07773 Bacteriuria Test Kit (Nitrate Reagent Test Kit; Urine Nitrite Test Kit; Nitrite Indicator Strips Kit)

This test can be used to detect the presence of nitrite. For example in urine from healthy humans no nitrite is detectable and the detection of nitrite indicates the presence of bacteria that may be caused by infection of the kidneys, urethra, or bladder.

**Composition:**
One box contains 50 strips (Cat. No. 05857) for detection and one vial with 5ml of potassium nitrate solution (Cat. No. 03717).

**Strips contains:**
- a-naphtylamine
- citric acid
- sulfanilic acid

**Attention:** Keep the indicator strips in light protected and cool place (2-8°C)

**Directions:**
1. Fresh urine is needed (not older than 4 hours), the first morning urine is preferable.
2. One drop of urine is dripped on strip and color change is observed. Color change to purple is an indicator of bacteriuria.
3. If color of strip is not changed it is necessary to conduct the additional assay.
4. To 1mL of fresh urine 50μL of potassium nitrate solution is added (vial).
5. The mixture is incubated at 37°C for 1 hour.
6. Then 1 drop of incubated urine is added on an incubator strip.
7. No color change is an indicator of negative result.

**Principle and Interpretation:**
In presence of nitrate reducing bacteria in human urine, nitrite that is formed reacts with sulfanilic acid bring to formation of diazotized sulfanilic acid. The product formed reacts with a-naphtylamine to yield colored azo derivate that has purple color. To increase the sensitivity of assay (low titer of bacteria) the incubation of urine with potassium nitrate is conducted. Additional growth of bacteria produces additional amounts of nitrite. It permits to detect bacteria even in case of lower bacteria concentrations.

**Limitation of Test:**
Bacteria detected by this approach: *E. coli*, *Proteus sp.*, *Klebsiella*, *Aerobacter*, *Citroabacter*, *Salmonella*
not detected: *Pseudomonas*, Streptococci, Staphylococci

<table>
<thead>
<tr>
<th>Test Organisms (ATCC)</th>
<th>Nitrate reduction</th>
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<tbody>
<tr>
<td><em>Salmonella serotype typhimurium</em> (14028)</td>
<td>+</td>
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<tr>
<td><em>Escherichia coli</em> (25922)</td>
<td>+</td>
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<tr>
<td><em>Pseudomonas aeruginosa</em> (27853)</td>
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**References:**