



Hy Laboratories Ltd.

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

Tel. +972.8.9366475 Fax. +972.8.9366474

hylabs@hylabs.co.il | www.hylabs.co.il

## Cat No. PD091 - HEKTOEN ENTERIC AGAR

**Product Type:** 90 mm DISHES

**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.

### 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.

### 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 (H<sub>2</sub>S) produced from Sodium Thiosulfate. H<sub>2</sub>S-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.

### 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



Hy Laboratories Ltd.

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

Tel. +972.8.9366475 Fax. +972.8.9366474

hylabs@hylabs.co.il | www.hylabs.co.il

**Appearance:** trace to slightly hazy and light to dark green

**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.

## 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 H <sub>2</sub> S 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 H <sub>2</sub> S
<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	