

PRODUCT INFORMATION

Product Type: PETRI DISHES 90mm

Cat No. PD091 - HEKTOEN ENTERIC AGAR

Intended Use:

Hektoen Enteric Agar is used for the isolation and differentiation of enteric pathogens. Hektoen Enteric Agar is not intended for use in the diagnosis of disease or other conditions in humans

Description

Hektoen Enteric Agar was developed in 1967 by King and Metzger. Compared to other enteric differentiating media commonly used, Hektoen Enteric Agar increased the isolation rate of *Salmonella* spp. and *Shigella* spp. This was accomplished by increasing the carbohydrate and peptone content of the medium in order to counteract the inhibitory effects of bile salts and indicators. King and Metzger formulated a medium that slightly inhibited growth of *Salmonella* and *Shigella*, while inhibiting Gram positive microorganisms.

Principles and uses:

Enzymatic Digest of Animal Tissue provides nitrogen, carbon, and amino acids required for organism growth. Yeast Extract is a vitamin source. Bile Salts Mixture and Acid Fuchsin inhibit Gram-positive organisms. Lactose, Sucrose, and Salicin are fermentable carbohydrates. Sodium Chloride maintains the osmotic balance of the medium. Ferric Ammonium Citrate, a source of iron, allows the detection of hydrogen sulfide (H₂S) produced from Sodium Thiosulfate. H₂S-positive colonies have black centers. Bromothymol Blue is added as the pH indicator. Agar is the solidifying agent.

Limitation of the Procedure:

- *Proteus* spp. may resemble salmonellae or shigellae. Further testing should be conducted to confirm the presumptive identification or organisms isolated on this medium.
- Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

References

1. King, S., and W. I. Metzger. 1968. A new plating medium for the isolation of enteric pathogens. *Appl. Microbiol.* 16:577-578.
2. King, S., and W. I. Metzger. 1968. A new plating medium for the isolation of enteric pathogens. II. Comparison of Hektoen Enteric Agar with S and EMB Agar. *Appl Microbiol.* 16:579-581.

Formulation

| | |
|-----------------------------------|-----------|
| Enzymatic Digest of Animal Tissue | 12.0 g/L |
| Yeast Extract | 3.0 g/L |
| Bile Salts Mixture | 9.0 g/L |
| Lactose | 12.0 g/L |
| Sucrose | 12.0 g/L |
| Salicin | 2.0 g/L |
| Sodium Chloride | 5.0 g/L |
| Sodium Thiosulfate | 5.0 g/L |
| Ferric Ammonium Citrate | 1.5 g/L |
| Bromothymol Blue | 0.065 g/L |
| Acid Fuchsin | 0.1 g/L |
| Agar | 13.5 g/L |

Storage: 2-8 °C

Final pH: 7.2 - 7.7

Appearance: trace to slightly hazy and light to dark green

Package contents: 10 plates in a package

Shelf life: 1.2 months

Exp. Date: Printed on label and on the item.

Required materials not supplied: Laboratory equipment as required.

Warning and Precautions - For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Petri dishes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Petri Dishes may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.

If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation. Storage Instructions: On receipt, store plates in the dark at 2–8°C. Avoid freezing and overheating. Do not open until ready to use

Performance Testing Results:

GPT: Inoculum 10-100 cfu

Inhibitory properties: inoculum 10000 cfu

| TEST | ATCC | Incubation Temp. (°C) | Incubation Cond. | Reaction 1 | |
|-------------------------------|-------|-----------------------|-------------------|---------------------|---------------------------------------|
| <i>Salmonella typhimurium</i> | 14028 | 33-37 °C | Aerobic, 24 hours | Pass | Green, black centered H2S positive |
| <i>Shigella flexneri</i> | 29903 | 33-37 °C | Aerobic, 24 hours | Pass | Smooth opaque, green |
| <i>Shigella sonnei</i> | 29930 | 33-37 °C | Aerobic, 24 hours | Pass | Smooth opaque, green |
| <i>Proteus mirabilis</i> | 4630 | 33-37 °C | Aerobic, 24 hours | Pass | Yellow or green, with or w/o H2S |
| <i>Escherichia coli</i> | 25922 | 33-37 °C | Aerobic, 24 hours | Partially inhibited | Yellow-orange with slight precipitate |
| <i>Staphylococcus aureus</i> | 25923 | 33-37 °C | Aerobic, 24 hours | Inhibited | |

Hy Laboratories Ltd.

6 Menachem Plaut St., Park Tamar, Rehovot 7670606, Israel

Tel. +972.8.9366475 Email. hylabs@hylabs.co.il

Implementation Date: 30/07/25

Version Number: 02