

# PRODUCT SPECIFICATION SHEET

## Peptone Water (DM192)

### Intended Use

Peptone Water (DM192) is an all purpose growth medium and may be used as a base for carbohydrate fermentation media.

### Product Summary and Explanation

Peptone Water may be used as a growth medium or as a basis of carbohydrate fermentation media. A pure culture in Peptone water is a convenient inoculum for a series of fermentation tubes or other diagnostic media. The formulation of Peptone water makes it useful for cultivating non-fastidious organisms.<sup>(1)</sup> Peptone Water, adjusted to pH 8.4, is suitable for the cultivation and enrichment of *Vibrio cholerae* from infected material.<sup>(2)</sup> The medium was formerly used for the performance of the indole test, but now better results can be obtained by use of Tryptone water. Peptone Water may be modified to make it suitable for carbohydrate fermentation tests by the addition of Andrade indicator and the required carbohydrate.

### Principles of the Procedure

Peptic digest of animal tissue provides essential nutrients. Sodium Chloride maintains the osmotic balance of the medium. If desired for carbohydrate fermentation studies Durham's tube may be used to detect the gas production if produced.

### Formula / Liter

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.00
Sodium chloride	5.00
Final pH: 7.2±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 15 grams of the medium in one liter of distilled water.
2. Add the test carbohydrate in desired quantity and dissolve completely.
3. Dispense in tubes with or without inverted Durham's tubes.
4. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.

### Quality Control Specifications

Dehydrated Appearance	Cream to yellow colored, homogeneous, free flowing powder
Prepared Medium	Light amber colored clear solution without any precipitate
Reaction of 1.5% Solution	pH 7.2±0.2 at 25°C
Gel Strength	Not Applicable

**Expected Cultural Response:** Cultural response on Peptone Water observed after incubation at 35-37°C for 18-24 hours

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Indole test
1.	<i>Escherichia coli</i> ATCC 25922	50 -100	Luxuriant	Positive reaction, red ring at the interface of the medium on addition of Kovac's reagent (IRO02)
2.	<i>Salmonella typhimurium</i> ATCC 14028	50 -100	Luxuriant	Negative reaction, no red ring at the interface of the medium on addition of Kovac's reagent (IRO02)
3.	<i>Staphylococcus aureus</i> ATCC 25923	50-100	Luxuriant	Negative reaction, no red ring at the interface of the medium on addition of Kovac's reagent (IRO02)

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

## Test Procedure

### For Performing Carbohydrate Fermentation

1. Inoculate tubes with test organism.
2. Incubate tubes at  $35 \pm 2^\circ\text{C}$  for 18-48 hours.
3. Observe for color change.

### For Performing the Indole Test

1. Using aseptic technique, suspend an Indole Test Strip 10mm above the surface of a 24 or 48 hour culture.
2. Incubate at  $37^\circ\text{C}$  for 5-30 minutes.
3. Alternatively inoculate peptone water with the test organism. Incubate at  $37^\circ\text{C}$  for 18-24 hours.
4. Add few drops of indole reagent to the culture broth.
5. Observe for the formation red ring.

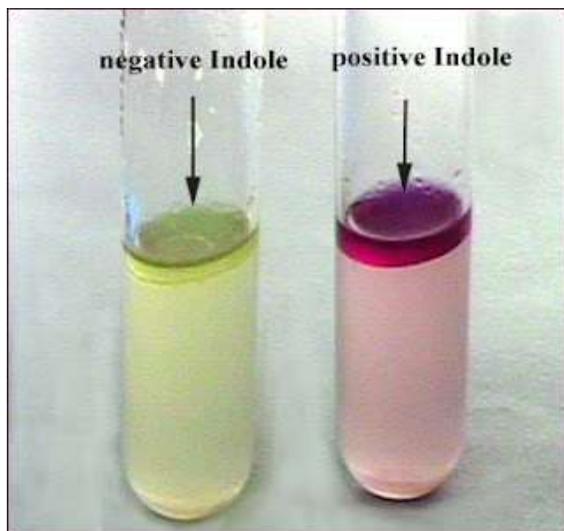
## Results

### For determining Carbohydrate Fermentation Patterns

Acid is produced when carbohydrates are fermented. This is indicated by a yellow color in the medium. Gas production is indicated by the presence of gas bubbles in the fermentation tube.

### For performing Indole Test

Observe for the formation of violet color on the strip which indicates a positive test for indole production or observe for the red ring at the interface of the medium.



### Peptone Water (DM192)

1. *Escherichia coli* ATCC 25922-Indole positive
2. *Staphylococcus aureus* ATCC 25923-Indole negative

### Storage

Store the sealed bottle containing the dehydrated medium at  $10 - 30^\circ\text{C}$ . 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. Medium is pink in color when hot but becomes colorless upon cooling.
2. *Vibrio spp.* should not be incubated longer than 18-20 hours. Longer incubation may cause the development of suppressed forms.<sup>(3)</sup>

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## Packaging

Product Name : Peptone Water

Product Code : DM192

Available Pack sizes : 100gm / 500gm

## References

1. MacFaddin, J.F. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol,1, p. 610-612. Williams & Wilkins, Baltimore, MD.
2. Cruickshank R. (1968) 'Medical Microbiology' 11<sup>th</sup> ed., Livingstone Ltd., London, p. 268.
3. Finegold, S.M., and W. Martin. 1982. Bailey and Scott's diagnostic microbiology, 6<sup>th</sup> ed. St. Louis.

## Further Information

For further information please contact your local MICROMASTER Representative.



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