

RTA.KK.135 Revision Date/Revision Number:-/0 Issue Date: 01.11.2014

HEKTOEN ENTERIC AGAR

INTENDED USE:

Hektoen Enteric Agar is a moderately selective and differential medium for the isolation and cultivation of gram-negative enteric microorganisms, especially for the isolation of Shigella and Salmonella species from fecal specimens.

PRINCIPLE AND INTERPRETATION:

Bile salts render the medium selective, inhibiting Gram positive organisms and reducing growth of some gram-negative organisms other than Salmonella and Shigella. Lactose, sucrose and salicin are included for optimal differentiation by the color of the colonies and of the medium adjacent to the colonies. Salmonella and Shigella do not ferment these carbon compounds and thus do not cause a color change of the pH indicator system, while organisms fermenting one or several of these compounds to acids, e.g. E. coli, cause a color change to yellow or orange. Ferric ammonium citrate and sodium thiosulfate in the medium enable the detection of hydrogen sulfide production by Salmonella. The pH indicator system consists of acid fuchsin and bromthymol blue.

COMPOSITION:

Ingredients	Gr/Liter
Proteose peptone	12 gr
Yeast extract	3 gr
Lactose	12 gr
Sucrose	12 gr
Salicin	2 gr
Bile salts No.3	9 gr
Sodium chloride	5 gr
Sodium thiosulphate	5 gr
Ammonium ferric citrate	1,5 gr
Acid fuchsin	0,1 gr
Bromothymol blue	0,065 gr
Agar	14 gr

^{***}Formula adjusted, standardized to suit performance parameters

pH: $7,5 \pm 0,2$

PRECAUTIONS:

For professional use only. Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

TEST PROCEDURE:

Inoculate the medium with fresh faeces suspended in Ringers solution or inoculate directly with rectal swabs. Spread the inoculum to obtain well separated colonies. Incubate for 24-48 hours at 37°C. Further incubation will improve differentiation between shigellae and salmonellae.

QUALITY CONTROL:

1.Sterility Control:

Incubation 48 hours at 30-35°C and 72 hours at 20-25°C: NO GROWTH

2.Phsical/Chemical Control

pH: $7,5 \pm 0,2$

Apperance: Green with yellowish cast

3.Microbiological Control: Incubation at 30-35 °C during 24-48 h

Microorganism	Inoculum	Results	
	(CFU)	Growth	Reaction
P. roteusmirabilis ATCC 43071	10-100	Good growth	Black colonies
Salmonella typhimurium ATCC 14028	10-100	Good growth	Black colonies
Shigella flexneri ATCC 12022	10-100	Good growth	Green-Blue colonies
Enterococcus faecalis ATCC 29212	100-1000	Inhibition	-
Escherichia coli ATCC 25922	100-1000	Partial inhibition	Orange colonies



Technical Data Sheet

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STORAGE CONDITIONS AND SHELF LIFE:

Store the prepared medium at 2 - 12°C. Use before expiry date on the label. Do not use beyond stated expiry date.

DISPOSAL:

Incubated prepared medium may contain active bacteria and micro-organisms. Do not open infected medium. Infected plate should be autoclaved, incinerated or opened and soaked in a chlorine-based disinfectant (liquid bleach) for 20 minutes prior to disposal.

PACKAGING:

Katalog Number: 02029 Packaging: Single wrap

Content: 10 plates/each package

REFERENCES:

- 1. King S. and Metzger W. I. (1968) Appl. Microbiol. 16. 577-561.
- 2. Taylor W. I. and Schelhaut D. (1971) Appl. Microbiol. 21. 32-37.
- 3. Hoben D. A., Ashton D. H. A. and Peterson A. C. (1973) Appl. Microbiol. 21. 126-129.
- 4. American Public Health Association (1992) Compendium of Methods for the Microbiological Examination of Foods 3rd Edition. APHA Inc. Washington DC.

