO NOT freeze. If accidentally frozen, contaminated, or compromised, discard the vial and call IDEXX Technical Support to reorder.

1. Tap the **SediVue Dx** icon on the IDEXX VetLab Station Home screen.
2. Tap **Quality Control**.
3. If the QC lot that you're using is listed, select it and tap **Run QC**.
OR
4. If the QC lot that you're using is NOT listed, follow these steps:
 - a. Tap **Add QC Lot**.
 - b. Scan or enter the L2 and L1 bar codes located on the QC insert.
 - c. Tap **Next**.
 - d. Select the lot number that you added.
 - e. Tap **Run QC**.
5. Gently invert the vial 10 times to ensure the cells at the bottom of the vial are completely suspended.
6. Using the SediVue pipette, aspirate 165 μ L of IDEXX SediVue* QC fluid and then inject it into a cartridge in the pipetting window.
7. Press the **Start** button on the analyzer.
8. Repeat the above steps for the opposite QC vial (if you ran L1 first, run L2 second—or vice versa).
9. Verify the results are in the target ranges and that the images are sharp and in focus.

Maintenance

Upgrading the software

As new features and functionality are added to the SediVue Dx* analyzer, you will receive software upgrades from IDEXX. These upgrades will be sent automatically to your IDEXX VetLab* Station via your SmartService* Solutions connection. You'll receive a message in the IDEXX VetLab Station Message Center when an upgrade is available.

Emptying the waste bin (as needed)

It's recommended that you empty the waste bin whenever a new cartridge sleeve is loaded into the analyzer.

To empty the waste bin, pull it to remove it from the analyzer, dispose of its contents, and then replace it in the analyzer.

Note: Do not remove the waste bin while a run is in progress as it will cancel the run and discard the cartridge and sample.



Rebooting the analyzer (weekly)

IDEXX recommends that you reboot the analyzer weekly. For greater efficiencies, consider rebooting the analyzer at the same time that you perform your weekly reboot of the IDEXX VetLab Station.

1. Tap the **SediVue Dx** icon on the IDEXX VetLab Station Home screen.
2. Tap **Turn Off SediVue Dx**.
3. Confirm that you would like to restart the analyzer.

Cleaning the analyzer

To ensure the optimal performance of your SediVue Dx* Urine Sediment Analyzer, it's recommended that you clean the internal components of the analyzer on a monthly basis. If a cartridge is overfilled or filled incorrectly, cleaning is also needed to prevent the excess sample from contaminating the analyzer's moving parts. Maintaining a clean analyzer will reduce "cartridge movement" errors and maximize the analyzer's performance.

Note: You'll need alcohol prep pads and optical tissues when performing routine and preventive maintenance. Need to order more? Get them free at order.idexx.com.

Which model of SediVue Dx do you have?

There are two very similar models of the SediVue Dx analyzer, and the process for cleaning their internal components (see next pages) can vary slightly. The biggest visual difference between the two models is their analyzer door—one model's door is the full size of the front of the analyzer and the other is about half the size of the front of the analyzer. Be sure to follow the appropriate steps for your model.



Note: Do not open the analyzer door while a run is in progress as it will cancel the run and discard the sample and cartridge.

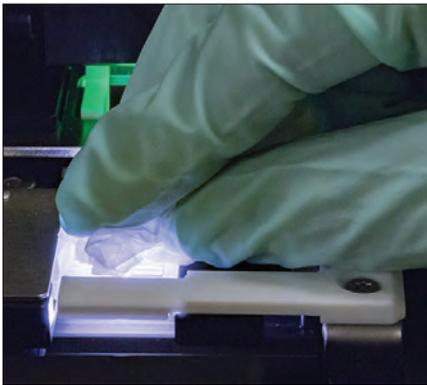
IMPORTANT: Do not use any of the following near the analyzer: organic solvents, ammonia-based cleaning products, ink markers, sprays containing volatile liquids, insecticides, disinfectants, polish, or room fresheners.

To clean after a cartridge was overfilled or filled incorrectly

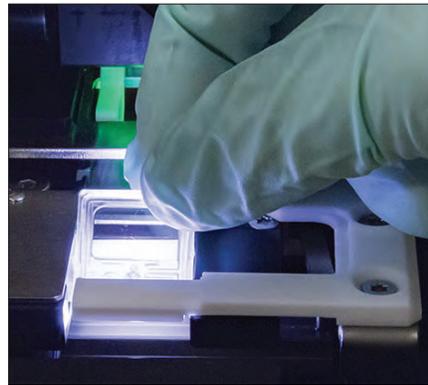
If a cartridge is overfilled or filled incorrectly, cleaning is needed to prevent the excess sample from contaminating the analyzer's moving parts. Maintaining a clean analyzer will reduce "cartridge movement" errors and maximize the analyzer's performance.

For best results, after you notice that the cartridge has been inappropriately filled, **do not press the Start button as this will drag urine into the internal components of the analyzer.** Instead, follow the instructions below.

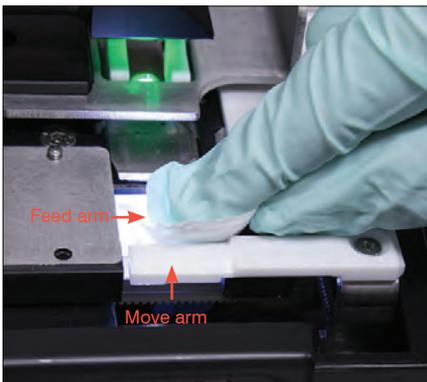
Note: Already pressed the Start button? Use the instructions on the next page to clean the internal components of the analyzer.



1. Open the analyzer door. Then, with gloved hands, use an optical tissue to absorb urine on top of the cartridge.



2. Remove and dispose of the cartridge.



3. Using a new alcohol prep pad, clean the feed arm (dispense area), including the front of the move arm. Then dry the components with an optical tissue.



4. Close the analyzer door. Once the SediVue Dx icon has a green "ready" status, tap the patient icon on the IDEXX VetLab* Station Home screen and tap **Start Run**. A new cartridge is placed in the pipetting window.



Is your analyzer door the full size of the front of the analyzer?

If so, use the instructions on this page to clean the internal components of your analyzer (monthly or more frequently, if needed)

If your analyzer door is about half the size of the front of the analyzer, use the instructions on the next page.

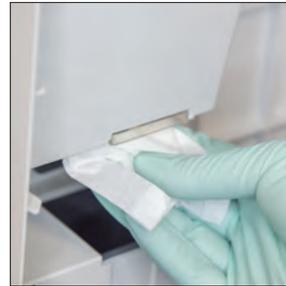
IMPORTANT: Be sure to use these specific tools as mentioned in the following steps.

Tools needed:

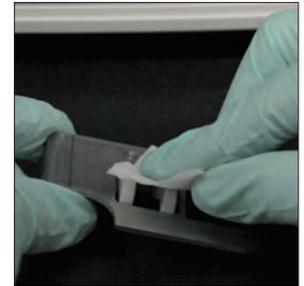
- 1 pair powder-free latex or nitrile gloves
- 9 dry optical tissues
- 1 damp optical tissue (dampened with warm water)
- 3 rinsed alcohol prep pads (rinsed in warm water and squeezed dry)
- 3 alcohol prep pads (not rinsed)
- Paper towels



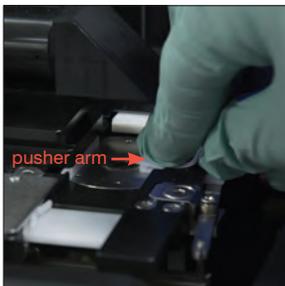
1. On the SediVue Dx Settings screen, tap **Clean** and then tap **Turn Off SediVue**.



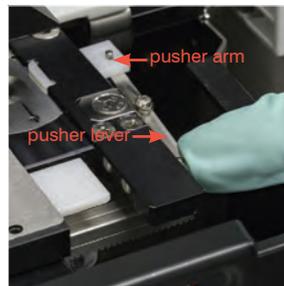
2. Open the analyzer door and clean the top and bottom of the pipetting window with a damp optical tissue. Then dry with a new dry optical tissue.



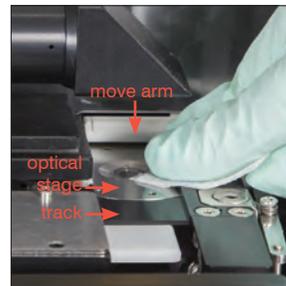
3. Remove the cartridge holder, clean it with a new alcohol prep pad, dry it with a new dry optical tissue, and then set it aside.



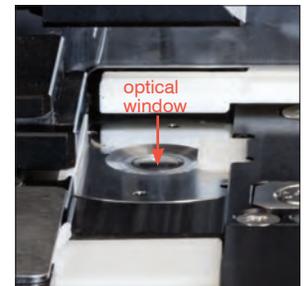
4. Using a new rinsed alcohol prep pad, clean the left side of the pusher arm 5 times (ensuring the right edge of the track is cleaned thoroughly), and then dry it with a new dry optical tissue.



5. Press the pusher lever to the left and repeat step 4 on the right side of the pusher arm using a new rinsed alcohol prep pad.

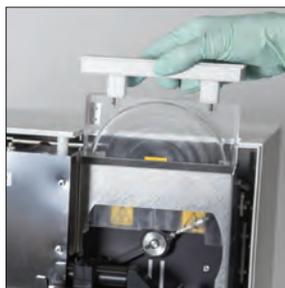


- 6a. Using a new rinsed alcohol prep pad, clean the optical stage and track repeatedly to remove all debris. Then dry with a new dry optical tissue.

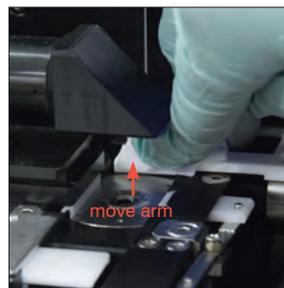


- 6b. Using a new alcohol prep pad (not rinsed), clean the optical window using a circular motion (3–4 times) and then dry it in a circular motion with a new dry optical tissue.

IMPORTANT: Do not exert excess pressure on the optical window.



7. Remove the centrifuge shield, waste bin, and drip tray. Then clean them with warm water and dry them with paper towels.



8. Using a new alcohol prep pad (not rinsed), clean the move arm and then dry it with a new dry optical tissue.



9. Return the waste bin, drip tray, centrifuge shield, and cartridge holder to their locations in the analyzer.



10. Remove the fan filter, rinse it thoroughly with warm water, pat it dry with a paper towel, and return it to its location in the analyzer. Then on the SediVue Dx Cleaning Guide screen, tap **Done** to power on the SediVue Dx.



Is your analyzer door about half the size of the front of the analyzer?

If so, use the instructions on this page to clean the internal components of your analyzer (monthly or more frequently, if needed)

If your analyzer door is the full size of the front of the analyzer, use the instructions to the left.

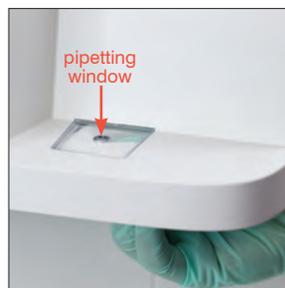
IMPORTANT: Be sure to use these specific tools as mentioned in the following steps.

Tools needed:

- 1 pair powder-free latex or nitrile gloves
- 6 dry optical tissues
- 1 damp optical tissue (dampened with warm water)
- 4 alcohol prep pads
- Paper towels



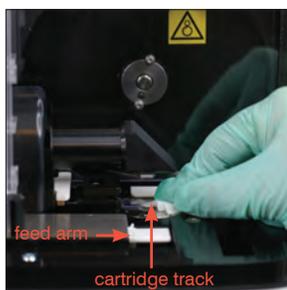
1. On the SediVue Dx Instruments screen, tap **Turn Off SediVue** and then tap **Shut Down**.



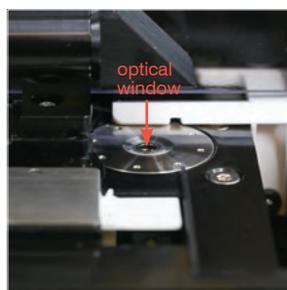
2. Open the analyzer door and clean the top and bottom of the pipetting window with a damp optical tissue. Then dry with a new dry optical tissue.



3. Remove the cartridge holder, clean it with a new alcohol prep pad, dry it with a new dry optical tissue, and then set it aside.

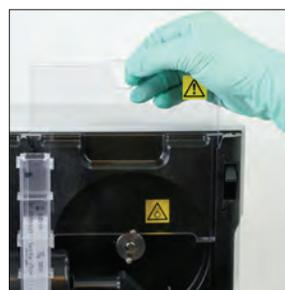


4. Using a new alcohol prep pad, clean the cartridge track and the white feed arm thoroughly. Then dry them with a new dry optical tissue.

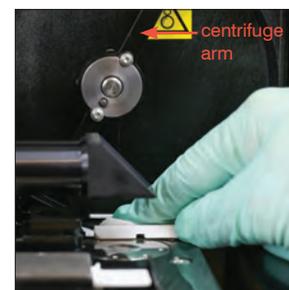


5. Using a new alcohol prep pad, clean the optical window using a circular motion (3–4 times) and then dry it in a circular motion with a new dry optical tissue.

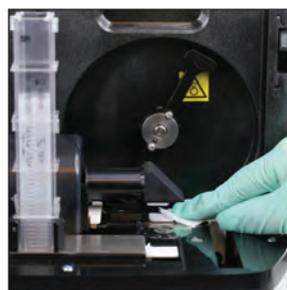
IMPORTANT: Do not exert excess pressure on the optical window.



6. Remove the centrifuge shield and waste bin. Then clean them with warm water and dry them with paper towels.



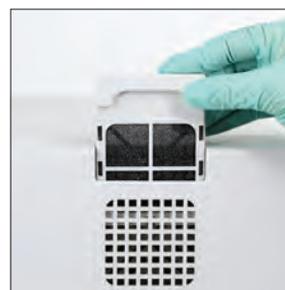
7. Gently move the centrifuge arm to the left and inspect the area below it for debris. If it's dirty, use a new alcohol prep pad to clean it and then dry it with a new optical tissue.



8. Using a new alcohol prep pad, clean the move arm and then dry it with a new dry optical tissue.



9. Return the waste bin, centrifuge shield, and cartridge holder to their locations in the analyzer.



10. Remove the fan filter on the back of the analyzer, rinse it thoroughly with warm water, pat it dry with a paper towel, and return it to its location in the analyzer.



11. On the SediVue Dx Instruments screen, tap **Turn On SediVue Dx** to power on the SediVue Dx.

Frequently asked questions

Cartridge FAQs

How do I remove a cartridge jam?

If you receive an error that a cartridge jam has occurred, it is likely because the cartridge pathway is dirty. Open the analyzer door, remove the jammed cartridge, and then follow the monthly cleaning instructions. If the jam impacted the delivery of results, rerun with a new sample and cartridge. Cartridge jams do not impact result quality.

If you are unable to remove the cartridge, power off the analyzer to decrease the holding force of the motors.

My cartridge counter is wrong—how do I fix it?

If the cartridge counter on the SediVue Dx Instruments screen is incorrect, you can:

- Keep using the system until it runs out of cartridges or until the counter reaches zero.
- Scan the bar code if you forgot to scan the bar code initially.
- Call IDEXX Technical Support for assistance.

I tried to scan the bar code on a new cartridge sleeve, but it is not accepting it. What should I do?

Confirm the following:

- The correct bar code is being scanned (on the plastic wrapping on the sleeve).
- The CAPS lock is turned **off** on the on-screen keyboard.
- The bar code entered matches the bar code on the sleeve.

If the bar code is still not accepted, discard the sleeve with the bad bar code and try a new cartridge sleeve. If the problem continues, or you need to adjust your inventory, call IDEXX Technical Support.

My IDEXX VetLab Station says I have cartridges left, but the sleeve is empty. What should I do?

Install a new cartridge sleeve to reset the counter. Cartridges are shipped for free, so discarded cartridges will not result in lost revenue.

My IDEXX VetLab Station says I have no cartridges left, but the cartridge sleeve still has cartridges. What should I do?

Install a new sleeve to reset the counter. Cartridges are shipped for free, so discarded cartridges will not result in lost revenue.

SediVue Bacteria Confirmation Kit FAQs

When should I use the SediVue Bacteria Confirmation Kit?

You should use the kit if:

- You receive a bacteria result of “Suspect presence” and the corresponding images do not provide conclusive evidence of the absence or presence of bacteria.
- You receive a bacteria result that does not align with the corresponding images and/or your expectations.

How does the bacteria confirmation kit help to clarify my bacteria results?

The reagents in the kit dissolve crystalline and cellular material, allowing better visibility to the absence or presence of bacteria.

How do I interpret my results obtained after using the bacteria confirmation kit?

Your results will report rods and cocci as either “None detected” or “Present.” As always, be sure to use the corresponding images along with results to make the most informed decision.

I received a message stating the kit didn’t dissolve enough nonbacterial sediment. What do I do?

This message indicates there was an abundance of elements in the sample that did not dissolve fully; therefore, the images are not clear enough to confidently identify the absence or presence of bacteria. To resolve, do one of the following:

- Review the images to determine if further action is needed.
- Perform an air-dried cytological preparation (“dry prep”).
- Perform a urine culture.

Why do I need to wear PPE while using the kit?

The bacteria confirmation kit reagents could cause skin and eye irritation. We recommend wearing PPE as a precaution.

Why am I still seeing cells and/or other material in my images after running the bacteria confirmation kit?

While it is possible to see some remaining elements (such as epithelial cells, which don’t dissolve as well as others or crystalline, cellular, or amorphous material), results and/or images will not be impacted in most cases. If these elements are interfering with the quality of the results and/or images, do one of the following:

- Perform an air-dried cytological preparation (“dry prep”).
- Perform a urine culture.

If this issue persists, confirm that you’re following the steps as outlined in the kit insert—adding the reagents in the improper order, or not at all, will impact results.

Can I run the bacteria confirmation kit without an initial patient run?

You can run the bacteria confirmation kit without an initial SediVue Dx patient run; however, you will be invoiced, important elements may dissolve in the sample, and only bacteria results will be reported.

Will I be charged for running the bacteria confirmation kit?

You will not be invoiced for running the bacteria confirmation kit as long as it's run as part of a complete urine sediment analysis.

Why doesn't bacteria dissolve with the bacteria confirmation kit reagents?

Bacteria have an outer layer that prevents penetration by the reagents, thereby maintaining their integrity.

How do I order another bacteria confirmation kit?

A new kit will be shipped to you, via autoreplenishment, based on your usage and the kit expiration date. Should you need to order beforehand, call your IDEXX Inside Sales Representative.

Which species are supported for use with the bacteria confirmation kit?

The bacteria confirmation kit is intended for use with canine and feline urine.

Image FAQs

Why do all of my images have the same spot/blemish on them?

If you see scratches or blotches that repeat on every image, some dust or dirt has probably collected on the optical stage.

To clean the optical stage:

1. Power off the analyzer.
2. Open the analyzer door.
3. Remove the cartridge holder and clean it with an IDEXX-supported alcohol prep pad.
4. Using a new IDEXX-supported alcohol prep pad, clean the optical stage and then slide the pad along the track repeatedly to remove all debris.

IMPORTANT: The optical stage should only be cleaned with new IDEXX-supported alcohol prep pads and optical tissues.

5. Dry the components cleaned in steps 3–4 with a dry optical tissue.
6. Close the analyzer door and power on the analyzer.

Why do some of my images have a spot/blemish on them?

Spots and blemishes may be caused by bubbles in your sample. Ensure you're following proper sample preparation protocols (see "Preparing Samples" on page 9 for more information) and then rerun the sample. If the problem persists after multiple runs with new samples, please contact IDEXX Technical Support.

Why are my images out of focus?

Images may appear out of focus if there are significant lipids in the sample or if the microscope stage is dirty. If this occurs on only one sample, it is likely related to lipids. If it occurs on many samples, please contact IDEXX Technical Support for assistance.

Miscellaneous troubleshooting FAQs

What do I do when I receive an alert?

When the analyzer experiences a problem, an alert message appears on the upper right side of the IDEXX VetLab* Station title bar, the LED on the front panel of the SediVue Dx* analyzer flashes red, and the SediVue Dx icon on the IDEXX VetLab Station Home screen appears with an Alert status.

To respond to an alert, do one of the following:

- Tap the **SediVue Dx** icon on the IDEXX VetLab Station Home screen.
- Tap the alert message in the title bar to display the alert message. Follow the instructions displayed in the alert message.

How do I cancel a run that is already in process?

To cancel a run that is already in process, tap the **SediVue Dx** icon on the IDEXX VetLab Station Home screen and then tap **Cancel Run**.

What should I do if I get repeated messages about rerunning a sample because it is complex or has lipid interference?

This message is generated when a significant number of images are either complex or have lipid interference (which can affect the focus of the images). In most cases, diluting the sample will resolve the issue. If you're getting this alert repeatedly even after diluting the sample, it may be because the analyzer requires cleaning. Clean the analyzer using the steps provided on page 20. If the problem persists, please contact IDEXX Technical Support.

What if I need to make adjustments to my inventory of cartridges, pipette tips, or QC fluid (e.g., due to loss, damage, or troubleshooting)?

Contact IDEXX Technical Support to make inventory adjustments.

What should I do if I receive multiple pusher arm errors?

This is generally due to a dirty cartridge path. Remove any jammed cartridges and clean according to the monthly cleaning instructions.

QC FAQs

What should I do if my QC results are out of range?

If your quality control results are out of range:

- Verify the QC materials are in-date.
- Confirm that you've been storing the QC materials correctly.
- Review the images to ensure they are in focus.

If the problem persists, remix the QC materials and run them again. If that still does not resolve the problem, contact IDEXX Technical Support for assistance.

What should I do if I've accidentally frozen my QC?

Discard the QC material and call IDEXX to order more.

What should I do if my QC looks contaminated?

Contaminated QC material will appear cloudy and may have solid material that does not dissolve when mixed. Discard the QC material and call IDEXX to order more.

What happens if I've accidentally left my QC out of the refrigerator?

The SediVue QC material is good for 30 days at room temperature. If the material looks clear, place it back in the refrigerator. If contaminated, discard the QC material and call IDEXX to order more.

Pay per Run and Auto Replenishment FAQs

How does Pay per Run work?

The first run for each patient that provides results and/or images will be invoiced at the end of the month, after you've already billed clients for the service. This way, you can eliminate up-front inventory costs and minimize the risks of inventory management.

How does Auto Replenishment work?

For North America only—Your monthly usage is monitored through your SmartService Solutions connection, so you'll receive supplies when your inventory runs low.

Appendices

Preparing the installation site

- Before unpacking, find a suitable space for the analyzer. Check the dimensions of the analyzer and combine it with the needed workspace for sample handling to meet the requirements.
- The analyzer should only be used indoors. Keep out of direct sunlight. Intense light can interfere with the optical sensors.
- Make sure there is enough room behind the analyzer for easy connection and disconnection of power supply, for the peripherals, and for the proper ventilation of the analyzer. The recommended safety clearance is 10 centimeters (3.94 inches).
- Make sure you set up and operate the analyzer on a solid level surface in an environment with fairly constant temperature and humidity. Do not operate the analyzer in temperatures below 15°C (59°F) or above 40°C (104°F), or outside of the 20%–80% relative humidity level (noncondensing) at 30°C (86°F). Do not expose the analyzer to strong light.
- Do not operate the analyzer in close proximity to sources of intense electromagnetic radiation (such as unshielded intentional radio frequency (RF) sources). The analyzer is certified to meet the electromagnetic compatibility (EMC) requirements of EN 61326-1:2007 and EN 61236-2-6:2007.
- Do not set up and operate the analyzer in an environment with vibration sources, as these vibrations could influence the results and/or cause instrument failure..
- Make sure the instrument is allowed to acclimatize to room temperature before use.

Installing the SediVue Dx analyzer

The SediVue Dx* analyzer works in conjunction with the IDEXX VetLab* Station.

1. Before you unpack the analyzer, choose an optimum location for the instrument. The analyzer should be placed on a level surface in a well-ventilated area away from obvious sources of heat, direct sunlight, cold, humidity, or vibrations.

IMPORTANT: Ensure proper ventilation. The analyzer's cooling vents are in the back.

2. Connect the analyzer to a numbered port on the router using an Ethernet cable (provided).

Note: For more information about connecting your analyzer to the router, see the installation instructions that accompanied your router.

3. Power on the SediVue Dx analyzer. Once the **SediVue Dx** icon displays on the IDEXX VetLab Station Home screen, your connections are complete.

Note: If the SediVue Dx icon does not appear on the IDEXX VetLab Station Home screen within 3 minutes, contact IDEXX Technical Support for assistance.

Technical specifications

Sample volume: 165 μ L

Database capacity: up to 1,000 samples

Interfaces: Ethernet

Dimensions

Width: 12.6 in. (320 mm)

Depth: 12.6 in. (320 mm)

Height: 13.2 in. (336 mm)

Weight: 22 lb (10 kg)

Power requirements

Input: 100–240 V AC

Line frequency: 50–60 Hz

Operating conditions

Indoor use only

Ambient room temperature: 15°C–40°C (59°F–104°F)

Relative humidity: 20%–80% at 30°C (86°F), noncondensing

Altitude: Up to 2,000 meters above sea level

Safety precautions

IMPORTANT: If the equipment is used in a manner other than specified, the protection provided by the equipment may be impaired.

The analyzer does not contain any user-serviceable components. DO NOT disassemble.

Line voltage for the SediVue Dx AC power cable is 100–240 V AC, 50–60 Hz. Be sure to plug all equipment into properly grounded electrical outlets.

Use only the AC power cable supplied.

Disconnect the AC power cable from the wall outlet if the:

- AC power cable becomes frayed or otherwise damaged.
- AC power adapter is exposed to water or other liquids.

Electrical safety

Removing the covers of electronic equipment can cause electric shock, as there are high-voltage parts inside.

Do not tamper with any of the electronics inside the analyzer.

Do not remove any analyzer cover other than those specified in this document.

To prevent fire or shock hazard, do not expose the analyzer to rain or moisture of any kind.

To prevent electric shock, never use an extension cord. Ensure all plugs and sockets are fully inserted so that no parts of the plug prongs or blades are visible.

Installation, service, and repair must be performed by personnel authorized and trained by IDEXX Laboratories only.

Line voltage for the SediVue Dx AC power cable is 100–240 V AC, 50–60 Hz. Be sure to plug all equipment into properly grounded electrical outlets.

Use only the AC power cable supplied.

Disconnect the AC power cable from the wall outlet if the:

- AC power cable becomes frayed or otherwise damaged.
- AC power adapter is exposed to water or other liquids.

Care of the analyzer

Use powder-free latex or nitrile gloves when operating or cleaning the analyzer.

Keep analyzer away from sources of heat or flames.

PROTECT your equipment from damp conditions, wet weather, or liquid spills.

Take care not to spill water or other liquids on the unit.

DO NOT use solvents, ink markers, sprays containing volatile liquids, or polish on the analyzer as it may damage the outer case.

Clean only with mild soap and a slightly moist cloth and only when the analyzer is not in use.

Biohazard precautions

All components of the analyzer may come into contact with urine and are therefore possible sources of infection. Urine specimens should be handled at Biosafety Level 2.

Be sure to wear appropriate protective equipment, including but not limited to eye protection with side shields, fluid-resistant lab coat, and approved lab gloves.

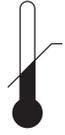
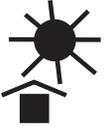
Operator qualification

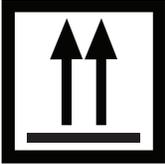
Operators are required to have a sound knowledge of relevant guidelines and standards as well as the information and procedures contained in this Operator's Guide.

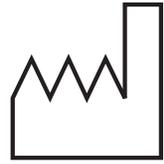
Follow good laboratory practices, especially when working with biohazardous material.

International symbol descriptions

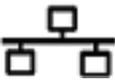
International symbols are often used on packaging to provide a pictorial representation of particular information related to the product (such as expiration date, temperature limitations, batch code, etc.). IDEXX Laboratories has adopted the use of international symbols on our analyzers, product boxes, labels, inserts, and manuals in an effort to provide our users with easy-to-read information.

Symbol	Description	Symbol	Description
	Use by A utiliser avant Verwendbar bis Usare entro Usar antes de 使用期限		Temperature limitation Température limite Zulässiger Temperaturbereich Temperatura limite Limitación de temperatura 保存温度（下限）
	Batch code (Lot) Code de lot (Lot) Chargenbezeichnung (Partie) Codice del lotto (partita) Código de lote (Lote) ロット番号		Upper limit of temperature Limite supérieure de température Temperaturobergrenze Limite superiore di temperatura Limite superior de temperatura 保存温度（上限）
	Serial number Numéro de série Seriennummer Numero di serie Número de serie シリアル番号		Consult instructions for use Consulter la notice d'utilisation Gebrauchsanweisung beachten Consultare le istruzioni per l'uso Consultar las instrucciones de uso 取扱説明書をご参照ください。
	Catalog number Numéro catalogue Bestellnummer Numero di catalogo Número de catálogo 製品番号		Keep away from sunlight Conserver à l'abri de la lumière Vor direkter Sonneneinstrahlung schützen Mantener alejado de la luz solar Tenere lontano dalla luce diretta del sole 遮光してください。
	Authorized Representative in the European Community Représentant agréé pour la C.E.E. Autorisierte EG-Vertretung Rappresentante autorizzato nella Comunità Europea Representante autorizado en la Comunidad Europea EC内の正規販売代理店		WEEE Directive 2002/96/EC Directive 2002/96/CE (DEEE) WEEE-Richtlinie 2002/96/EG Directiva 2002/96/CE RAEE Direttiva RAEE 2002/96/CE 廃電気電子機器指令 (WEEE Directive 2002/96/EC)
	Manufacturer Fabricant Hersteller Ditta produttrice Fabricante 製造元		Biological risks Risques biologiques Biogefährlich Rischi biologici Riesgos biológicos 生物学的リスク
	Caution, consult accompanying documents Attention, consulter les documents joint Achtung, Begleitdokumente beachten Attenzione, consultare la documentazione allegata Precaución, consultar la documentación adjunta 注意、添付文書をご参照ください。		Do not reuse Usage unique Nicht wiederverwenden No reutilizar Non riutilizzare 再利用しないでください。
	Caution, hot surface Attention, surface très chaude Precaución, superficie caliente Vorsicht, heiße Oberfläche Attenzione, superficie rovente 高温注意		Electrostatic-sensitive device Appareil sensible aux charges électrostatiques Dispositivo sensible a descargas electrostáticas Gerät ist sensibel auf elektrostatische Ladung Dispositivo sensible alle scariche elettrostatiche 静電気の影響を受ける装置

Symbol	Description
	<p>Keep dry Conserver dans un endroit sec Mantener seco Vor Nässe schützen Tenere al riparo dall'umidità 濡らさないこと。</p>
	<p>This side up Haut Este lado hacia arriba Diese Seite nach oben Alto この面を上にする。</p>

Symbol	Description
	<p>Fragile Fragile Frágil Zerbrechlich Fragile 取扱注意</p>
	<p>Date of manufacture Date de production Fecha de producción Herstellungsdatum Data di produzione 製造年月日:</p>

Other symbols

Symbol	Description
	Ethernet/Network symbol
	Pinch point

IDEXX technical support contact information

IDEXX sales representative: _____

Telephone/voice mail: _____

United States: 1-800-248-2483

Australia: 1300 44 33 99

Austria: 43 (0)1 206 092 729

Belgium: 32 (0)27 00 64 38

Brazil: 0800-777-7027

Canada: 1-800-248-2483

China (PRC): 400-678-6682

Czech Republic: 420-239018034

Denmark: 45 (0) 43 31 04 39

Finland: 358 (0)9 7252 2253

France: 33 (0) 810 433 999

Germany: 49 (0)69 153 253 290

Ireland: 353 (0)1 562 1211

Italy: 39 02 87 10 36 76

Japan: 0120-71-4921

Latin America: tecnico-latam@idexx.com

Luxembourg: 352 (0)34 20 80 87 22

Netherlands: 31 (0)70 700 7033

New Zealand: 0800 83 85 22

Norway: 47 24 05 51 10

Poland: 48 22 853 40 01

Russia: 7-4999-511-255

Singapore: 65 6807-6277

Slovakia: 421-268622417

South Korea: 080 7979 133

Spain: 34 932 672 660 or 34 916 376 317

Sweden: 46 (0)8 5198 9566

Switzerland: 41 (0)44 511 22 37

Taiwan: 0800 291 018

United Kingdom: 44 (0)20 3788 7508

