BI002 **Agar Powder (Bacteriological)**

Specifications

Appearance **:** Pale Cream to light yellow coloured homogeneous free flowing powder

Clarity (1.5% solution) **:** Clear to slight opalescent gel

pH (1% solution) **:** 5.5 – 7.0

Moisture **:** NMT 12 %

Gelling Temperature: 35-40^{0}c

Microbial Load:(CFU/g): Total aerobic microbial count by plate method when incubated at 30-35^{0}c for 48 hours

Bacterial count :NMT 5000

Total Yeast and mold count by plate method when incubated at 20-25^{0}c for 120 hours

Yeast and mold count :NMT 250

Test for specific organisms

E.coli : Absent
Salmonella species : Absent
Pseudomonas aeruginosa : Absent
Staphylococcus aureus : Absent

Applications:

As solidifying agent in Microbiological culture media at concentrations:
For routine media – 1.2.to 1.7%
For softer media –0.5%
For semisolid media – 0.15%
For inhibition of Proteus spp. – 2.0%

Precaution

1. For Laboratory Use
2. Follow proper, established laboratory procedures in handling and disposing of infectious materials**.**

Storage : Below 30^{0}c in cool, dry place.

Packing **:** 500g

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B422	BILE ESCULIN AGAR			
Formula				
Ingredients :		**gms/lit.**		
Peptic digest of animal tissue		5.00		
Beef extract		3.00		
Oxgall		40.00		
Esculin		1.00		
Ferric citrate		0.50		
Agar		15.00		
Final pH (at 25°C) : 6.6 ± 0.2				
Directions :				
Suspend 64.5 gms. in 1000 ml. distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 minutes.				
Principle :				
The medium contains 4% oxgall that inhibits gram positive bacteria other than group D Streptococci and Enterococci. Enterococci and Group D Streptococci hydrolyze esculin to esculetin and dextrose, which reacts with ferric citrate producing brownish black precipitate. Peptic digest of animal tissue and beef extract provide essential nutrients and vitamins. Agar is the solidifying agent.				
QC Tests – (I)Dehydrated Medium				
	Colour :	Brownish yellow		
	Appearance :	Homogeneous Free Flowing powder		
(II)Rehydrated medium				
	pH (post autoclaving/heating) :	6.6 ± 0.2		
	Colour (post autoclaving/heating) :	Yellow to medium amber		
	Clarity (post autoclaving/heating) :	Clear to Slightly opalescent		
(III)Q.C. Test Microbiological				
	Cultural characteristics observed after18 –24 hrs at 35-37°C in an increased atmosphere of carbon dioxide.			
	MICROORGANISM (ATCC)	GROWTH	ESCULIN HYDROLYSIS	
	Enterococcus faecalis (29212)	Luxuriant	+	
	Streptococcus pyogenes (19615)	Luxuriant	-	
	Proteus mirabilis (25933)	Luxuriant	-	

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Precautions :	1. For Laboratory Use.				
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.				
	3. IRRITANT. 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. Target organ(s) : Lungs.				
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. The bile esculin test was originally formulated to identify enterococci. However, the properties of growth on 40% bile media and esculin hydrolysis are characterstics shared by most strains of Group D streptococci. The bile esculin test should be used in combination with other tests to make a positive identification. Facklam and Facklam et al. recommend a combination of the bile esculin test and salt tolerance (growth in 6.5 % NaCl). Streptococcus bovis will give a positive reaction on Bile Esculin Agar, but unlike Enterococcus spp., it cannot grow on 6.5% NaCl or at 10°C.				
	3. Bile Esculin Agar should be considered a differential medium, but with the addition of sodium azide (which inhibits gram –negative bacteria) the medium can be made more selective (see Bile Esculin Azide Agar).				
	4. Occasional viridans strains will be positive on Bile Esculin Agar or will display reactions that are difficult to interpret. Of the viridans group, 5 to 10% may be able to hydrolyze esculin in the presence of bile.				
	5. Use a light inoculum when testing E. Coli on Bile esculin agar. Wasilauskas suggests that the time required for an isolate to hydrolyze esculin is directly proportional to the size of the inoculum. For a tabulation of those Enterobacteriaceae that can hydrolyze esculin, refer to Farmer.				
Use :	For differential isolation and presumptive identification of group D Streptococci in food and pharmaceutical products.				
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
B422	64.5g/l	7.751L	6.6 ± 0.2	NIL	121^0C / 15 minutes

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B119	BRAIN HEART INFUSION AGAR
Formula	
Ingredients :	**gms/lit.**
Calf brain,infusion from	200.00
Beef infusion from	250.00
Proteose peptone	10.00
Dextrose	2.00
Sodium chloride	5.00
Disodium phosphate	2.50
Agar	15.00
Final pH (at 25°C) : 7.4 ± 0.2	

Directions :

Suspend 52 gms. in 1000 ml. distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well before pouring. If desired,20 units Penicillin and 40 microgram Streptomycin per ml of medium may be added to make the medium selective for fungi.

Principle :

Infusion from Beef Heart, Calf Brains and Proteose Peptone provide nitrogen, carbon, sulfur and vitamins in Brain Heart Infusion media. Dextrose is a carbon energy source that facilities organism growth, Sodium Chloride maintains the osmotic balance of the medium. Disodium Phosphate is a buffering agent. Agar is a solidifying agent.

Brain Heart Infusion Agar is used in the aminoglycoside and vancomycin screen test for resistant enterococci. BHI Agar with 5-10% sheep blood and chlormphenicol (16 µg/ml) and gentamicin (5 µg/ml) will inhibit the growth of bacteria while allowing growth of dimorphic fungi. This agar can be used as a primary plating medium for growth of fungi since it has been shown to yield better recovery than the previously recommended Sabouraud Dextrose Agar. In Brain Heart CC Agar, Chloramphenicol is uded as a broad – spectrum antibiotic to inhibit a wide range of bacteria; cycloheximide inhibits saprophytic fungi. Sheep blood provides essential growth factors for fastidious fungi.

QC Tests – (I)Dehydrated Medium		
	Colour :	Cream to Pale yellow
	Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium		
	pH (post autoclaving/heating) :	7.4 ± 0.2
	Colour (post autoclaving/heating) :	a)Basal medium –light amber b)with addition of 5 % v/v sterile defibrinated blood – Cherry red
	Clarity (post autoclaving/heating) :	a)Clear to slightly opalescent b)Opaque
(III)Q.C. Test Microbiological		
	Cultural characteristics observed after 18 –24 hrs at 35-37°C.	

	MICROORGANISM (ATCC)	GROWTH
	Escherichia coli (25922)	Luxuriant
	Shigella flexneri (12022)	Luxuriant
	Streptococcus pneumoniae (6303)	Luxuriant
	Streptococcus aureus (25923)	Luxuriant
	Candida albicans (26790)	Luxuriant
	*Trichophyton mentagrophytes (9533)	Luxuriant
	*Incubation at 25-30°C for 1-2 weeks.	

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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. Certain pathogenic fungi may be inhibited by the antibiotics in Brain Heart CG agar.				
	3. Clostridium Difficile Antimicrobic Supplement CC is intended for use in the preparation of Clostridium Difficile Agar. Although this medium is selective for C. difficile, additional testing using pure cultures is necessary for complete identification. Consult appropriate references for further information.				
	4. Suspected colonies of C. difficile should be gram stained and subcultured anaerobically and aerobically on blood agar for complete identification.				
	5. Demonstration of the C. difficile toxin in feces in the presence of clinically evident pseudomembranous colitis is required for definitive diagnosis.				
Use :	For cultivation of fastidious pathogenic bacteria yeasts and molds.				
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
B119	52g/l	9.615L	7.4 ± 0.2	20 units Penicillin and 40 microgram Streptomycin	121^0C / 15 minutes

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B053	MANNITOL SALT AGAR

Formula

Ingredients:	**gms/lit.**
Proteose peptone	10.00
Beef extract	1.00
Sodium chloride	75.00
D-Mannitol	10.00
Phenol red	0.025
Agar	15.00

Final pH (at 25°C) : 7.4 ± 0.2

Directions :

Suspend 111gms in 1000 ml. distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes. If desired, add 5% v/v Egg yolk Emulsion to (B053). Mix well & dispense as desired.

Principle :

Mannitol Salt Agar contains Proteose Peptone and Beef Extract as sources of carbon, nitrogen, vitamins and minerals. D-Mannitol is the carbohydrate source. Sodium Chloride, in high concentration, inhibits most bacteria other than staphylococci. Phenol Red is the pH indicator. Agar is the solidifying agent.
Bacteria that grow in the presence of a high salt concentration and ferment mannitol produce acid products which turn the phenol red pH indicator from red to yellow. Typical pathogenic staphylococci (coagulase – positive staphylococci) ferment mannitol and form yellow colonies with yellow zones around the colonies. Typical non – pathogenic staphylococci do not ferment mannitol and form red colonies.

QC Tests – (I)Dehydrated Medium		
	Colour :	Light pink
	Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium		
	pH (post autoclaving/heating) :	7.4 ± 0.2
	Colour (post autoclaving/heating) :	Orangish red to red
	Clarity (post autoclaving/heating) :	Clear to slightly opalescent
(III) Q.C. Test Microbiological		
	Cultural characteristics observed after 18 - 48 hours at 35 - 37°C.	

	MICROORGANISM (ATCC)	GROWTH	COLOUR OF COLONY
	Staphylococcus aureus (25923)	Good -Luxuriant	Yellow
	Staphylococcus epidermidis (12228)	Fair to good	Red
	Escherichia coli (25922)	Inhibited	---

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.
Use :	For selective isolation of pathogenic Staphylococci.
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
B053	111g/l	4.50L	7.4 ± 0.2	5% v/v Egg yolk Emulsion	121^0C / 15 minutes

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B263	MUELLER HINTON AGAR		
Formula			
Ingredients :		**gms/lit.**	
Beef, infusion from		300.00	
Casein acid hydrolysate		17.50	
Starch		1.50	
Agar		17.00	
Final pH (at 25°C) :		7.3 ± 0.2	
Directions :			
Suspend 38 gms in 1000 ml. distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well before pouring.			
Principle :			
Beef heart infusion and casein acid hydrolysate provide nitrogenous compounds, carbon, sulphur and other essential nutrients. Starch is added to absorb any toxic substances present in the medium. Different factors influence the disc diffusion susceptibility tests as, inoculum concentration, agar depth, disc potency, medium pH and beta – lactamase production by test organisms. Agar is the solidifying agent.			
QC Tests – (I)Dehydrated Medium			
	Colour :	Cream to yellow	
	Appearance :	Homogeneous Free Flowing powder	
(II)Rehydrated medium			
	pH (post autoclaving/heating) :	7.3 ± 0.2	
	Colour (post autoclaving/heating) :	Light amber	
	Clarity (post autoclaving/heating) :	Sligthly opalescent	
(III) Q.C. Test Microbiological			
	Cultural characteristics observed after 18- 24 hours at 35-37°C.		
	MICROORGANISM (ATCC)	GROWTH	
	Escherichia coli (25922)	Luxuriant	
	Neisseria gonorrhoeae (49226)	Luxuriant	
	Pseudomonas aeruginosa (77853)	Luxuriant	
	Staphylococcus aureus (25923)	Luxuriant	
	Streptococcus faecalis (19433)	Luxuriant	
	Haemophilus influenzae (49247)	Good – Luxuriant (on chocolate agar)	
Precautions :	1. For Laboratory Use.		
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.		

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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. Numerous factors can affect results ; inoculum size, rate of growth, medium formulation of pH, length of incubation and incubation environment, disk content and drug diffusion rate, and measurement of endpoints. Therefore, strict adherence to protocol is required to ensure reliable results.				
	3. Disk diffusion susceptibility testing is limited to rapidly growing organisms. Drug inactivation may result from the prolonged incubaction times required by slow growers.				
	4. Media containing excessive amounts of thymidine or thymine can reverse the inhibitory effects of sulfonamides and trimethoprim, causing zones of growth inhibition to be smaller or less distinct.				
	5. Variation in the concentration of divalent cations, primarily calcium and magnesium, affects results of aminoglycoside, tetracycline, and colistin tests with P. aeruginosa isolates. A cation content that is too high reduces zones sizes, whereas a cation content that is too low has the opposite effect.				
	6. When Mueller Hinton Medium is supplemented with blood, the Zone of inhibition for oxacillin and methicillin may be 2 to 3 mm smaller than those obtained with unsupplemented agar. Conversely, sheep blood may markedly increase the zone diameters of some cephalosporins when they are tested against enterococci. Sheep blood may cause indistinct zones or a film of growth within the zones of inhibition around sulfonamide and trimethoprim disks.				
	7. Mueller Hinton Medium deeper than 4 mm may cause false – resistant results, and agar less than 4 mm deep may be associated with a false –suceptibility report.				
	8. A pH outside the range of 7.3 ± 0.1 may adversely affect susceptibility test results. If the pH is too low, aminoglycosides and macrolides will appear to lose potency; others may appear to have excessive activity. The opposite effects are possible if the pH is too high.				
	9. When Mueller Hinton Medium is inoculated, no droplets of moisture should be visible on the surface or on the petri dish cover.				
	10. Mueller Hinton Medium should be inoculated within 15 minutes after the inoculum suspension has been adjusted.				
	11. The zone of inhibition diameters of some drugs, such as the aminoglycosides, macrolides, and tetracyclines, are significantly altered by CO_2 Plates should not be incubated in increased CO_2.				
Use :	For cultivation of Neisseria and for determination of susceptibility of microorganisms to antimicrobial agents.				
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
B263	38g/l	13.157L	7.3 ± 0.2	NIL	121^0C / 15 minutes

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B298	PLATE COUNT AGAR				
Formula					
Ingredients :		**gms/lit.**			
Casein enzymic hydrolysate		5.00			
Yeast extract		2.50			
Dextrose		1.00			
Agar		15.00			
Final pH (at 25°C) :	7.0 ± 0.2				
Directions :					
Suspend 23.5 gms in 1000 ml. distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.					
Principle :					
Plate count agar contains Casein enzymic hydrolysate and Yeast extract which provide the carbon and nitrogen sources required for growth of a wide variety of organisms. Dextrose is a source of fermentable carbohydrate (energy source). Agar is a solidifying agent.					
QC Tests – (I)Dehydrated Medium					
Colour :		Cream to light yellow			
Appearance :		Homogeneous Free Flowing powder			
(II)Rehydrated medium					
pH (post autoclaving/heating) :		7.0 ± 0.2			
Colour (post autoclaving/heating) :		Cream to light yellow			
Clarity (post autoclaving/heating) :		Clear to slightly opalescent			
(III)Q.C. Test Microbiological					
Cultural characteristics observed after 18 – 24 hrs at 35 – 37°C.					
MICROORGANISM (ATCC)		GROWTH			
Bacillus subtilis (6633)		Luxuriant			
Escherichia coli (25922)		Luxuriant			
Lactobacillus casei (9595)		Luxuriant			
Staphylococcus aureus (25923)		Luxuriant			
Enterococcus faecalis (29212)		Luxuriant			
Streptococcus pyogenes (19615)		Luxuriant			
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.				
Use :	**B298:** For determination of plate counts of microorganisms in foods, water and wastewater.				
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
B298	23.5g/l	21.276L	7.0 ± 0.2	NIL	121^0C / 15 minutes

B057	SABOURAUD DEXTROSE AGAR

Formula

Ingredients :	**gms/lit.**
Mycological peptone	10.00
Dextrose	40.00
Agar	15.00

Final pH (at 25°C) : 5.6 ± 0.2

Directions :

Suspend 65 gms in 1000 ml. distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle :

Sabouraud Dextrose Agar contains Mycological peptone which provide the carbon and nitrogen required for growth of a wide variety of organisms. Dextrose is included as an energy source. Agar is incorporated into the agar media as a solidifying agent.

QC Tests – (I)Dehydrated Medium		
	Colour :	Cream to light yellow
	Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium		
	pH (post autoclaving/heating) :	5.6 ± 0.2
	Colour (post autoclaving/heating) :	Cream to light amber
	Clarity (post autoclaving/heating) :	Clear to slightly opalescent
(III)Q.C. Test Microbiological		
	Cultural characteristics observed after 48 –72 hrs.at 30°C.	

	MICROORGANISM (ATCC)	GROWTH
	Aspergillus niger (16404)	Luxuriant
	Candida albicans (10231)	Luxuriant
	Trychophyton rubrum (28191)	Luxuriant
	Saccharomyces cerevisiae (9763)	Luxuriant
	Escherichia coli (25922)	Luxuriant*
	Lactobacillus casei (9595)	Luxuriant
	Key * = inhibited on media with lower pH.	

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. Antimicrobial agents incorporated into a medium to inhibit bacteria may also inhibit certain pathogenic fungi.
	3. Avoid overheating a medium with an acidic pH because this often causes a soft medium.
Use :	**B057:** For cultivation of yeasts, molds and aciduric microorganisms.
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
B057	65g/l	7.692L	5.6 ± 0.2	NIL	121^{0}C / 15 minutes

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B039	SOYABEAN CASEIN DIGEST AGAR (TRYPTONE SOYA AGAR)

Formula

Ingredients :	**gms/lit.**
Casein enzymic hydrolysate	15.00
Papaic digest of soyabean meal	5.00
Sodium chloride	5.00
Agar	15.00

Final pH (at 25°C) : 7.3 ± 0.2

Directions :

Suspend 40 gms. in 1000 ml distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. If desired, aseptically add 5% v/v defibrinated blood in previously cooled to 45-50°C.

Principle :

The combination of Casein enzymic hydrolysate and papaic digest of soyabean meal makes these media nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Sodium chloride maintains osmotic balance in both the media.

QC Tests – (I)Dehydrated Medium	
Colour :	Cream to light yellow
Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium	
pH (post autoclaving/heating) :	7.3 ± 0.2
Colour (post autoclaving/heating) :	a) Cream to light yellow b) After addition of blood : Cherry red
Clarity (post autoclaving/heating) :	a) Clear slightly opalescent b) Opaque

(III)Q.C. Test Microbiological

Cultural characteristics observed after 18 – 48 hrs.at 35 – 37°C.

MICROORGANISM (ATCC)	GROWTH W/ BLOOD	HAEMOLYSIS
Candida albicans (10231)	Luxuriant	-
Staphylococcus aureus (25923)	Luxuriant	β
Streptococcus pyogenes (19615)	Luxuriant	β
Bacillus subtilis (6633)	Luxuriant	None
Bacteroides vulgatus (8482)	Luxuriant	None
Neisseria meningitides (13090)	Luxuriant	None

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.
Use :	A general purpose medium used for cultivation of a wide variety of microorganisms.
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
B039	40g/l	12.5L	7.3 ± 0.2	5% v/v defibrinated blood	121^{0}C / 15 minutes

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B121	BRAIN HEART INFUSION BROTH
Formula	
Ingredients :	**gms/lit.**
Calf brain,infusion from	200.00
Beef infusion from	250.00
Proteose peptone	10.00
Dextrose	2.00
Sodium chloride	5.00
Disodium phosphate	2.50

Final pH (at 25°C) : 7.4 ± 0.2

Directions :

Suspend 37 gms in 1000 ml. distilled water. Dispense into bottles or tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. For best results, the medium should be used on the day it is prepared, otherwise, it should be boiled or steamed for a few minutes and then cooled before use.

Principle :

Infusion from Beef Heart, Calf Brains and Proteose Peptone provide nitrogen, carbon, sulfur and vitamins in Brain Heart Infusion media. Dextrose is a carbon energy source that facilities organism growth, Sodium Chloride maintains the osmotic balance of the medium. Disodium Phosphate is a buffering agent. With the addition of 10 % defibrinated sheep blood, it is useful for isolation and cultivation of Histoplasma capsulatum

QC Tests – (I)Dehydrated Medium			
	Colour :	Pale yellow to yellow	
	Appearance :	Homogeneous Free Flowing powder	
(II)Rehydrated medium			
	pH (post autoclaving/heating) :	7.4 ± 0.2	
	Colour (post autoclaving/heating) :	Light yellow to medium Amber	
	Clarity (post autoclaving/heating) :	Clear	
(III)Q.C. Test Microbiological			
	Cultural characteristics observed after 18 –24 hrs at 35-37°C.		
	MICROORGANISM (ATCC)	GROWTH	
	Neisseria meningitidis (13090)	luxuriant	
	Streptococcus pneumoniae (6303)	luxuriant	
	Streptococcus pyogenes (19615)	luxuriant	
	Staphylococcus aureus (25923)	luxuriant	

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.
Use :	For propagation of pathogenic cocci and other fastidious organisms associated with blood culture work and allied pathogical investigation.
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
B121	37g/l	13.513L	7.4 ± 0.2	NIL	121^0C / 15 minutes

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B177	EC Medium(reduced Bile salts)
Formula	**B177**
Ingredients :	**gms/lit.**
Tryptone	20.00
Lactose	5.00
Bile Salt no.3	1.50
Dipotassium phosphate	4.00
Potassium dihydrogen phosphate	1.50
Sodium chloride	5.00
Final pH (at 25°C) :	6.9 ± 0.2

Directions :

Suspend 37 gms. in 1000 ml. distilled water. Heat if necessary to dissolve the medium Completely. Dispense in test tubes containing Inverted Durham's tube. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Adjust the concentration of medium in accordance with sample size.

Principle :

Tryptose and Casein enzymic hydrolysate provide the nitrogen, vitamins and amino acids in EC Medium. Lactose is the carbon source. Bile Salts is the selective agent against gram positive bacteria, particularly bacilli and fecal streptococci Dipotassium Phosphate and Monopotassium Phosphate are the buffering agents. Sodium Chloride maintains the osmotic balance of the medium.

QC Tests – (I)Dehydrated Medium		
	Colour :	Cream to yellow
	Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium		
	pH (post autoclaving/heating) :	6.9 ± 0.2
	Colour (post autoclaving/heating) :	Light yellow to yellow
	Clarity (post autoclaving/heating) :	Clear
(III)Q.C. Test Microbiological		
	Cultural characteristics observed after 24 hrs. at 44.5°C ± 0.2.	

	MICROORGANISM (ATCC)	GROWTH	GAS	
	Escherichia coli (25922)	Luxuriant	+	
	Klebsiella pneumoniae (13883)	Luxuriant	+	
	Pseudomonas aeruginosa (27853)	Fair to good	-	
	Enterobacter aerogenes (13048)	Inhibited	-	
	Enterococcus faecalis (29212)	Inhibited	-	
	Bacillus subtilis (6633)	Inhibited	-	

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. False – negative reactions in recovering coliforms from water supplies can occur due to low pH, refrigeration and use of bactericidal or bacteriostatic agents.
Use :	For selective enumeration of faecal and non-faecal colifroms in water, wastewater and shell fish by MPN technique.
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
B177	37g/l	13.51L	6.9 ± 0.2	Nil	121^0C / 15 minutes

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B015	BRILLIANT GREEN BILE BROTH 2%
Formula	
Ingredients :	**gms/lit.**
Peptic digest of animal tissue	10.00
Lactose	10.00
Oxgall	20.00
Brilliant green	0.0133
Final pH (at 25°C) : 7.2 ± 0.2	

Directions :

Suspend 40 gms.in 1000 ml. distilled water. Heat to boiling to dissolve the medium completely. Distribute in fermentation tubes containing inverted Durham's tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Do not autoclave double strength broth. NOTE: Where number of organisms is expected to be low, large quantities of samples may be added with equal quantities of double strength medium in dilution bottles.

Principle :

Peptic digest of animal tissue is a source of carbon and nitrogen for general growth requirements. Oxgall (bile) and Brilliant green inhibit gram – positive bacteria and many gram – negative bacteria other than coliforms. Lactose is a carbohydrate source. Bacteria that ferment lactose and produce gas are detected.

QC Tests – (I)Dehydrated Medium		
	Colour :	Greenish yellow
	Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium		
	pH (post autoclaving/heating) :	7.2 ± 0.2
	Colour (post autoclaving/heating) :	Green
	Clarity (post autoclaving/heating) :	Clear
(III)Q.C. Test Microbiological		
	Cultural characteristics observed after 18 –48 hrs at 35- 37°C.	

	MICROORGANISM (ATCC)	GROWTH	GAS
	Escherichia coli (25922)	Luxuriant	+
	Enterobacter aerogenes (13048)	Luxuriant	+
	Enterococcus faecalis (19433)	None-poor	-
	Staphylococcus aureus (25923)	Inhibited	-
	Bacillus cereus (10876)	Inhibited	-

Precautions :	1. For Laboratory Use.
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.
	3. IRRITANT. Irritating to eyes, respiratory system and skin. Avoid contact with skin and eyes. Do not breathe dust. Wear suitable gloves and eye / face protection. Use only in well ventilated areas. Keep container tightly closed. Target organ(s) : Lungs.
Limitations :	1. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.
Use :	For confirmation of presumptive tests for coliform bacteria in examination of water, wastewater, foods and dairy products and it is also recommended by ISO committee as per specification ISO 4831:1991 and by BIS.
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
B015	40g/l	12.5L	7.2 ± 0.2	NIL	121^0C / 15 minutes

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