

## TECHNICAL DATA SHEET

# Carbohydrate Consumption Broth Base

### Principle

The carbohydrate consumption broth base consists of protease peptone, meat extract, sodium chloride and bromocresol purple. Protease peptone and meat extract provide nitrogen, amino acids and essential elements for the growth. Sodium chloride maintains the osmotic balance. Bromocresol purple is pH indicator, which turns yellow in color due to carbohydrate fermentation. The differentiation can be achieved by addition of particular carbohydrate and its fermentation. The commonly used carbohydrate for differentiation are glucose, mannitol, ribose, rhamnose, xylose, etc.

**Use:** For the cultivation and differentiation of *Listeria* species.

### Contents\*

Ingredients	Gram/Litre
Protease Peptone	10.00
Meat Extract#	1.00
Sodium Chloride	5.00
Bromocresol Purple	0.10
pH at 25°C	6.8 ±0.2

\* Formula adjusted for optimum performance and parameters

# Equivalent to Beef Extract

**Directions:** Dissolve 16.00 grams in 990 ml distilled water. Boil to dissolve the medium completely and distribute 9.0 ml of media in test tubes containing inverted Durham's tube. Sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 min, cool it to 42-45 °C and aseptically add 1.0 ml of sterile carbohydrate solution (0.5%), mix well and inoculate test sample.

### Specimens types analyzed

Food and dairy samples and water samples, pharmaceutical samples, clinical and non-clinical samples etc.

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## Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

## Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

## Quality Control

Appearance	Light beige colored free flowing, homogeneous powder
Reaction of 1.6% solution	6.8 ±0.2 at 25 °C
pH	6.60- 7.00
Color and clarity of ready medium	Purple colored clear opalescent solution
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-48 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

**Different Microbial Response:** Cultural characteristics observed after incubation at 33-37°C for 18-48 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth	w/o carbohydrate		with Rhamnose	
			Acid	Gas	Acid	Gas
<i>Listeria monocytogenes</i>	13932	Luxuriant	Negative	Negative	Positive	Negative
<i>Escherichia coli</i>	8739	Luxuriant	Negative	Negative	Positive	Positive
<i>Staphylococcus aureus</i>	25923	Luxuriant	Negative	Negative	Negative	Negative

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**Storage and Shelf Life:** The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

**Note:** Sterilize media immediately after reconstitution

**Disposal:** To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

## Reference

1. American Public Health Association, (1978) *Standard Methods for the Examination of Dairy Products*, 14<sup>th</sup> Ed., Washington D.C.
2. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
3. *Difco Manual* (1998). 11<sup>th</sup> Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.

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