Carbohydrate Consumption Broth Base

Intended Use
Carbohydrate Consumption Broth Base is recommended for the cultivation and differentiation of *Listeria* species on the basis of sugar fermentation.

Summary
Carbohydrate Consumption Broth is used for the cultivation and differentiation of *Listeria* species. It is formulated as per Atlas, with a slight difference in the concentration of bromocresol purple and is recommended by FDA (2005) and ISO (1993). Differentiation is based on the fermentation of glucose, xylose, rhamnose, ribose, a-methyl-D-mannoside and mannitol. Further biochemical determinations can be made by the haemolysis of erythrocytes on the Blood Agar.

Principle
Proteose peptone and beef extract in the medium provide carbon and nitrogen compounds including essential amino acids, vitamins and trace ingredients for bacterial metabolism. Bromocresol purple is the pH indicator, which indicates acid production by turning yellow in colour.
Carbohydrate utilization test*:* Inoculate each kind of carbohydrate fermentation broth with one loopful of inoculum. Incubate for 7 days at 37°C. Observe daily for acid induced colour change and gas formation. Sometimes weak positive reactions may occur after 48 hours of incubation.

Formula*

Ingredients	**g/L**
Proteose Peptone	10.0
Sodium Chloride	5.0
Beef Extract	1.0
Bromocresol Purple	0.1
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 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen
Clinical samples - Faeces; Food and dairy samples; Environmental samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
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
1. Suspend 16.10 g of the powder in 990 mL purified / distilled water.
2. Heat if necessary, to dissolve the medium completely.
3. Dispense into sterile tubes containing inverted Durham's tubes.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
5. Aseptically add 10 mL separately sterilized carbohydrate solution to give a final concentration of 0.5%. Mix well.

Quality Control

Dehydrated Appearance: Light yellow to beige colour, homogeneous, free flowing powder.
Prepared Appearance: Purple coloured, clear solution without any precipitate.
Cultural Response: Cultural characteristics observed after incubation at 35°C-37°C for 18-48 hours.

Organism (ATCC)	Growth	w/o carbohydrate acid	w/o carbohydrate gas	w/o rhamnose acid	w/o rhamnose gas
Escherichia coli (25922)	Good	Negative reaction No colour change	Negative reaction	Positive reaction Yellow colour	Positive reaction
Staphylococcus aureus subsp. *aureus* (25923)	Good	Negative reaction No colour change	Negative reaction	Negative reaction No colour change	Negative reaction
Listeria monocytogenes (19111)	Good	Negative reaction No colour change	Negative reaction	Positive reaction Yellow colour	Negative reaction
Listeria monocytogenes (19112)	Good	Negative reaction No colour change	Negative reaction	Positive reaction Yellow colour	Negative reaction
Listeria monocytogenes (19117)	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.

Reference

1. Atlas R. M., 2004, Handbook of Microbiological Media, 3rd Edition, CRC Press, Washington D. C.
2. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, D.C.
3. International Organization for Standardization (ISO), 1993, Draft ISO/DIS 10560.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201030020500	Dehydrated Culture Media	500 g