

Culture Media used in Microbiology



List of culture media used in microbiology with their uses

Last updated: October 26, 2018 by Sagar Aryal

Media	Uses
<ul style="list-style-type: none"> · Alkaline Peptone Water 	Enrichment media for <i>Vibrio cholerae</i>
<ul style="list-style-type: none"> · Alkaline Salt Transport Medium · Taurocholate Peptone Transport Medium 	Transport media for diarrheal diseases suspected of being caused by <i>V. cholerae</i>
<ul style="list-style-type: none"> · Anaerobic Media 	Liquid media by addition of <ul style="list-style-type: none"> · Glucose (0.5 % to 1 %) · Ascorbic Acid (0.1 %) · Cysteine (0.1 %) · Sodium Mercaptoacetate (0.1 %) · Thioglycollate (0.1 %) · Particles of cooked meat broth
<ul style="list-style-type: none"> · Bile Salt Agar · Thiosulphate Citrate Bile Salts-Sucrose Agar (TCBS) 	Selective media for <i>V. cholerae</i>

<ul style="list-style-type: none"> · Monsur's Tellurite Taurocholate Gelatin Agar 	
<ul style="list-style-type: none"> · Bile Esculin Agar (Contains 40% Bile) 	Selective media for Enterococcus species (Black coloration of the medium)
<ul style="list-style-type: none"> · Blood Agar 	<ul style="list-style-type: none"> · Enriched media (Supports the growth of fastidious organisms, e.g. <i>Streptococcus</i>) · Indicator media to show hemolytic properties of certain organisms (<i>Staphylococcus aureus</i>: β-Hemolytic; <i>Streptococcus pneumonia</i> and <i>S viridans</i>: α-Hemolytic; <i>Enterococcus</i>: Non-Hemolytic)
<ul style="list-style-type: none"> · Bordet-Gengou Agar · Charcoal Blood Agar · Regan-Lowe Medium (Charcoal Agar with blood, cephalixin and Amphotericin B) 	Isolation of <i>Bordetella pertussis</i>
<ul style="list-style-type: none"> · Brain Heart Infusion Broth 	Used in blood culture bottles (both adult and pediatric patients)

<ul style="list-style-type: none"> · Buffered Charcoal Yeast Agar (BCYA) · Feeley Gorman Agar 	Specialized media for isolation of <i>Legionella</i>
<ul style="list-style-type: none"> · <i>Campylobacter</i> Thioglycollate Broth 	Selective holding media for recovery of <i>Campylobacter</i> species
<ul style="list-style-type: none"> · Castaneda Medium 	Biphasic medium for the isolation of <i>Brucella</i>
<ul style="list-style-type: none"> · Cefoxitin Cycloserine Fructose Agar (CCFA) · Cefoxitin Cycloserine Egg-Yolk Agar (CCEY) 	Selective media for isolation of <i>Clostridium difficile</i> form suspected cases of pseudomembranous colitis / antibiotic -associated diarrhea
<ul style="list-style-type: none"> · Cefsulodin-Irgasan-Novobiocin medium (CIN Medium) 	Selective media for <i>Yersinia</i> (and may be used for <i>Aeromonas</i> also)
<ul style="list-style-type: none"> · Columbia-Colistin Nalidixic Acid agar (CNA Agar) 	Selective media for the isolation of Gram-positive cocci
<ul style="list-style-type: none"> · Cooked meat broth · Nutrient agar slopes · Semisolid nutrient agar stabs · Heated blood agar slopes 	In general, used for preservation and storage of bacterial cultures

· Crystal violet blood agar	Selective media for <i>Streptococcus pyogenes</i>
· Cysteine Lactose Electrolyte Deficient Media (CLED Media)	Most commonly used media for culturing urine samples
· Egg Saline Medium	Preservation of cultures of Gram-negative bacilli
· Egg Yolk Agar	Detection of lipase and lecithinase activity of <i>Clostridium</i> species
· Ellner's Medium · Medium of Duncan and Strong · Medium of Phillips · Alkaline Egg Medium	Specialized media to induce sporulation in <i>Clostridium</i>
· Fildes Blood-Digest Agar and Broth · Levinthal's Agar	Enriched media for recovery of <i>Haemophilus influenzae</i>
· Firm Agar (4% to 6% Agar)	Prevents swarming of <i>Proteus mirabilis</i> , <i>P. vulgaris</i> and <i>Clostridium tetani</i>
· Fletcher's Agar	Solid media for isolation of <i>Leptospira</i>

<ul style="list-style-type: none"> · Ellinghausen and McCullough Medium · Ellinghausen-McCullough-Johnson-Harris (EMJH) Media 	
<ul style="list-style-type: none"> · Glycerol Saline Transport Medium 	Transport stool specimen for typhoid bacilli
<ul style="list-style-type: none"> · Heated Blood Agar/Chocolate Agar 	Growth of fastidious organisms (E.g. <i>Hemophilus influenzae</i> , <i>Neisseria gonorrhoeae</i> and <i>S. pneumoniae</i>)
<ul style="list-style-type: none"> · Hoyle's Tellurite Lysed Blood Agar · Tinsdale Medium 	Selective media for isolation of <i>Corynebacterium</i> from throat swabs
<ul style="list-style-type: none"> · Loeffler Serum Slope 	Stimulation of metachromatic granules in <i>Corynebacterium diphtheriae</i>
<ul style="list-style-type: none"> · Lowenstein-Jensen Medium · Middlebrook Media 	Selective media for isolation of <i>Mycobacterium tuberculosis</i> from sputum and other samples
<ul style="list-style-type: none"> · MacConkey Agar 	Differential media for Enterobacteriaceae (i.e., lactose fermenting and non-lactose fermenting)
<ul style="list-style-type: none"> · MacConkey Bile Salt Lactose Agar 	Differential and media for isolation of <i>Salmonella</i> and <i>Shigella</i> from stool specimens

<ul style="list-style-type: none"> · Brilliant MacConkey Agar · Leifson's Deoxycholate-Citrate Agar (DCA) · Wilson and Blair's Brilliant Green Bismuth- Sulphite Agar (BBSA) · Taylor's Xylose Lysine Deoxycholate Agar (XLD) · Hektoen Enteric Agar · <i>Salmonella-Shigella</i> Agar 	
<ul style="list-style-type: none"> · Mannitol Salt Agar 	Selective and indicator media for <i>S. aureus</i>
<ul style="list-style-type: none"> · Modified Barbour Stoenner Kelly medium (BSK) 	Specialized media for <i>Borrelia burgdorferi</i>
<ul style="list-style-type: none"> · Modified Korthoff's Medium 	Liquid media for isolation of <i>Leptospira</i>
<ul style="list-style-type: none"> · Modified New York City Medium (contains colistin, lincomycin, trimethoprim, amphotericin B) 	Selective media for <i>Neisseria gonorrhoeae</i>
<ul style="list-style-type: none"> · Mueller-Hinton Agar 	Performing antimicrobial susceptibility for bacteria
<ul style="list-style-type: none"> · Nutrient Agar (1% to 2% Agar) 	Basal media in microbiology Supports the growth of all non-fastidious organisms

· Non-Nutrient Agar	Cultivation of parasites (e.g., <i>Acanthamoeba</i>)
· Peptone Water	<ul style="list-style-type: none"> · Basal media for preparation for carbohydrate fermentation media · To ascertain whether a bacteria is motile or non-motile · Basis for Indole test
· Phenol-Red Egg Yolk Polymyxin Agar	Selective media for isolation of <i>Bacillus cereus</i> from food, feces, and vomitus
· Pike's Media	Preservation of <i>S. pyogenes</i> , pneumococci, and <i>Hemophilus influenzae</i> in nose and throat swabs
· Polymyxin B-lysozyme-EDTA-Thallos Acetate (PLET)	Selective media for isolation of <i>Bacillus anthracis</i> from soil and other medium materials containing numerous spore formers of other species
· Polymyxin B, Neomycin, Fusidic Acid Media (PNF)	Selective media for <i>S. pyogenes</i> (or β -hemolytic <i>Streptococcus</i>)
· PPLO Medium (Contains Sterol)	Specialized media for <i>Mycoplasma pneumoniae</i>

· Pre-Reduced Anaerobically Sterilized (PRAS) Media	Commercially available media for anaerobic organisms
· Proteose Peptone-Yeast Extraction Broth	Media for carrying out biochemical tests for anaerobes
· Requirements of X and V Factors	Isolation of <i>Haemophilus influenzae</i>
· Roswell Park Memorial Institute (RPMI) 1640 Medium	Cultivation of malarial parasites (i.e., <i>Plasmodium</i>)
· Robertson Cooked Meat Broth (RCMB)	<ul style="list-style-type: none"> · Growth of anaerobes (e.g., <i>Clostridium</i>) · Maintaining stock cultures of anaerobic organisms
· Salt-Cooked Meat Broth (Cooked Meat Broth with 10% NaCl)	Enrichment media for isolation of <i>S. aureus</i> from heavily contaminated materials
· Semisolid Agar (0.05% to 0.1% Agar)	Prevents convection current and allows the growth of anaerobic and micro-aerophilic organisms
<ul style="list-style-type: none"> · Skirrow's Campylobacter Medium (contains polymixin B, trimethoprim, vancomycin) · Preston Campylobacter Medium (contains polymixin B, rifampicin, trimethoprim) · Campy Blood Agar 	Selective media for <i>Campylobacter jejuni</i>

<ul style="list-style-type: none"> · CVA Medium (contains cefoperazone, vancomycin, amphotericin) 	
<ul style="list-style-type: none"> · Smith-Noguchi Medium 	Cultivation of nonpathogenic treponemes (e.g., Reiter strain of <i>Treponema phagedenis</i>)
<ul style="list-style-type: none"> · Sorbitol MacConkey Agar 	Isolation of verocytotoxin-producing (enterohemorrhagic) <i>E. coli</i> of 0157 type (as it fails to ferment D-sorbitol)
<ul style="list-style-type: none"> · Stuart Transport Media · Amies Transport Media 	Maintaining the viability of gonococci on swabs during transportation
<ul style="list-style-type: none"> · Tetrathionate Broth · Gram-Negative Broth · Selenite-F Broth 	Enrichment media for isolation of <i>Shigella</i> and <i>Salmonella</i> from stool samples
<ul style="list-style-type: none"> · Thayer-Martin Medium (contains vancomycin, colistin, nystatin) 	Selective media for <i>Neisseria gonorrhoeae</i>
<ul style="list-style-type: none"> · Thioglycollate Broth 	All purpose enrichment broth for anaerobes, aerobes, micro-aerophilic, and fastidious organisms

· Trypticase Soy Broth	
· Todd Hewitt Broth with Antibiotics	Selective and enrichment for <i>Streptococcus agalactiae</i> in female genital specimens
· Triple Sugar Iron Agar (TSI) Medium	Differentiation of various members of Enterobacteriaceae
· Wilkins-Chalgren Agar	Performing antimicrobial susceptibility of anaerobic bacteria

Basic Microbiology, Culture Media

10 thoughts on “List of culture media used in microbiology with their uses”

GA Khorshidian

February 9, 2019 at 8:47 PM | Reply

Hi,

What would be the preferential culture media(um) for initial isolation of Corynebacterium Pseudotuberculosis from a pus specimen aspirated from an ovine superficial lymph node abscess ?

Regards,
GA

Lisa Ramey

November 8, 2018 at 11:23 PM | Reply

Is there a reason to use McConkey's agar over Eosin Methylene Blue agar?

Shan

March 9, 2017 at 12:56 PM | Reply

Where are
R2A agar, GP2 Agar, Bushnell Hass Medium etc ???

sanjeeth

February 7, 2017 at 8:20 PM | Reply

what is OF Media??

4th semester

April 6, 2017 at 1:16 AM | Reply

Hugh leifson oxidation fermentation media with bromothymol blue indicator

ZIZOR-NKEM GOBARI KELVIN

January 21, 2017 at 10:49 AM | Reply

This is one of the best educative site I've ever seen, I had to save it on my home screen, I'm a doctor of pharmacy(PHARM.D) student, and with this, PMB has been all rosy, thanks a million and keep it up.

Machido Abdullahi

December 19, 2016 at 1:46 AM | Reply

This note provides an impressive coverage of media that can be used for the detection and isolation of many important pathogens from all forms of samples. Its just adequate for postgraduate students of food, medical and environmental microbiology.

Ngoc

December 15, 2016 at 8:21 AM | Reply

Please send me the “List of culture media used in microbiology with their uses”

Kate

June 10, 2016 at 3:26 PM | Reply

hi, you can easily get d shape of a bacterium grow on culture media by observing under d microscope using its colonies. the only characteristics that u can get from the culture medium are things like, colour, texture (rough, dry, smooth colonies....) e.t.c

Eva Maria Soles

March 12, 2016 at 9:37 PM | Reply

Hello

I would like to ask if maybe you know a special and also an economic culture media for the isolation of Hg-resistant bacteria?

Thank you

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