BIOMARK Laboratories-INDIA

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TECHNICAL SHEET

PP034	**Xylose Lysine Deoxycholate Agar Plate**
Formula	
Ingredients:	**gms/lit.**
Yeast extract	3.00
L-Lysine	5.00
Lactose	7.50
Sucrose	7.50
Xylose	3.50
Sodium chloride	5.00
Sodium deoxycholate	2.50
Sodium thiosulphate	6.80
Ferric ammonium citrate	0.80
Phenol red	0.08
Agar	15.00
Final pH (at 25°C): 7.4± 0.2	

Directions:

Label the ready to use plate (PP034). Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Principle:

Xylose Lysine Deoxycholate Agar is a selective as well as differential medium. Yeast extract provides sources of nitrogen and carbon, as well as vitamins and cofactors required for growth. Xylose, lactose, and sucrose (Saccharose) are fermentable carbohydrates. Xylose is fermented by most enteric organisms except Shigella and Providencia. Lysine is added to differentiate Salmonella. As xylose is exhausted, Salmonella organisms decarboxylate lysine causing reversion to alkaline conditions. Alkaline reversion by other lysine – positive organisms is prevented by excess acid production form fermentation of lactose and sucrose. Sodium Thiosulfate and Ferric Ammonium citrate allow visualization of hydrogen sulfide production under alkaline conditions. Acidic conditions inhibit the reaction. Phenol red is pH indicator. Sodium chloride maintains osmotic balance in the medium. Agar is a solidifying agent. Sodium Deoxycholate in XLD agar inhibits growth of gram – positive organisms. This medium is an ideal medium for screening samples containing mixed flora of enteric pathogens as recovery of Salmonellae and Shigellae is not conspicuous by even profuse growth of other species.

(I) QC Tests	
pH:	7.4 ± 0.2
Color:	Red coloured medium.
Appearance:	Sterile Xylose Lysine Deoxycholate Agar in 90X15mm disposable plates.
(II)Sterility test	Passes release criteria

(III)Q.C. Test Microbiological

Cultural characteristics observed after incubation at 35-37°C for 18-48 hours.

MICROORGANISM (ATCC)	INOCULUM(CFU)	GROWTH	RECOVERY	COLOR OF COLONY
Salmonella typhimurium 14028	50 -100	LUXURIANT	≥50 %	red with black centers
Salmonella Abony NCTC6017	50 -100	Good-luxuriant	≥50 %	red with black centers
Escherichia coli 8739	50 -100	fair	20 -30 %	yellow
Escherichia coli NCTC 9002	50 -100	fair	20 -30 %	yellow
Escherichia coli 25922	50 -100	fair	20 -30 %	yellow
Proteus vulgaris 13315	50 -100	Good-luxuriant	≥50 %	grey with black centers
Salmonella Paratyphi A9150	50 -100	Good-luxuriant	≥50 %	red
Salmonella Paratyphi B 8759	50 -100	Good-luxuriant	≥50 %	grey with black centers
Salmonella Enteritidis 13076	50 -100	Good-luxuriant	≥50 %	grey with black centers
Salmonella Typhi 6539	50 -100	Good-luxuriant	≥50 %	grey with black centers
Shigella flexneri12002	50 -100	fair-good	30 -40 %	red

	Shigella dysenteriae13313	50 -100	Good-luxuriant	≥50 %	red
	Shigella sonnei25931	50 -100	fair-good	30 -40 %	red
	Enterobacter aerogenes13048	50 -100	fair	20 -30 %	yellow
	Enterobacter cloacae 13047	50 -100	fair	20 -30 %	yellow
	Staphylococcus aureus 6538	≥10^3	inhibited	0%	-
	Staphylococcus aureus25923	≥10^3	inhibited	0%	-
	Enterococcus faecalis 29212	≥10^3	inhibited	0%	-

Precautions :	1. In Vitro diagnostic use only.
	2. Read the label before opening the container
Limitations :	1. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.
Use:	For the selection of Salmonella.
Storage:	Store between 2-8°C. Use before expiry date on the label.
Packing:	10/20/50 disposable plates.