



MR-VP Broth (Glucose Phosphate Broth) 100 g / 500 g

Used for the differentiation of coli-aerogenes group by means of the Methyl Red and Voges Proskauer reaction.

Product Presentation:

Cat No.	Product description	Pack Size
11130050100	MR-VP Broth (Glucose Phosphate Broth)	100 Gram
11130050500	MR-VP Broth (Glucose Phosphate Broth)	500 Gram

Principle

Methyl red positive organisms produce high levels of acid during fermentation of dextrose, overcoming the phosphate buffering system and produce a red colour on the addition of methyl red pH indicator. In Voges-Proskauer test, the red colour produced by the addition of potassium hydroxide to cultures of certain microbial species is due to their ability to produce a neutral end product, acetoin (acetylmethylcarbinol), from the fermentation of dextrose. The acetoin is oxidized in the presence of oxygen and alkali to produce diacetyl, which reacts with creatine to give a red colour, which is a positive VP test.

Composition

Ingredients	Grams / Litre
Buffered Peptone 7.0	7.00
Dextrose 5.0	5.00
Dipotassium Phosphate 5.0	5.00

Final pH (at 25°C) 6.9 ±0.2

*Formula adjusted, standardized to suit performance parameters

Type of specimen

Food and Dairy samples; Clinical samples; Water samples

Specimen Collection and Handling

Ensure that all samples are properly labeled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

- ✓ Suspend 17.00 g of powder in 1000 mL distilled water.
- ✓ Mix thoroughly.
- ✓ Boil to dissolve the medium completely. Avoid Overheating.
- ✓ Dispense 10 mL amounts in test tubes.
- ✓ Sterilize by autoclaving 121°C for 15 minutes or as per validated cycle.

FACTORY & OFFICE

Plot No. D 76 , Five Star MIDC Area, Kagal.

Dist. Kolhapur -416216 (M.S.)India.

Email : oxalispvtltd@outlook.com

Telefax : 0231-2305072

Phone : 0231-2305062

Mobile : +91 8805867810



Storage and Stability

- ✓ Store Dehydrated culture media in cool, dry place at 10°C-30°C away from direct light.
- ✓ Store prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Quality Control

Dehydrated Appearance: Cream coloured, homogeneous, free flowing powder

Prepared Appearance: Light yellow to amber coloured, clear solution without any precipitate

Cultural Response: Cultural characteristics after an incubation of 18-48 hours at 30°C-35°C. After incubation add 2-3 drops of Methyl Red Indicator for MR Test and for VP Test add 1-2 drops of Creatine, 2-3 drops of Barritt Reagent A and 1-2 drops of Baritt Reagent B.

Organism	Type Culture	Growth	MR Test	VP Test
<i>Klebsiella aerogenes</i>	ATCC 13048	Good	- (Yellow)	+ (Red)
<i>Escherichia coli</i>	ATCC 25922	Good	+ (Red)	- (Yellow)
<i>Klebsiella pneumoniae</i>	ATCC 10031	Good	- (Yellow)	+ (Red)

Interpretation of Results

1. Methyl Red Test:

Positive test - Red colour at the surface of the medium.

Negative test - Yellow colour at the surface of the medium.

2. Voges-Proskauer Test:

Positive test - Development of a distinct red colour within 5 minutes.

Negative test - Appearance of a yellow colour or copper like colour on the surface of the medium.

3. Certain species within *Enterobacteriaceae* genera may react differently or give variable results.

Disposal

Disposal of infectious material and material that comes in to contact with clinical sample must be decontaminated and dispose of by autoclaving or incineration or established laboratory procedures.

User must be ensure safe disposal of used or unusable preparation of the products.

Reference

1. US Food and Drug Adm; 1998, Bacteriological Analytical Manual, 8th Ed; Rev. A, AOAC, International, Gaithersburg, Md.

2. Downes and Ito (ed.) 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th edition, APHA Washington DC.

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