CM 22637 - XYLOSE LYSINE DEOXYCHOLATE (XLD) AGAR PLATE

INTENDED USE

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

PRODUCT SUMMARY AND EXPLANATION

Xylose Lysine Deoxycholate agar (XLDa gar) isaselective growth medium used in the isolation of *Salmonella* and *Shigella* species from clinical samples or food products. XLD Agar has been recommended for the identification of Enterobacteriaceae and for the microbiologicaltesting of foods, water and dairy products. The media formulation does not allow the over growth of other organismsover *Salmonella* and *Shigella.* XLD Agar is one of the media used in the Microbial Limit Tests in the USP & EP.

COMPOSITION

Ingredients	Gms / Ltr
Agar	13.500
Sucrose	7.500
Lactose monohydrate	7.500
Sodium thiosulphate	6.800
L-Lysine	5.000
Sodium chloride	5.000
Xylose	3.500
Yeast extract	3.000
Sodium deoxycholate	2.500
Ferric ammonium citrate	0.800
Phenol red	0.080

PRINCIPLE

XLDAgar is both a selectiveanddifferential medium. The selective agent in XLD Agar is sodium deoxycholate, which inhibits the growth of gram-positiveorganisms. It contains yeast extract as a source of nutrients and vitamins. The carbohydrate source is xylosewhichisfermented by most enteric except for *Shigella* species, and these colonies appear red on this medium as a result.Asecond differential mechanism for *Salmonella* is employed by the addition of lysine. Lysine decarboxylation revertsthepHof the medium to an alkaline condition. To avoid this reversal to a *Shigella* reaction, lactose and sucrose are addedinexcess. The addition of sodium thiosulfate and ferric ammonium citrate as a sulphur source and indicator, respectively,allows hydrogen sulphide forming organisms to produce colonies with black centers, under alkaline conditions.Organismswhich ferment xylose, are lysine decarboxylase-negative, and do not ferment lactose or sucrose cause anacidpHinthe medium, and form yellow colonies.

INSTRUCTION FOR USE

Eitherstreak,inoculateorsurface spread the test inoculum aseptically on the plate.

QUALITY CONTROL SPECIFICATIONS

Appearance	:	Red color Medium
Quantity of Medium	:	25ml of medium in 90mm plates.

pH (at 25°C)	:	7.4± 0.2
Sterility Check	:	Passes release criteria

INTERPRETATION

Culturalresponse wasobserved after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Appearance of colony	Incubation Temperature	Incubation Period
Salmonella typhimurium	14028	50-100	Good-Luxuriant	>=50%	Red with black centres	35-37°C	18-48 hours
Salmonella typhi	6539	50-100	Good-Luxuriant	>=50%	Red with black centres	35-37°C	18-48 hours
Salmonella enteritidis	13076	50-100	Good-Luxuriant	>=50%	Red with black centres	35-37°C	18-48 hours
Shigella flexneri	12022	50-100	Fair – Good	30-40%	Red	35-37°C	18-48 hours
Shigella sonnei	25931	50-100	Fair – Good	30-40%	Red	35-37°C	18-48 hours
Escherichia coli	25922	50-100	Fair	20-30%	Yellow	35-37°C	18-48 hours
Enterobacter aerogenes	13048	50-100	Fair	20-30%	Yellow	35-37°C	18-48 hours
Enterococcus faecalis	29212	≥ 1000	Inhibited	0%	---	35-37°C	18-72 hours
Staphylococcus aureus	25923	≥ 1000	Inhibited	0%	---	35-37°C	18-72 hours

PACKAGING:

Doubledlayered packing containing 5 No. of plates with one silica gel desiccant bag packed inside it.

STORAGE

Onreceipt,store the plates at 15–30 °C. Avoid freezing and overheating. Do not open until ready to use. Prepared plates stored in their original sleeve wrapping until just prior to use may be inoculated up to the expiration date and incubated for recommended incubation times. Allow the medium to warm to room temperature before inoculation.

Product Deterioration: Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

DISPOSAL

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

REFERENCES

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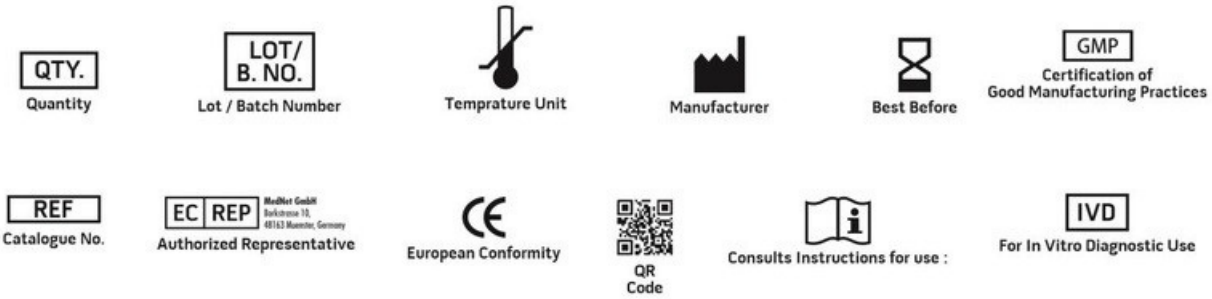

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.