Intended use
A urine culture-paddle method for diagnosing urinary tract infections (UTI). Uricult Vet CLED EMB is intended for veterinary use only.

Principles of the procedure
The Uricult Vet CLED EMB culture-paddle system is based on two culture media for the detection of microbes causing urinary tract infections (UTI) in animals. One side of the plastic paddle is coated with green CLED medium and the other with reddish EMB medium. The CLED medium is intended for determining the total microbial count. The EMB media is intended for detecting gram-negative microbes.

Reagents

Contents
Uricult Vet CLED EMB Cat. No. 130179
10 Patient labels
10 Instructions for use

Typical formulation
CLED medium
- Peptone 10.0 g/l
- Meat extract 3.0 g/l
- Lactose 10.0 g/l
- L-Cystine 0.13 g/l
- Bromthymol blue 5.0 g/l

EMB medium
- Peptone 10.0 g/l
- Lactose 5.0 g/l
- Sucrose 5.0 g/l
- Dipotassium phosphate 2.0 g/l
- Eosin Y
- Methylene Blue

Storage
Uricult Vet CLED EMB is stored at 45...77°F (7...25°C) in the package provided. Protection from light, air and temperature fluctuations will ensure product stability until the expiration date.

Warning and precautions
- Uricult Vet is for in vitro diagnostic use only.
- Do not use the product beyond the expiration date marked on the box.
- Wear protective clothing and disposable gloves while handling samples or tests, and wash hands thoroughly afterwards.
- Do not use the product if you detect discoloration or dehydration of the culture media.
- Because any colonies growing on the Uricult Vet CLED EMB culture media are actual or potential pathogens, do not touch the surfaces from the plastic paddle or evidence of microbial growth on the culture media.
- Avoid drafts and storage near heat-generating appliances.
- Do not allow to freeze.

Sample collection and preparation
Ideally, urine for bacterial culture should remain in the bladder for four hours prior to sampling. The veterinarian can take a sample via catheterization or cystocentesis as required. Cystocentesis is preferred method when taking sample from animals suspected of having a UTI.

The urine should be inoculated onto the Uricult Vet CLED EMB culture-paddle immediately after collection. The paddle should be tightly closed to ensure the service be returned into its protective tube and the cap closed.

If the urine sample needs to be stored prior to inoculation onto Uricult Vet CLED EMB, it should be kept refrigerated at 36...46°F (2...8°C) no longer than 24 hours.

Antibiotics may affect the result of the Uricult Vet CLED EMB culture media by placing drops of urine from the syringe onto both sides while titling the paddle from side to side to ensure complete wetting.

Procedure

1 Unscrew the paddle from the tube without touching the surfaces of the culture media.

2 Holding Uricult Vet CLED EMB by the cap, inoculate the culture media by placing drops of urine from the syringe onto both sides while titling the paddle from side to side to ensure complete wetting.

3 Allow excess urine to drain from the paddle and blot the last drops on absorbent paper.

4 Return the paddle into the tube and close the tube.

5 Fill in the patient label and attach to the tube.

6 To incubate*** Uricult Vet CLED EMB, place the urine upright in an incubator (97°F ± 4°F / 36°C ± 2°C) for 16–24 hours. The tube may also be sent to a laboratory for incubation and interpretation.

7 To obtain a colony forming units per milliliter (CFU/ml), remove the slide from the tube and compare the colony density with the model chart provided in the kit.

Note:
- Negative cultures may be inoculated for additional 24 hours at 97°F ± 4°F (36°C ± 2°C) to ensure that slow growing microbes are detected.
- The inoculated slide may be incubated immediately or stored or transported to a laboratory for incubation and interpretation. Storage or transportation should not exceed 48 hours at 45...77°F (7...25°C) for 16 – 24 hours. If the slide has been stored or transported for up to 48 hours, only the presence of growth and the colony count should be recorded from it; the color reaction may be atypical.
- The inoculated slide may be incubated at room temperature for 24 – 72 hours, after which positive cultures may be interpreted.

Quality control
Quality control tests are performed on each lot of Uricult Vet CLED EMB culture-paddle at the time of manufacture.

Results’ interpretation
Following the incubation of an inoculated culture-paddle, the presence of bacteria may be evidenced by visible signs of colony growth on the culture medium. Separate, distinct areas of the bacterial growth on the agar surface are called “colonies.” Following the formation of a colony results from the natural multiplication of a single bacterial cell, and since the agar surfaces on Uricult Vet CLED EMB culture-paddle are uniform in dimension, the number of colonies can indicate the “colony count” which is the approximate number CFU/ml of urine.

Contact information
Uricult® is a registered trademark of Aidian Oy.

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Further confirmation of a negative culture may be obtained by gently swabbing the agar surface. Bacterial growth will be evident on the swab itself, and by a difference in appearance between the swabbed and unswabbed portions of the agar surface.

Limitations of procedure
Uricult Vet is capable of detecting urinary bacterial concentra-tions between 10^3 and 10^7 CFU/ml. The colony density chart allows the determination of colony counts to the nearest power of 10. When the method is used according to instructions, the colony counts show a 95% correlation with the conventional pour plate method.

Expected values
High bacterial number in a properly collected and cultured sam-ples indicates bacterial UTI.

Method of sampling

<table>
<thead>
<tr>
<th>Significant colony count (CFU/ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dog</strong></td>
</tr>
<tr>
<td>≥ 1,000</td>
</tr>
</tbody>
</table>

Performance characteristics

<table>
<thead>
<tr>
<th>Organism</th>
<th>CLED</th>
<th>EMB</th>
<th>Gram</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. aureus</td>
<td>G</td>
<td>TNG</td>
<td>+</td>
</tr>
<tr>
<td>E. faecalis</td>
<td>G</td>
<td>G</td>
<td>+</td>
</tr>
<tr>
<td>P. vulgaris</td>
<td>G</td>
<td>G</td>
<td>–</td>
</tr>
<tr>
<td>E. coli</td>
<td>G</td>
<td>G</td>
<td>–</td>
</tr>
<tr>
<td>G = Growth</td>
<td>TNG = Typically No Growth</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Confluent growth
"Confluent growth" (complete coverage of the agar surfaces) can be interpreted as a negative result. Therefore, any culture media surfaces that appear negative should be examined under a reflecting light; absence of reflection suggests confluent bacterial growth. A bright light also facilitates the detection of pinpoint colonies. A change in color of the CLED media is also an indication of confluent growth.

A growth consisting of several species of bacteria is termed mixed flora and is most likely due to contamination of the urine sample.

References


Explanation of symbols

- **REF**: Manufacturer
- **LOT**: Consult instructions for use
- **Use by**: Protect from draught and temperature fluctuations