



O'Meara Reagent

R031

Intended Use:

The reagent is used in Voges-Proskauer test for detection of acetoin production by bacterial culture.

Composition**

Ingredients

Potassium hydroxide	40.0g
Creatine	0.30g
Distilled water	100.0ml

**Formula adjusted, standardized to suit performance parameters

Directions

1. Inoculate isolated test culture in MR-VP Medium (M070) and incubate at appropriate temperature for 24-48 hours.
2. Add 0.2 ml (2 drops) of Reagent A and 0.2 ml (2 drops) of O'Meara Reagent(R031) for 10 ml medium.
3. Shake tubes gently for 30 seconds to 1 minute to expose the medium to atmospheric oxygen in order to oxidize the acetoin (acetylmethylcarbinol) so as to obtain a colour reaction.
4. Allow tube to stand at least 10 to 15 minutes.

Principle And Interpretation

VP test is helpful in identifying members of the family Enterobacteriaceae. Initially all enterics will give a positive MR reaction if tested. However, after further incubation, required by the test procedure (2-5 days), MR - positive organisms continue to produce acids, resulting in a low pH (acidic) that overcomes the phosphate buffering system and maintain an acidic environment in the medium (pH 4.2 or less). MR- negative organisms further metabolize the initial fermentation products by decarboxylation to produce neutral acetyl methylcarbinol (acetoin), which results in decreased acidity in the medium and raises the pH towards neutrality (pH 6.0 or above). In the presence of atmospheric oxygen and alkali, the neutral end products, acetoin and 2, 3-butanediol, are oxidized to diacetyl, which react with creatine to produce a red colour.(7)

Type of specimen

1. The specimen is any isolated colony on primary or subculture plates.

Specimen Collection and Handling

1. For clinical samples follow appropriate techniques for handling specimens as per established guidelines(1,2).
 2. For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,5).
 3. For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(4)
- After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Increased exposure of organisms to atmospheric oxygen in the microtechnique decrease the incubation period.
2. False-positive VP results may occur if VP tests are read beyond one hour following the addition of reagents. A copper like color may develop, resulting in a potential false positive interpretation.
3. With prolonged incubation, some VP positive organisms can produce acid condition in the medium, yielding weak positive reaction or false negative VP reaction.
4. Shaking the tubes enhance VP reaction.

5. Do not add more than 2 drops of KOH per 2 ml of medium. Excess amount of KOH can give a weak positive reaction, which may be masked by the formation of copper like color because of the reaction of KOH with alphanaphthol alone.

6. Reagents must be added in specified order. A reversal of order may result in the weak positive or false negative VP results.

Performance and Evaluation

Performance of the product is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Colourless liquid

Clarity

Clear solution without any precipitate. Note : On storage of the reagent, precipitate may develop. This will not affect the performance criteria of the reagent.

Cultural Response

Biochemical identification was carried out by adding Barritt Reagent (Part A) (R029) and O'Meara Reagent (R031) in 24-48 hours old cultures grown in MR-VP Medium (M070).

Organism	Growth	VP Test
Cultural response <i>Enterobacter aerogenes</i> ATCC 13048	Luxuriant	Positive (Red colour formation)
<i>Escherichia coli</i> ATCC 25922	Luxuriant	Negative (No red colour formation)
<i>Klebsiella pneumoniae</i> ATCC 13883	Luxuriant	Positive (Red colour formation)

Storage and Shelf Life

Store below 30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (6,7).

Reference

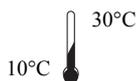
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IVD In vitro diagnostic medical device



CE Marking



Storage temperature



Do not use if package is damaged



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