TRM 492 –XLD AGAR

INTENDED USE

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

PRODUCT SUMMARY AND EXPLANATION

XLD Agar was formulated by Taylor for the isolation and differentiation of enteric pathogens including *Salmonella typhi* from other *Salmonella* species. XLD Agar has been recommended for the identification of Enterobacteriaceae and for the microbiological testing of foods, water and dairy products. The media formulation does not allow the over growth of other organisms over *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	15.000
Sucrose	7.500
Lactose	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

The medium contains Yeast extracts as source of vitamins and minerals. Addition of Sodium deoxycholate acts as a selective agent which is inhibitory to Gram-positive bacteria. It suppresses the growth of other enteric pathogens and enhances the growth of only few enteric bacilli. The medium contains Xylose as a fermentable carbohydrate which is utilized by *Salmonella* species. The medium pH is changed due to fermentation of Xylose which is detected by indicator Phenol red, thus the colony colour turns red. The medium also contains Lactose and Sucrose as the source of fermentable sugar. L-lysine is an essential amino acid source. Lysine is added to differentiate *Salmonella* spp. Sodium chloride helps maintaining the osmotic balance of the cells. This medium also allows differentiation of bacilli based on their ability to produce H2S; it contains Sodium thiosulphate and Ferric ammonium citrate that helps visualizing the black centered colonies on production of hydrogen sulphide in the medium. Agar is added as the solidifying agent.

INSTRUCTION FOR USE

1. XLD Agar is a ready to use solid media in glass bottle. The medium is pre-sterilized, hence sterilization is not required.
2. Prior to use, medium in the bottle can be melted by using a pre-heated water bath.
3. Slightly loosen the cap before melting.
4. Pour liquefied agar into each plate as desired and allow them to solidify at room temperature. Plates are now ready to inoculate or refrigerate for later use

QUALITY CONTROL SPECIFICATIONS

Appearance	:	Red color, clear to slightly opalescent gel.
Quantity of Medium	:	100 ml of the medium in glass bottle
pH (at 25°C)	:	7.4± 0.2
Sterility Check	:	Passes release criteria

INTERPRETATION

Cultural characteristics observed after an incubation**.** Recovery rate is considered 100% for bacteria growth on Soya Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Proteus vulgaris	13315	50-100	Luxuriant	>=50%	Grey with black centres	35-37°C	18-24 Hours
Salmonella typhimurium	14028	50-100	Luxuriant	>=50%	Red with black centres	35-37°C	18-24 Hours
Salmonella paratyphi B	8759	50-100	Luxuriant	>=50%	Red with black centres	35-37°C	18-24 Hours
Salmonella enteritidis	13076	50-100	Luxuriant	>=50%	Red with black centres	35-37°C	18-24 Hours
Salmonella typhi	6539	50-100	Luxuriant	>=50%	Red with black centres	35-37°C	18-24 Hours
Shigella dysenteriae	13313	50-100	Luxuriant	>=50%	Red	35-37°C	18-24 Hours
Salmonella paratyphi A	9150	50-100	Luxuriant	>=50%	Red	35-37°C	18-24 Hours
Shigella sonnei	25931	50-100	Fair to Good	30-40%	Red	35-37°C	18-24 Hours
Staphylococcus aureus	6538	≥1000	Inhibited	0%	-	35-37°C	18-24 Hours
Enterococcus faecalis	29212	≥1000	Inhibited	0%	-	35-37°C	18-24 Hours
# Klebsiella aerogenes	13048	50-100	Fair	20-30%	Yellow	35-37˚C	18-24 Hours

Formerly known as *Enterobacter aerogenes*

PACKAGING

100 ml glass bottle.

STORAGE

On receipt, store bottles in the dark at 10 to 25° C. Avoid freezing and overheating. The medium may be used up to the expiration date and incubated for the recommended incubation times. Bottles from unopened packages can be used up to the expiration date. Opened bottles must be used immediately. To prepare plates or tubes from the bottled medium, it must first be liquefied. Do not liquefy any leftovers for a second time

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

DISPOSAL

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

REFERENCES

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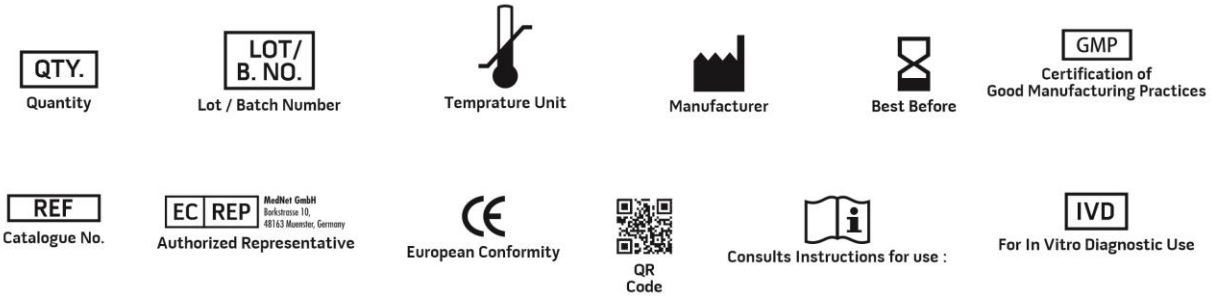

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 31st March. 2022