

**XLT4 AGAR BASE****TM 493**

For selective isolation of *Salmonella* species other than *Salmonella typhi*.

Composition

Ingredients	g/L
Agar	18.00
Lactose	7.50
Saccharose	7.50
Sodium thiosulphate	6.80
L-Lysine	5.00
Sodium chloride	5.00
Xylose	3.75
Yeast extract	3.00
Proteose peptone	1.60
Ferric ammonium citrate	0.80
Phenol red	0.08

*Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly - sealed containers below 25°C and protect from direct Sunlight.

Instructions for use

Dissolve 59.03 g in 1000ml distilled water. Add 4.6ml XLT4 supplement (TS 072) and gently heat to boil with gentle swirling and dissolve the medium completely. DO NOT AUTOCLAVE OR OVER HEAT. Dispense in sterile Petriplates as desired.

Appearance: Red colour, clear to slightly opalescent gel

pH (at 25°C): 7.4 ± 0.2

Principle

XLT4 AGAR BASE is used for selective isolation of *Salmonella* species other than *Salmonella typhi*. *Salmonella* is Gram-negative, rod-shaped, motile enterobacteria.

Some strains are harmful to humans and cause food borne illness. “Miller and Tate” formulated this medium.

Medium composed of Proteose peptone is a sources of carbon, nitrogen and amino acids essential for growth. Yeast extract supplies nitrogenous requirements and vitamins required for growth. The sugars namely lactose, saccharose and xylose are the fermentable carbohydrates.

Salmonella utilizes xylose to produce acidity. Subsequently it decarboxylates lysine and revert to alkalinity. To add to the differentiating ability of the formulation, an H₂S indicator system, consisting of sodium thiosulphate and ferric ammonium citrate is included for the visualization of the hydrogen sulphide produced, resulting in the formation of colonies with black centers.

The non-pathogenic H₂S producers do not decarboxylate lysine; therefore, the acid reaction generated by them prevents the blackening of the colonies.



PRODUCT DATA SHEET

XLT4 Agar is both selective and differential. Tergitol 4 inhibits growth of non- Salmonella organisms. Presumptive Salmonella colonies should be confirmed by performing biochemical tests.

Microbiological parameters (Growth promotion test)

Cultural characteristics observed with added supplement after inoculation ($10^3 - 10^4$ CFU/ml) and incubation at 35 - 37°C for 18 – 24 hours.

Test strains	ATCC	Inoculum (CFU/ml)	Growth	Colony appearance
<i>Salmonella enteritidis</i>	13076	10^3	Good - Luxuriant	Red with black centers
<i>Salmonella typhimurium</i>	14028	10^3	Luxuriant	Red with black centers
<i>Escherichia coli</i>	25922	10^3	Fair - good	Yellow
<i>Enterococcus faecalis</i>	29212	10^4	Inhibited	NA
<i>Staphylococcus aureus</i>	25923	10^4	Inhibited	NA

NA; Not applicable

References

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