Bacteria Identification Guide

Bacteria can be a challenge to distinguish from amorphous debris and crystalline material. When the presence of bacteria is “suspect presence,” the SediVue Dx Urine Sediment Analyzer’s convolutional neural network will suggest that you review the patient’s images for deeper clinical insights.

In cases where bacteria cannot be visually confirmed in the images, a dry-slide sediment cytology ("dry prep") may be considered to differentiate bacteria from other debris or artifacts. If bacteria are obvious in the images, or the result is "present," a dry prep is not necessary, but you can follow up with a culture and sensitivity (MIC) test if you want to further classify the bacteria as well as test for sensitivity to certain antibiotics.

None to rare

- Bacteria not seen
- Suspect presence
  - Bacteria possible
  - No clinical signs
  - With clinical signs
- Bacteria obvious

Present

- Bacteria seen

If negative
- Consider a dry prep to differentiate bacteria from debris, artifacts, or amorphous crystalline material (see instructions on reverse)
  - If positive
    - Bacteriuria present—no dry prep needed; consider culture and sensitivity to classify bacteria and test for antibiotic sensitivity.†

† If you receive a negative culture result and a positive SediVue Dx result, it may be due to recent or current antibiotic use, presence of nonviable bacteria that do not grow on culture media, and/or misinterpretation of amorphous debris as bacteria.
How 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. Gently 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*).
12. Review microscopically.

Have questions? Visit [idexxlearningcenter.com/dryprep](http://idexxlearningcenter.com/dryprep) to view a short video or call IDEXX Technical Support:
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