



PRODUCT SPECIFICATION SHEET

Peptone Water (DM192BS)

Intended Use

Peptone Water (DM192BS) is an all purpose growth medium and as a base of carbohydrate fermentation media as per BIS (IS:5887 Part I -1976).

Product Summary and Explanation

Peptone Water may be used as a growth medium or as the basis of carbohydrate fermentation media, whilst a pure culture in Peptone Water is a convenient inoculum for a series of fermentation tubes or other diagnostic media. Peptone Water is recommended by BIS⁽¹⁾ for detection of Indole production by *Escherichia coli*. For studying the ability of organisms to ferment a specific carbohydrate which aids in differentiation of genera and species, a slightly different formulation of Peptone water/ Peptone water with phenol red is recommended.^(2,3,4) Peptone water with phenol red is recently recommended by ISO committee⁽⁵⁾ to study fermentation reactions of *Yersinia enterocolitica*. Peptone Water, adjusted to pH 8.4, is suitable for the cultivation and enrichment of *Vibrio cholerae* from infected material.

Principles of the Procedure

Peptone Water contains peptic digest of animal tissue provides essential nutrients required for the growth of organisms. Sodium chloride maintains the osmotic balance.

Formula / Liter

Ingredients	Gms / Liter
Peptic digest of animal tissue	20.00
Sodium chloride	5.00
Final pH : 7.4 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 25 grams of the medium in one litre of distilled water.
2. Heat if necessary to dissolve the medium completely.
3. Dispense in tubes.
4. Autoclave at 121°C, 15 psi pressure for 15 minutes / validated cycle.

Quality Control Specifications

Dehydrated Appearance	Light yellow coloured homogeneous free flowing powder
Prepared Medium	Light amber coloured clear solution
Reaction of 2.5% Solution	pH : 7.4 ± 0.2 at 25°C
Gel Strength	Not Applicable

Expected Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 24 - 48 hours.

Sr.	Organisms	Results to be achieved
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No.		Inoculum (CFU)	Growth	Indole
1.	<i>Enterobacter aerogenes ATCC 13048</i>	50-100	good-luxuriant	negative reaction, no colour development / cloudy ring
2.	<i>Escherichia coli ATCC 25922</i>	50-100	good-luxuriant	positive reaction, red ring at the interface of the medium
3.	<i>Salmonella Typhimurium ATCC 14028</i>	50-100	good-luxuriant	negative reaction, no colour development / cloudy ring
4.	<i>Staphylococcus aureus ATCC 25923</i>	50-100	good-luxuriant	negative reaction, no colour development / cloudy ring

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Refer to appropriate references for standard test procedures.

Results

To detect indole production add 0.5 ml of Kovacs reagent to the tube and shake the tube gently. Appearance of a red colour indicates presence of indole. Refer to appropriate references for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Peptone Water

Product Code : DM192BS

Available Pack sizes : 100gm / 500gm

References

1. Bureau of Indian Standards IS: 5887 (Part I) 1976, reaffirmed 1986.
2. Macfaddin J., 1980, Biochemical Tests for Identification of Medical Bacteria, 2nd ed., Williams and Wilkins, Baltimore.
3. Finegold and Baron, 1986, Bailey and Scotts Diagnostic Microbiology, 7th ed., The C.V Mosby Co., St. Louis.
4. Lennette and others (Eds), 1985, Manual of Clinical Microbiology, 4th ed. ASM, Washington D.C.
5. International Organization for Standardization (ISO), 1994, Draft ISO/ DIS 10273.





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Further Information

For further information please contact your local MICROMASTER Representative.



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