B010	XLT 4 AGAR BASE

Formula

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

Final pH (at 25°C) : 7.4 ± 0.2

Directions :

Suspend 59.03 gms. in 1000 ml. distilled water. Add 4.6 ml.of XLT4 supplement (BF140) Heat with frequent agitation until the medium Boils. DO NOT AUTOCLAVE OR OVERHEAT.

Principle :

Yeast extract provides sources of nitrogen and carbon, as well as vitamins and cofactors required for growth. Proteose peptone is source of carbon, nitrogen and other essential amino acids and growth factors. Xylose, lactose, and sucrose (Saccharose) provide of fermentable carbohydrate. 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 an indicator. Sodium chloride maintains osmotic balance in the medium. Agar is a solidifying agent.

QC Tests – (I)Dehydrated Medium			
	Colour :	Light yellow to Pink	
	Appearance :	Homogeneous Free Flowing powder	
(II)Rehydrated medium			
	pH (post autoclaving/heating) :	7.4 ± 0.2	
	Colour (post autoclaving/heating) :	Red	
	Clarity (post autoclaving/heating) :	Clear to slightly opalescent	
(III)Q.C. Test Microbiological			
	Cultural characteristics observed after 18 – 24 hrs. at 35 - 37°C with added XLT4 Supplement(BF140).		
	MICROORGANISM (ATCC)	GROWTH	COLOUR OF COLONY
	Salmonella enteritidis (13076)	Good –luxuriant	Red with black centers
	Salmonella typhimurium (14028)	Good –luxuriant	Red with black centers
	Enterobacter faecalis (29212)	Inhibited	-
	Escherichia coli (25922)	Fair-Good	Yellow
	Staphylococcus aureus (25923)	Inhibited	-
	Proteus mirabilis (25933)	None-poor	-

Refer disclaimer Overleaf

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Precautions :	1. For Laboratory Use.				
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.				
Limitations :	1. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.				
	2. Red. false – positive colonies may occur with some Proteus and Pseudomonas species.				
	3. Incubation in excess of 48 hours may lead to false – positive results.				
	4. S. paratyphi A, S. choleraesuis, S. pullorum and S. gallinarum may form red colonies without black centers, thus resembling Shigella species.				
	5. Some Proteus strains will give black – centered colonies on XLD Agar.				
Use :	For selective isolation and enumeration of Salmonella species other than Salmonella typhi.				
Storage :	Dehydrated medium- below 30°C Prepared medium– Between 2 to 8°C.				
Packing :	500 gm. bottle				
Product profile:	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
B010	59.03 g/l	8.47 L	7.4 $\pm$ 0.2	XLT supplement	Donot autoclave/overheat.Boil medium to dissolve w/frequent agitation