TMV 121 - HEKTOEN ENTERIC AGAR (VEG.)

INTENDED USE

For differential and selective isolation of *Salmonella* and *Shigella* species from pathological specimens.

PRODUCT SUMMARY AND EXPLANATION

Hektoen Enteric Veg Agar is formulated by replacing animal base Proteose peptone by Veg Peptone No. 3 making it free from BSE/ TSE. Hektoen Enteric Veg Agar is the modification of Hektoen Enteric Agar which was formulated by King and Metzger and recommended by APHA.

Hoben et al added Novobiocin (15 mg/litre) to improve the selectivity of the conventional medium by inhibiting *Citrobacter* and *Proteus* species. Taylor and Schelhaut found the medium valuable for differentiating pathogenic organisms and for better growth of *Shigella.* Inoculate the medium with fresh faeces suspended in Ringers solution or inoculate directly with rectal swabs. Spread out the inoculum to obtain isolated colonies and incubate at 35°C for 18-24 hours. Further incubation will improve differentiation between *Salmonellae* and *Shigellae. Proteus* species may resemble *Salmonellae* or *Shigellae*, hence further testing must be carried out for confirmation.

COMPOSITION

Ingredients	Gms / Ltr
Veg peptone No.3	19.00
Yeast extract	3.00
Lactose	12.00
Sucrose	12.00
Salicin	2.00
Synthetic detergent No. I	2.00
Sodium chloride	5.00
Sodium thiosulphate	5.00
Ferric ammonium citrate	1.50
Acid fuchsin	0.10
Bromo thymol blue	0.065
Agar	15.00

PRINCIPLE

The increased concentration of carbohydrate and vegetable peptone helps to reduce the inhibitory effect of synthetic detergent and the indicators allow good growth of *Salmonella* and *Shigella* species while inhibiting the normal intestinal flora. The medium contains three carbohydrates lactose, sucrose and salicin for optional differentiation of enteric pathogens. The higher lactose concentration aids in the visualization of enteric pathogens and minimizes the problem of delayed lactose fermentation. Due to the combination of thiosulphate with ferric ammonium citrate, hydrogen sulphide (H_2S)-producing colonies form black centers.

INSTRUCTION FOR USE

- Dissolve 76.67 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely, do not autoclave.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow w/ tan cast coloured, homogeneous, free flowing powder.
Appearance of prepared medium : Green coloured, clear to slightly opalescent gel forms in petri plates.
pH (at 25°C) : 7.5 ± 0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of Colony	Incubation Temperature	Incubation Period
Enterobacter aerogenes	13048	50-100	Fair-good	20-40%	Salmon-orange	35 - 37°C	18-24 Hours
Enterococcus faecalis	29212	>=10^3	Inhibited	0%	-	35 - 37°C	18-24 Hours
Escherichia coli	25922	50-100	Fair	20-30%	Orange	35 - 37°C	18-24 Hours
Salmonella serotype Enteritidis	13076	50-100	Luxuriant	>70%	Greenish blue may have black centers (H_2S production)	35 - 37°C	18-24 Hours
Salmonella serotype Typhimurium	14028	50-100	Luxuriant	>70%	Greenish blue may have black centers (H_2S production)	35 - 37°C	18-24 Hours
Shigella flexneri	12022	50-100	Luxuriant	>70%	Greenish blue may have black centers (H_2S production)	35 - 37°C	18-24 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

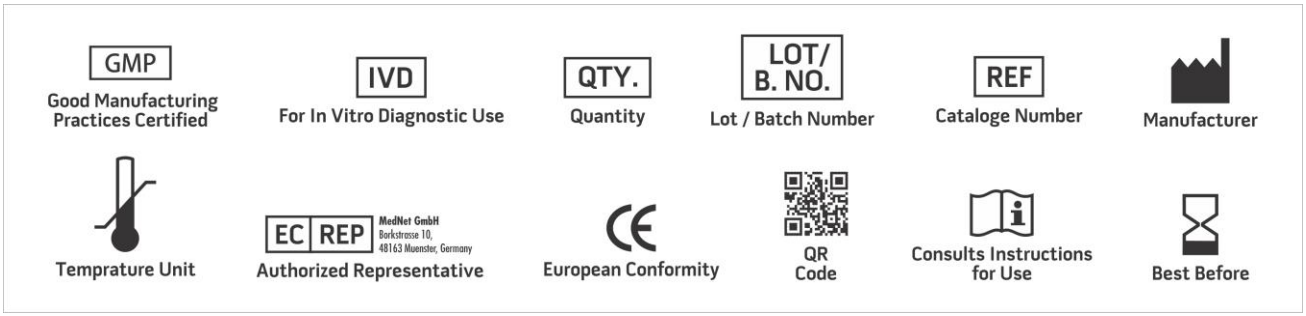
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. King, K.S. and Metzger W.I., 1968, Appl.Microbiol., 16:577, 579.
2. Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods for The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
3. Hoben D.A., Ashton D.H.A. and Peterson A.C., 1973, Appl. Microbiol., 21:126.
4. Taylor W.I. and Schelhaut, 1971, Appl.Microbiol., 21:32.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019