

07689 O'Meara's Reagent

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

Composition:

Potassium hydroxide	40g
Creatine	0.3g
Distilled water	100ml

Directions:

- 1) Use a culture grown in in MR-VP Medium for 24-48h.
- 2) Remove aseptically 10 ml of grown culture. Add 0.2 ml (2 drops) of Barritt's Reagent A (Cat. No. 29333) and 0.2 ml (2 drops) O'Meara's reagent.
- 3) Shake tubes gently for 30 seconds to 1 minute to expose the medium to atmospheric oxygen in order to oxidize the acetoin and to obtain a color reaction.
- 4) Allow tube to stand at least 10-15 minutes.

Principle and interpretation:

VP test is helpful in identifying members of the family Enterobacteriaceae based on their ability to produce acetylmethylcarbinol (AMC = acetoin) from glucose. Acetoin is produced in the medium by bacterial culture and is oxidized under alkaline conditions in presence of air to form diacetyl which reacts with creatinine (break down product from creatine) to give a red compound. A-naphthol present in Barritt's Reagent A enhance the reaction.

Limitations:

- 1) Increased exposure of organisms to atmospheric oxygen during incubation and handling decrease the incubation period.
- 2) False-positive VP results may occur if VP tests are read after 1 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 2drops of KOH per 2ml 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 α -naphthol alone.
- 6) Reagents must be added in specified order. A reversal of order may result in the weak positive or false negative VP results.

Test Organisms (ATCC)	Growth	Voges-Proskauer Reduction
<i>E. aerogenes</i> (13048)	luxuriant	+
<i>E. coli</i> (25922)	luxuriant	-
<i>K. pneumoniae</i> (13883)	luxuriant	+

+ = red colour formation

- = no red colour formation



Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

