VOGES-PROSKAUER TEST REAGENTS
BIOCHEMICAL IDENTIFICATION

PRODUCT:
Bottle:

Alpha-Naphthol, 5%, item no. R6580 (30ml), R6581 (250ml)
Potassium Hydroxide, 40%, item no. R6670 (30ml), R6672 (250ml)

PURPOSE:
Voges-Proskauer (V-P) reagents are used to develop the reactions sought in the Voges-Proskauer test.

PRINCIPLE:
Certain bacteria produce stable acid end products when cultivated in specific media. After fermentation of glucose, particular enteric bacteria metabolize pyruvic acid to acetyl methyl carbinol. This end product reacts with alpha-naphthol in the presence of 40% KOH to produce a red color complex.

FORMULAS:
Approximate ingredients per liter.

(1) Alpha-Naphthol, 5%:

Alpha-Naphthol	50.0 g
Ethanol	1000.0 ml

(2) Potassium Hydroxide, 40%:

Potassium Hydroxide	400.0 g
Deionized Water	1000.0 ml

PRECAUTIONS:*
For in vitro diagnostic use. Observe all safety precautions consistent with hazard(s) stated on the product label and/or Material Safety Data Sheet. Avoid contact with eyes, skin, or mucous membranes. If contact occurs, wash immediately with water. 40% KOH is caustic. Seek medical aid for severe burns or when eye contact is suspected.

Storage: For Alpha-Naphthol: Upon receipt store at 2-8°C in the dark. For Potassium Hydroxide: Upon receipt store below 30°C.

Limitations: Excess KOH may mask a weak VP-positive reaction due to a copper-like color that is formed by a reaction with alpha-naphthol alone.

These tests are designed for the identification of coliform and other enteric bacteria only.

The order in which these reagents are added is important. First, add the alpha-naphthol; then, add the KOH. A reversal in the order in which the reagents are added may result in a weak-positive or false-negative reaction.

PROCEDURE: *
Specimen Collection: Not applicable since these reagents are used in media which are not for primary isolation. These reagents are used in characterizing cultures of isolated organisms, and established isolation techniques and tests for purity are necessary. Direct inoculation of specimens into the media to which these reagents are added will produce erroneous results. Information on specimen collection may be found in standard reference texts.[2]

Method of Use: Inoculate the MR-VP medium with a pure culture of the test organism. Incubate for 24 hours at 35°C. To 1 ml of the above culture, add 0.6 ml of the alpha-naphthol solution and 0.2 ml of the 40% KOH solution. Development of a red color within 5 minutes indicates a positive reaction. If equivocal results are obtained, the broth may be reincubated and retested after another 24 hours of incubation. See MR-VP Media, Data #530.

Interpretation:

Positive: Development of a pink-to-red color within 5 minutes.
Negative: No color change, or development of a slight yellow color.

Materials Required but Not Provided: Standard microbiological supplies and equipment such as loops, needles, pipettes, incubator, and incinerator are not provided.

QUALITY CONTROL: *

Microorganisms Used (ATCC #):	**Expected Results:**
Enterobacter aerogenes (13048)	(+)
Escherichia coli (25922)	(-)
	Key: See "Interpretation"

User Quality Control: Check for signs of deterioration. Check the performance of the reagents weekly with the organisms described above.

BIBLIOGRAPHY:

1. Blazevic, D., and C. Ederer, *Principles of Biochemical Tests in Diagnostic Microbiology*, John Wiley and Sons, New York, 1975.
2. Lennette, E. H., et al., *Manual of Clinical Microbiology*, 4th ed., American Society for Microbiology, Washington, D. C., 1985.

*For more detailed information, consult appropriate references and/or details in the preface of the PML Technical Manual.

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