TMV 492 – XLD AGAR (VEG.)

INTENDED USE

For selective isolation and enumeration of *Salmonella* Typhi and other *Salmonella* species.

PRODUCT SUMMARY AND EXPLANATION

Xylose Lysine Deoxycholate Agar (Veg) is prepared by replacing sodium deoxycholate by synthetic detergent No.III which makes the medium free of BSE/TSE risks. Xylose Lysine Deoxycholate Agar (Veg) is modification of Xylose Lysine Deoxycholate Agar which is a selective as well as differential medium formulated by Taylor for the isolation and identification of enteric pathogens especially Shigellae from stool samples.

COMPOSITION

Ingredients	Gms / Ltr
Yeast extract	4.000
L-Lysine	5.000
Lactose	7.500
Sucrose	7.500
Xylose	3.500
Sodium chloride	5.000
Synthetic detergent No. III	1.500
Sodium thiosulphate	6.800
Ferric ammonium citrate	0.800
Phenol red	0.080
Agar	15.000

PRINCIPLE

The medium consists of yeast extract, which provides nitrogen and vitamins required for growth. Though the sugars xylose, lactose and sucrose provide sources of fermentable carbohydrates, xylose is mainly incorporated into the medium since it is not fermented by Shigellae but practically by all enterics. This helps in the differentiation of *Shigella* species. Sodium chloride maintains the osmotic balance of the medium. Lysine is included to differentiate the *Salmonella* group from the non-pathogens. Synthetic detergent No. III inhibits gram-positive microorganisms.

Salmonellae metabolize the xylose and after Salmonellae exhaust the supply of xylose, they decarboxylate lysine and thus change the pH to alkaline and mimic Shigellae reaction. However, to prevent this reaction by lysine positive coliforms, lactose and sucrose are added in excess to produce acid and hence nonpathogenic hydrogen sulphide (H_2S) producers do not decarboxylate lysine. Thiosulphate and ferric ammonium citrate are the hydrogen sulphide (H_2S) indicators in the medium. Phenol red is the pH indicator.

INSTRUCTION FOR USE

- Dissolve 56.68 grams in 1000 ml purified/distilled water.
- Heat with frequent agitation until the medium boils. DO NOT HEAT IN AN AUTOCLAVE.
- Transfer immediately to a water bath at 50°C. After cooling, pour into sterile Petri plates.

- It is advisable not to prepare large volumes, which will require prolonged heating and may produce precipitate.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Pink coloured, homogeneous, free flowing powder.
Appearance of prepared medium : Red coloured clear to very slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.4 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Enterobacter aerogenes	13028	50-100	Fair	20-30%	Yellow	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Fair-good	20-40%	Yellow	35-37°C	18-24 Hours
Proteus mirabilis	25933	50-100	Good-luxuriant	>=50%	Yellow	35-37°C	18-24 Hours
Proteus vulgaris	13315	50-100	Good-luxuriant	>=50%	Yellow	35-37°C	18-24 Hours
Salmonella serotype *Paratyphi A*	9150	50-100	Good-luxuriant	>=50%	Red	35-37°C	18-24 Hours
Salmonella serotype *Paratyphi B*	8759	50-100	Good-luxuriant	>=50%	Red with black centers	35-37°C	18-24 Hours
Salmonella serotype Enteritidis	13076	50-100	Good-luxuriant	>=50%	Red with black centers	35-37°C	18-24 Hours
Salmonella serotype Typhi	6539	50-100	Good-luxuriant	>=50%	Red with black centers	35-37°C	18-24 Hours

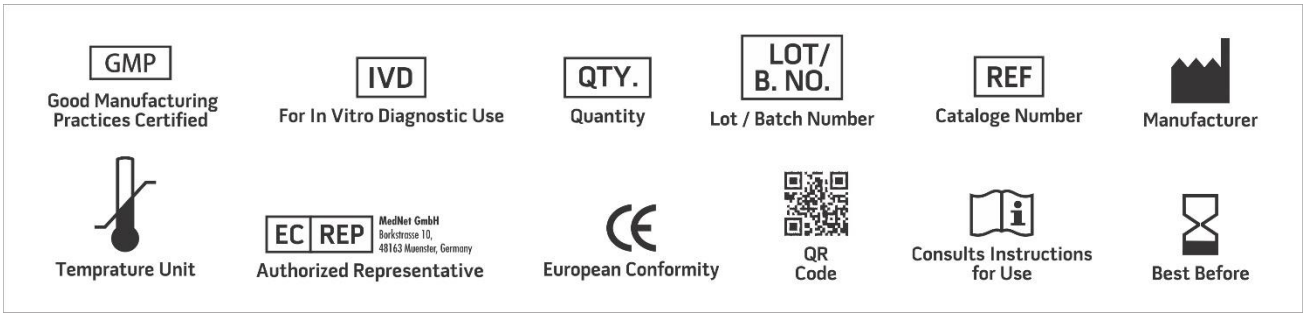
Salmonella serotype Typhimurium	14028	50-100	Good-luxuriant	>=50%	Red with black centers	35-37°C	18-24 Hours
Shigella dysenteriae	13313	50-100	Good-luxuriant	>=50%	Red	35-37°C	18-24 Hours
Shigella flexneri	12002	50-100	Good	40-50 %	Red	35-37°C	18-24 Hours
Shigella sonnei	25931	50-100	Good	40-50 %	Red	35-37°C	18-24 Hours
Staphylococcus aureus	25923	50-100	Inhibited	0%	-	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. Taylor W.I. 1965, Am. J. Clin. Path. 44:471.
2. McCarthy M.D., 1966, N.Z. J. Med. Lab. Technol., 20:127.
3. Isenberg H.D., Kominos S. and Siegal M., 1969, Appl. Microbiol., 18:656.



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

***For Lab Use Only**
Revision: 08 Nov., 2019