B115	BISMUTH SULPHITE AGAR
Formula	
Ingredients :	**gms/lit.**
Peptic digest of animal tissue	10.00
Beef Extract	5.00
Dextrose	5.00
Disodium phosphate	4.00
Ferrous Sulphate	0.30
Bismuth Sulphite Indicator	8.00
Brilliant Green	0.025
Agar	20.00
Final pH (at 25°C) :	7.7 ± 0.2

Directions :

Suspend 52.33 grams in 1000ml distilled water. Heat to boiling to dissolve the medium, DO NOT STERILIZE IN AUTOCLAVE or by fractional sterilization since overheating may destroy the selectivity of the medium. The sensitivity of the medium depends largely upon uniform dispersion of precipitated bismuth sulphite in the final medium which should be dispersed before pouring into the sterile petri plates.

Principle :

In Bismuth Sulfite Agar, Beef extract and Peptic digest of animal tissue provide nitrogen, vitamins and minerals. Dextrose is an energy source. Disodium phosphate is a buffering agent. Bismuth sulfite indicator and brilliant green are complementary in inhibiting gram-positive bacteria and members of the coliform group, while allowing Salmonella to grow luxuriantly. Ferrous sulfate is for H_2S production. When H_2S is present, the iron in the formula is precipitated, giving positive cultures the characteristic brown to black colour with metallic sheen. Agar is a solidifying agent.

QC Tests – (I)Dehydrated Medium		
	Colour :	Light yellow to greenish yellow
	Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium		
	pH (post autoclaving/heating) :	7.7 ± 0.2
	Colour (post autoclaving/heating) :	Greenish yellow
	Clarity (post autoclaving/heating) :	Opalescent gel with flocculent precipitate.
(III)Q.C. Test Microbiological		

Cultural characteristics observed after 40 –48 hrs at 35-37°C.

MICROORGANISM (ATCC)	GROWTH	COLOUR OF COLONY
Salmonella enteritidis (13076)	good-luxuriant	Black with metallic sheen
Salmonella typhi (19430)	good-luxuriant	Black with metallic sheen
Enterobacter aerogenes (13048)	None - Poor	Brown to green*
Escherichia coli (25922)	None - Poor	Brown to green*
Escherichia coli (8539)	None - Poor	Brown to green*
Escherichia coli (NCTC9002)	None - Poor	Brown to green*
Shigella flexneri (12022)	None - Poor	Brown
Enterococcus faecalis (29212)	Inhibited	---
Salmonella Typhimurium (14028)	good-luxuriant	Black with metallic sheen
Salmonella Abony (NCTC6017)	good-luxuriant	Black with metallic sheen
Key: * depends on inoculum density.		

Precautions :	1. For Laboratory Use.				
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.				
	3. HARMFUL. May cause sensitization by inhalation. Irritating to eyes, respiratory system and skin. Avoid contact with skin and eyes. Do not breathe dust. Wear suitable protective clothing. Keep container tightly closed.				
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. It is important to streak for well isolated colonies. In heavy growth areas, S. typhi appears light green and may be misinterpreted as negative growth for S. typhi.				
	3. S. typhi and S. arizonae are the only enteric organisms to exhibit typical brown zones on the medium. Brown zones are not produced by other members of the Enterobacteriaceae. However, S. arizonae is usually inhibited.				
	4. Colonies on Bismuth Sulfite Agar may be contaminated with other viable organisms; therefore, isolated colonies should be subcultured to a less selective medium (e.g. Mac Conkey Agar).				
	5. Typical S. typhi colonies usually develop within 24 hours ; however, all plates should be incubated for a total of 48 hours to allow growth of all typhoid strains.				
	6. DO NOT AUTOCLAVE. Heating this medium for a period longer than necessary to just dissolve the ingredients destroys its selectively.				
Use :	For selective isolation of Salmonella from faeces, urine, sewage and other materials.				
Storage :	Dehydrated medium-below 30°C Prepared medium- Between 2 to 8°C. but not for more than two days as after which dye oxidizes to give green medium that could be inhibitory to some Salmonellae. Current references suggest that the prepared medium should be aged for one day before use.				
Packing :	500 gm. bottle				
Product profile:	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
B115	52.33g/l l	9.554L	7.7 $\pm$ 0.2	NIL	DO NOT STERILIZE IN AUTOCLAVE