Technical Data Sheet

# m-HPC Broth – 2mL Liquid Media Ampoules
# Cat. No. MHA000P2S

This medium is recommended for stressed heterotrophic bacteria detection in various liquid samples including potable and high purity water.

## Mode of Action

Heterotrophs are organisms including bacteria, yeasts and moulds that require an external source of carbon for growth. The heterotrophic plate count (HPC), formerly known as the standard plate count, is a procedure for estimating the number of live heterotrophic bacteria in liquid samples such as water (including high purity water). HPC broth can be employed for the determination of bacteria by the membrane filter method. Peptic digestion of animal tissue is the source of nutrients for organisms, which are not highly fastidious. Gelatin is utilized by microorganisms through a proteolytic mechanism. The addition of glycerol to the basal medium provides a source of carbon and energy.

## Typical Composition (per liter of purified water)

| | |
|---|---|
| Peptone | 20.0 g |
| Gelatin | 25.0 g |
| Glycerol | 10.0 ml |

## Application

1. Collect the liquid sample in a sterile container. Sodium thiosulfate is necessary when the liquid sample contains a residual disinfectant. The sample should be a 100 ml minimum.
2. Prior to use, warm the sealed ampoule at 30 – 50 ° C for approximately 10 minutes to liquify the contents. Do not microwave the ampoule.
3. Invert one m-HPC Broth ampoule 2 to 3 times. Open the ampoule. Remove the lid of a petri dish and carefully pour the contents equally onto the absorbent pad.
4. Set up the membrane filtration apparatus. Use sterile forceps to put the membrane filter in the assembly. The grid side is up.
5. Invert the sample / diluted sample for approximately 30 seconds to thoroughly mix the sample.
6. Pour the sample / diluted sample into the funnel. If the volume is less than 20ml, add 10 ml of sterile buffered dilution water to the funnel.
7. Apply the vacuum until the funnel is empty. Then stop the vacuum.
8. Rinse the funnel with 20ml to 30ml of sterile buffered dilution water. Apply the vacuum. Rinse the funnel two more times.
9. Stop the vacuum when the funnel is empty. Remove the funnel from the assembly. Use sterile forceps to lift the membrane filter.
10. Put the membrane filter on the absorbent pad. Let the membrane filter bend and fall equally across the absorbent pad to make sure that the air bubbles are not trapped below the filter.
11. Secure the lid on the petri dish and invert the dish.
12. Incubate the inverted petri dish for 48-72 hours at 30 - 35° C.
13. Remove the petri dish from the incubator. Use a microscope to count the number of bacteria colonies on the membrane filter.
14. Interpret and report the results.

## Results Reporting

Report the colony density as the number of colonies in 100ml of sample. If there's more than 200 colonies, dilute the sample and use the diluted sample in the test procedure.

Colonies in 100ml = Colonies counted / ml of sample x 100.

## Storage and Shelf Life

The product can be used until the expiry date if the unopened ampoules are stored sealed in the aluminum foil bag at 2 – 10°C.

## Disposal

Please dispose of used culture medium in accordance with local regulations (e.g. autoclave for 20 min at 121 °C, disinfect, incinerate etc.).

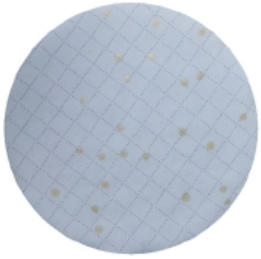
## Quality Control

| Function | Control Strains | Incubation | Reference Medium | Method of Control | Expected Results |
|---|---|---|---|---|---|
| Productivity | *Escherichia coli* ATCC® 25922 WDCM 00013 | 48 -72 hours at 30 - 35° C | m-TGE/TTC | Quantitative | Recovery 85-115% Characteristic colonies |
| | *Pseudomonas aeruginosa* ATCC® 27853 WDCM 00025 | | | | Recovery 85-115% Characteristic colonies |

Please refer to the actual batch specific certificate of analysis.

Colonies appear clear to creamy white, some may produce pigment.

**m-HPC (Heterotrophic Plate Count) Broth**



**MHA000P2S**

## Ordering Information

| Product | Cat. No. | Pack size |
|---|---|---|
| m-HPC Broth | MHA000P2S | 50 x 2 mL plastic ampoules |

## Literature

Taylor R and Geldreich EE (1979): Standard plate count methodology: a new membrane filter procedure for portable water and swimming pools. Journal American Water Works Association. 71. 402-405.



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