Purple Agar Base

Intended Use
Purple Agar Base is recommended for the preparation of carbohydrate media used in fermentation studies for the cultural identification of pure cultures of enteric and other microorganisms.

Summary
Purple media were originally formulated by Vera and further modified by addition of beef extract. Purple Agar Base is used for studying carbohydrate fermentation reactions, particularly in the identification of gram-negative enteric bacteria on addition of the desired carbohydrate. These media are recommended by FDA for fermentation studies of sugars.

Principle
Beef extract and peptone special supply the essential nutrients especially nitrogen sources to the growing organisms. Sodium chloride maintains the osmotic balance of the medium. Bromocresol purple is the pH indicator, which turns yellow at acidic pH. Gas production is evident by splitting of agar. The acid produced during the fermentation of carbohydrate causes bromocresol purple, the pH indicator to turn yellow. If the carbohydrate is not utilized or fermented, the color of the medium remains unchanged or becomes more alkaline (darker purple) due to decarboxylation of the amino acids present in the medium. It is recommended to add carbohydrate in 1% concentration to avoid possible reversion reactions except glucose (dextrose). If the medium containing carbohydrate is sterilized by autoclaving, precautions should be taken to use minimum amount of heat required for sterilization to avoid hydrolysis of the carbohydrate.

Formula*

Ingredients	**g/L**
Peptone, special	10.0
Beef extract	1.0
Sodium chloride	5.0
Bromo cresol purple	0.02
Agar	15.0
Final pH (at 25°C)	6.8 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the 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.

Specimen Collection and Handling
For clinical samples follow appropriate techniques for handling specimens as per established guidelines.
For food and dairy samples, follow appropriate techniques for handling specimens as per established guidelines.
For water samples, follow appropriate techniques for handling specimens as per established guidelines and local standards.
Specimens should be obtained before antimicrobial agents have been administered.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 31.02 g of the powder in 1000 mL purified / distilled water.
2. Add 5-10 g of carbohydrate to be tested.
3. Heat to boiling to dissolve the powder completely. Dispense in tubes as desired.
4. Sterilize by autoclaving at 121°C (15psi) for 15 minutes as per validated cycle.
5. Alternatively sterilize the basal medium prepared using 900mL distilled water and add 100mL separately sterilized 5-10% solution of the desired carbohydrate to it.

Quality Control

Dehydrated Appearance: Cream to greenish yellow, homogeneous, free flowing powder.
Prepared Appearance: Purple coloured clear to slightly opalescent gel forms in tubes as slants.
Cultural response: Cultural characteristics observed after an incubation at 35°C-37°C for 18 - 48 hours.

Organism (ATCC)	Growth	Without Carbohydrate, (Acid)	Without Carbohydrate, (Gas)	With 1% Dextrose, (Acid)	With 1% Dextrose, (Gas)
Escherichia coli (25922)	Good	Negative reaction, no Colour change	Negative reaction	Positive reaction, Yellow colour	Positive reaction
Listeria monocytogenes (19112)	Good	Negative reaction, no Colour change	Negative reaction	Positive reaction, Yellow colour (Fermentative Metabolism)	Negative reaction
Neisseria Meningitidis (13090)	Good	Negative reaction, no Colour change	Negative reaction	Positive reaction, Yellow colour	Negative reaction
Staphylococcus aureus subsp. *aureus* (25923)	Good	Negative reaction, no Colour change	Negative reaction	Positive reaction, Yellow colour	Negative reaction

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

References

1. Ewing W. H., 1986, Edwards and Ewings identification of *Enterobacteriaceae*, 4th ed. Elsevier Science Publishing Co, Inc., New York, N.Y.
2. Forbes B. A., Sahm A. S., and Weissfeld D. F., 1998, Bailey & Scotts Diagnostic Microbiology, 10th Ed., Mosby, Inc., St. Louis, Mo.
3. Vera H. D., 1950, Am. J. Public Health, 40:1267.
4. Finegold S. M. and Baron E. J., 1986, Bailey and Scotts Diagnostic Microbiology, 7th Ed., The C.V. Mosby Co., St. Louis.
5. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.
6. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. Wilkins, Baltimore and I Williams.
7. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201160350500	Dehydrated Culture Media	500 g