TM 1008 – LEIFSON DEOXYCHOLATE AGAR, MODIFIED

INTENDED USE

For selective isolation and differentiation of *Salmonella* and *Shigella* species.

PRODUCT SUMMARY AND EXPLANATION

Leifson Deoxycholate Agar, was originally described by Leifson and further modified by Hynes for selective isolation and differentiation of *Salmonella* and *Shigella* species. This medium is the modification of Leifson Agar for the isolation and maximum recovery of intestinal pathogens. Leifson Deoxycholate Agar, Modified is a less selective medium and is used for direct sampling of faeces.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Meat extract B	5.000
Lactose	10.000
Sodium citrate	5.000
Ferric citrate	1.000
Sodium deoxycholate	2.500
Neutral red	0.025
Sodium thiosulphate	5.000
Agar	15.000

PRINCIPLE

This medium consists of Peptone and Meat Extract B provide nitrogenous and carbonaceous compounds, long chain amino acids and other essential growth nutrients. Sodium citrate and sodium deoxycholate inhibit all gram-positive bacteria and coliforms but allow the gram-negative bacilli to grow. Lactose is added to the medium to allow differentiation of lactose fermenting bacteria such as, Escherichia coli from non-lactose fermenting species, such as *Salmonella, Proteus* and *Shigella*. Lactose fermenting strains grow as red to pink colonies because of absorption of neutral red indicator. Non-fermenting species grow as colourless colonies. Ferric citrate and sodium thiosulphate help in H_2S determination.

INSTRUCTION FOR USE

- Dissolve 48.52 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE OR OVERHEAT. Excessive heating is detrimental.
- Cool to 45-50°C. Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to pink homogeneous free flowing powder.
Appearance of prepared medium : Reddish orange coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

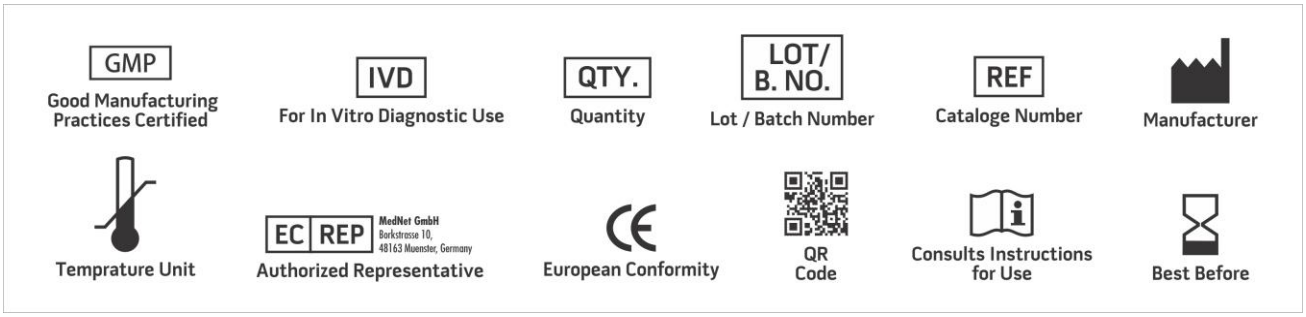
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Escherichia coll	22592	50-100	None- poor	0-10%	Pink with zone of precipitation	35-37°C	28-48 Hours
Enterococcus faecalis	29212	>=10^3	Inhibited	0%	-	35-37°C	28-48 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	>=50%	Colourless-tan	35-37°C	28-48 Hours
Salmonella Typhimurium	14028	50-100	Good-luxuriant	>=50%	Colourless, black centered colonies	35-37°C	28-48 Hours
Salmonella Enteritidis	13076	50-100	Good-luxuriant	>=50%	Colourless, black centered colonies	35-37°C	28-48 Hours
Shigella sonnei	25931	50-100	Good-luxuriant	>=50%	Colourless, black centered colonies	35-37°C	28-48 Hours

PACKAGING:
In pack size of 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. Hynes M., 1942, J. Pathol. Bacteriol., 40:581.
2. Leifson E., 1935, J. Pathol. Bacteriol., 40:581.
3. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.



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

***For Lab Use Only**

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