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Shimadzu Diagnostics Europe

CULTURE MEDIA
CATALOGUE

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Cell culture media

GAM

(Gifu Anaerobic Medium Agar, for common culture and sensitivity test)

CULTURE MEDIUM
Anaerobes

Product number	Form	Package	Storage	Shelf life
05420-GAM-0300	Powder	300 g	Dry, RT	3 years

Preparation

Add 74 g of the dry medium to 1,000 mL of distilled water and heat to dissolve the medium. Sterilise by autoclaving at 115 °C for 15 minutes. Distribute 20 mL of medium per Petri dish. Fresh prepared medium should be used within a day or kept in anaerobic conditions.

Remark

This medium has been developed by the Gifu University Medical School (Japan) to isolate and culture anaerobic bacteria from clinical samples. This medium could also be used for antibiotic sensitivity tests other than sulfa drugs.

Formula

Components	*In 74.0 g/L*
Peptone	10.0 g
Soya Peptone	3.0 g
Proteose Peptone	10.0 g
Digested Serum	13.5 g
Yeast Extract	5.0 g
Meat Extract	2.2 g
Liver Extract	1.2 g
Dextrose	3.0 g
Potassium Dihydrogen Phosphate	2.5 g
Sodium Chloride	3.0 g
Soluble Starch	5.0 g
L-Cysteine Hydrochloride	0.3 g
Sodium Thioglycollate	0.3 g
Agar	15.0 g
	pH 7.1 ±0.2

GAM Broth

(Gifu Anaerobic Medium Broth, for common culture and sensitivity test)

Product number	Form	Package	Storage	Shelf life
05422-GAM-0300	Powder	300 g	Dry, RT	3 years

Preparation

Add 59 g of dry medium to 1L of distilled water and heat to dissolve. Dispense the medium into test tubes or flasks and sterilise by autoclaving at 115 °C for 15 minutes. To cultivate anaerobic bacteria, cool down the medium immediately after sterilisation (under running water) without shaking. Inoculate organisms with a sterilised capillary or a Pasteur pipette, and incubate under the anaerobic condition.

Remark

As the medium has hemin from digested serum, it is used to cultivate anaerobic bacteria. It could also be used to detect other microorganisms such as *streptococci*, *pneumococci* and *meningococci* and is suitable for blood culture.

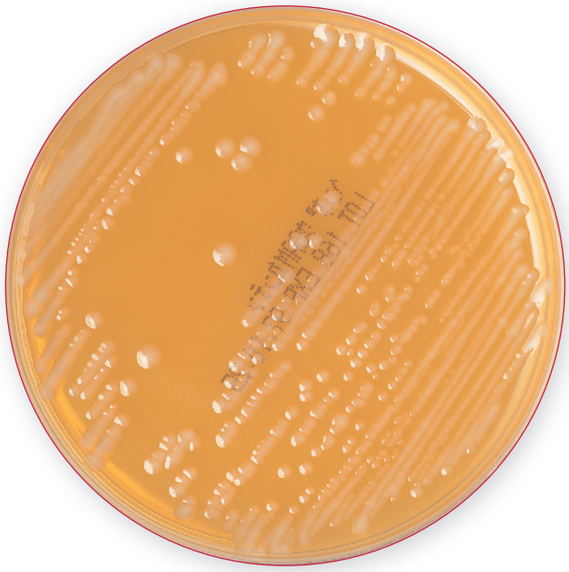
Formula

Components	*In 59.0 g/L*
Peptone	10.0 g
Soya Peptone	3.0 g
Proteose Peptone	10.0 g
Digested Serum	13.5 g
Yeast Extract	5.0 g
Meat Extract	2.2 g
Liver Extract	1.2 g
Dextrose	3.0 g
Potassium Dihydrogen Phosphate	2.5 g
Sodium Chloride	3.0 g
Soluble Starch	5.0 g
L-Cysteine Hydrochloride	0.3 g
Sodium Thioglycollate	0.3 g
	pH 7.1±0.2

GAM Agar, Modified

(Gifu Anaerobic Medium Agar, Modified for common culture and sensitivity test)

CULTURE MEDIUM
Anaerobes



Product number	Form	Package	Storage	Shelf life
05426-GMM-0300	Powder	300 g	Dry, RT	3 years

Preparation

Add 56.7 g of the dry medium to 1 L of distilled water, and heat to dissolve. Sterilise by autoclaving at 115 °C for 15 minutes.

Dispense 20 mL of the medium per Petri dish.

Freshly prepared medium should be used within a day, or kept under anaerobic conditions.

Remark

The medium is a modified medium of GAM Agar that has been developed by the Gifu University Medical School (Japan) to isolate and culture anaerobic bacteria from clinical samples. The medium is also used for antibiotic sensitivity tests other than sulfa drugs.

Formula

Components	*In 56.7 g/L*
Peptone	5.0 g
Soya Peptone	3.0 g
Proteose Peptone	5.0 g
Digested Serum	10.0 g
Yeast Extract	2.5 g
Meat Extract	2.2 g
Liver Extract	1.2 g
Dextrose	0.5 g
Soluble Starch	5.0 g
L-Tryptophan	0.2 g
L-Cysteine Hydrochloride	0.3 g
Sodium Thioglycollate	0.3 g
L-Arginine	1.0 g
Vitamin K_1	5 mg
Hemin	10 mg
Potassium Dihydrogen Phosphate	2.5 g
Sodium Chloride	3.0 g
Agar	15.0 g
	pH 7.3 ±0.2

GAM Broth, Modified

(Gifu Anaerobic Medium Broth, Modified, for common culture and sensitivity test)

CULTURE MEDIUM
Anaerobes

Product number	Form	Package	Storage	Shelf life
05433-GAM-0100	Powder	100 g	Dry, RT	3 years

Preparation

Add 41.7 g of the dry medium to 1 L of distilled water and heat to dissolve. Distribute the medium into appropriate containers.

Sterilise by autoclaving at 115 °C for 15 minutes and cool down quickly without shaking.

Remark

This liquid medium is used for isolation and cultivation of anaerobic bacteria from clinical samples. The medium is also used for antibiotic sensitivity tests other than sulfa drugs.

Formula

Components	*In 41.7 g/L*
Peptone	5.0 g
Soya Peptone	3.0 g
Proteose Peptone	5.0 g
Digested Serum	10.0 g
Yeast Extract	2.5 g
Meat Extract	2.2 g
Liver Extract	1.2 g
Dextrose	0.5 g
Soluble Starch	5.0 g
L-Tryptophan	0.2 g
L-Cysteine Hydrochloride	0.3 g
Sodium Thioglycollate	0.3 g
L-Arginine	1.0 g
Vitamin K_1	5 mg
Hemin	10 mg
Potassium Dihydrogen Phosphate	2.5 g
Sodium Chloride	3.0 g
	pH 7.3±0.2

CW Agar Base without Kanamycin

CULTURE MEDIUM
Anaerobes

(*Clostridium welchii* Agar base without Kanamycin, for examination of heated materials)

Product number	Form	Package	Storage	Shelf life
05404-GMM-0100	Powder	100 g	Dry, RT	3 years

Preparation

Add 60 g of dry medium to 900 mL of distilled water, mix well and heat to dissolve. Sterilise by autoclaving at 121 °C for 15 minutes.

Maintain the sterilised medium at about 50 °C, then add 100 mL of egg yolk saline suspension or defibrinated blood. Mix well and dispense 20 mL per Petri dish.

To prepare 100 mL of egg yolk solution, mix 20 g of egg yolk with 80 mL of sterilised physiological saline solution.

Identitication

After the medium has solidified, smear the heated material and incubate for 15 –20 hours under anaerobic conditions.

Clostridium welchii (perfringens) forms yellowish white, round, convex colonies with a bright surface and surrounded by an opaque zone.

The medium supplemented with defibrinated blood, *Clostridium welchii (perfringens)* form colonies with bright surface and a hemolytic ring. When the colonies are exposed to air, they will turn green.

Formula

Components	*In 60.0 g/L*
Heart Extract	5.0 g
Proteose Peptone	10.0 g
Peptone	10.0 g
Sodium Chloride	5.0 g
Lactose	10.0 g
Phenol red	0.05 g
Agar	20.0 g
	pH 7.2 ±0.2

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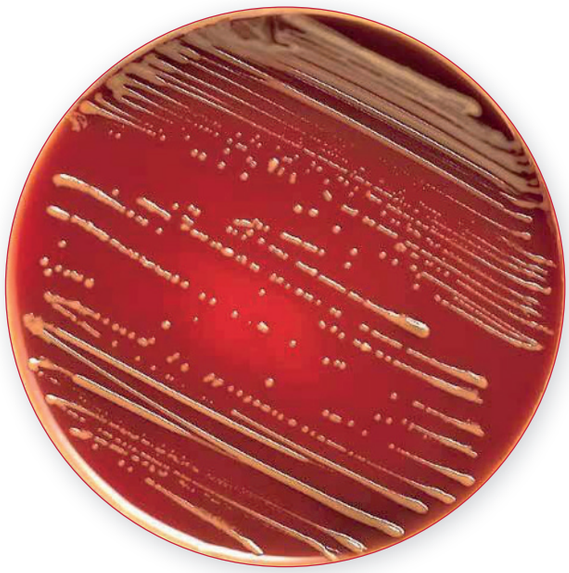
BL Agar

(For isolation of anaerobes and differentiation of Bifidobacterium)

CULTURE MEDIUM
Anaerobes



Product number	Form	Package	Storage	Shelf life
05430-BLA-0300	Powder	300 g	Dry, RT	3 years

Preparation

Add 58 g of dry medium to 1 L of distilled water, mix well and heat to dissolve. Sterilise by autoclaving at 115 °C for 20 minutes. After cooling to 50 °C, add defibrinated horse blood (5% final) and mix well. Distribute into Petri dishes and leave to set (solidify).

Identification

Bifidobacterium generally form smooth brown/dark brown colonies. Some enteric bacteria form red colonies. For details, see the "World of Intestinal Bacteria" written by Dr. Tomotari Mitsuoka.

Remarks

The medium allows growth of anaerobic bacteria, especially lactobacilli, and enables differentiation of various bacteria which form characteristic colonies.

Formula

Components	*In 58.0 g/L*
Meat Extract	2.4 g
Proteose Peptone	10.0 g
Peptone	5.0 g
Soya Peptone	3.0 g
Yeast Extract	5.0 g
Liver Extract	3.2 g
Dextrose	10.0 g
Soluble Starch	0.5 g
Monopotassium Phosphate	1.0 g
Potassium Dihydrogen Phosphate	1.0 g
Magnesium Sulfate	0.2 g
Ferrous sulfate	0.01 g
Sodium Chloride	0.01 g
Manganese sulftae	0.007 g
Bubblke absorbong agent (Silicon)	0.2 g
Polysorbate 80	1.0 g
L-Cysteine Hydrochloride	0.5 g
Agar	15.0 g
	pH 7.2±0.2

Clostridia Count Agar

CULTURE MEDIUM
Anaerobes

Product number	Form	Package	Storage	Shelf life
05409-CCA-0300	Powder	300 g	Dry, RT	3 years

Preparation

Add 70.3 g of dry medium to 1 L of distilled water, mix well and heat to dissolve. Sterilise by autoclaving at 121 °C for 15 minutes and keep the medium at about 55 °C. Dispense 15 mL of medium into anaerobic culture pouches in which 10 mL of sample has been distributed. Mix well, remove air bubbles and seal the neck of the pouch. Incubate at 37 ±1 °C for 24± 2 hours.

Remark

The medium is used for colony counting Clostridia (spore forming, sulfurous acid reducing anaerobic bacterium) in foodstuff. Clostridia develop colonies with a brown to black color through reducing sulfurous acid. Other bacteria develop light white colonies.

Formula

Components	*In 70.3 g/L*
Mixed Peptone	15.0 g
Soya Peptone	7.5 g
Yeast Extract	7.5 g
Beef Extract	7.5 g
Ferric Ammonium Citrate	1.0 g
Sodium Hydrogen Sulfite	1.0 g
L-Cysteine Chloride	0.75 g
Agar	30.0g
	pH 7.6±0.2

Salt Polymyxin Broth

(For enrichment of *Vibrio parahaemolyticus)*

DEHYDRATED MEDIUM
***Vibrio parahaemolyticus*, cholera**

Formula

Components	*In 33.0 g/L*
Peptone	10.0 g
Yeast Extract	3.0 g
Sodium Chloride	20.0 g
Polymyxin B	250,000 unit
	pH 7.4±0.2

Product number	Form	Package	Storage	Shelf life
05215-SPB-0100	Powder	100 g	Dry, RT	3 years

Preparation

Add 33 g of the dry medium to 1 L of distilled water, mix well and heat to dissolve. Distribute adequate amounts into test tubes or flasks then sterilise by autoclaving at 121 °C for 15 minutes.

The amount of sample shoud be one tenth of the medium. Incubate at 37 °C overnight, then take a loopful of the culture and inoculate on a plate of selective medium such as TCBS Agar.

Note

Incubation for 8 hours may be enough for urgent cases. Do not incubate for more than 24 hours to prevent the growth of other bacteria.

Remark

The medium is suitable for the enrichment culture of *Vibrio parahaemolyticus* from foods, especially from fish and fish-products, and for counting the number of bacteria (MPN values).

Features

The preservation of the medium after preparation is easy because the medium can be autoclaved.

Since Polymyxin B, a selective antibiotic, is unlikely to be inactivated by bacteria metabolities, the medium can be incubated overnight (up to 24 hours), and is also convenient for routine examination.

Alkaline Peptone Water

(Enrichment of *V. cholerae* and *V. parahaemolyticus*)

DEHYDRATED MEDIUM
Vibrio parahaemolyticus, cholera

Product number	Form	Package	Storage	Shelf life
05206-APW-0100	Powder	100 g	Dry, RT	3 years

Preparation

Add 20 g of the dry medium to 1 L of distilled water, mix well and heat to dissolve. Distribute about 10 mL of the medium into test tubes and sterilise by autoclaving at 121 °C for 15 minutes.

The medium is used for enrichment of *Vibrio cholerae* and *Vibrio parahaemolyticus* which grow mainly on the surface of the medium.

Remark

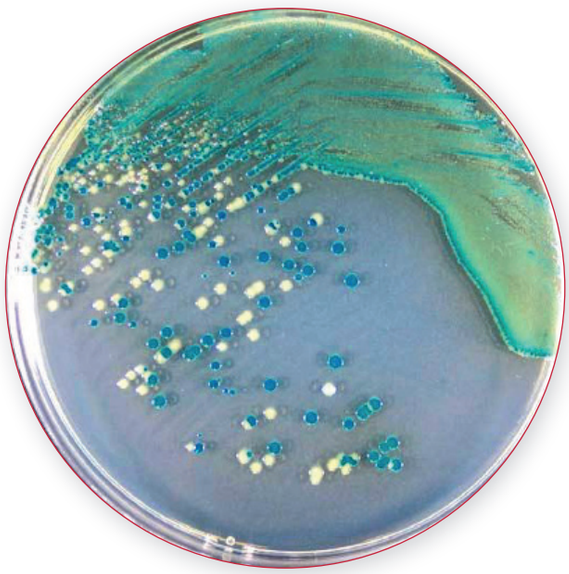
Incubate at 37 °C for 8 hours.

Formula

Components	*In 20.0 g/L*
Peptone	10.0 g
Sodium Chloride	10.0 g
	pH 8.8 ±0.2

X-VP Agar

DEHYDRATED MEDIUM
Vibrio parahaemolyticus, Vibrio cholera



Product number	Form	Package	Storage	Shelf life
05135-XVP-0300	Powder	300 g	Dry, RT	3 years

Preparation

Add 102.4 g of the dry medium to 1 L of distilled water, mix well and heat to dissolve.

Poor immediately about 20 mL of the medium per Petri dish. Do not autoclave.

Identification

Inoculate the samples directly or after enrichment culture, and incubate at 35 -37 °C for 18-24 hours.

Vibrio parahaemolyticus forms blue or blue green colonies, *Vibrio cholerae* and *Vibrio vulnificus* form purple colonies, *Vibrio alginolyticus* forms milky colonies.

Remarks

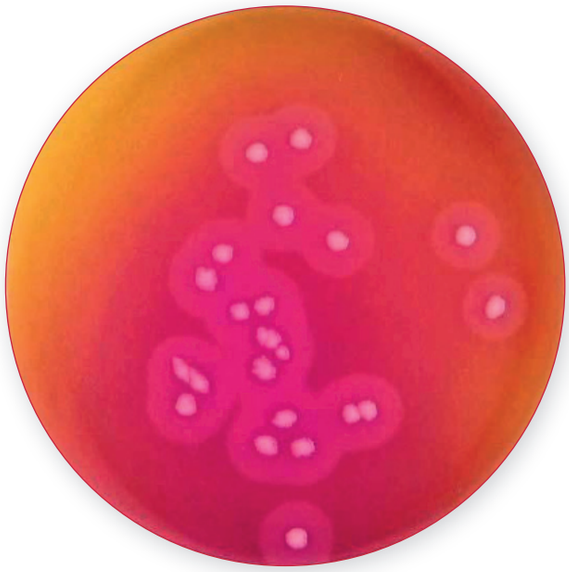
As the medium is highly selective, the growth of bacteria except Vibrio in feces are inhibited.

Formula

Components	*In 102.4 g/L*
Peptone	10.0 g
Yeast Extract	5.0 g
Sucrose	30.0 g
Sodium Thiosulfate	6.4 g
Sodium Citrate	10.0 g
Sodium Chloride	20.0 g
Sodium Pyruvate	5.0 g
Bile Salt	3.0 g
Selective Agents	0.27 g
Colorimetric Substrate by Enzyme	0.25 g
Agar	12.5 g
	pH 8.8±0.2

NGKG Agar Base

DEHYDRATED MEDIUM
Bacillus Cereus



Product number	Form	Package	Storage	Shelf life
05282-NGK-0300	Granule	300 g	Dry, RT	3 years

Preparation

Add 26.5 g of the dry medium to 900 mL of distilled water, mix well and heat to dissolve. Sterilise by autoclaving at 121°C for 15 minutes. Maintain the medium at about 50 °C, add 100 mL of 20% egg-yolk suspension, mix well and distribute about 20 mL per Petri dish.

To prepare the 20% egg-yolk suspension, add 20 mL of egg-yolk to 80 mL of sterilised saline solution and mix well.

Identification

Once the agar is set (solidified), smear the samples and incubate at 30 °C for 18 –24 hours.

B. cereus forms white and slightly thick colonies with an irregular margin and shows the lecithinase reaction; a zone of red coloured opacity around the colonies (see image above). The growth of miscellaneous bacteria other than *B. cereus* are generaly inhibited. However, if some bacteria grow, their colonies are small and do not show the lecithinase reaction.

Remarks

The medium was designed for the selection and detection of *B. cereus* from contaminated. *B. cereus* spores can be visualised by microscopy after 18h of incubation at 30 °C.

Formula

Components	*In 26.5 g/L*
Peptone	1.0 g
Yeast Extract	0.5 g
Sodium Chloride	4.0 g
Glycine	3.0 g
Polymyxin B Sulfate	50, 000 units
Phenol Red	0.025 g
Agar	18.0 g
	pH 6.8±0.2

Candida GE Agar

DEHYDRATED MEDIUM
Yeast

Product number	Form	Package	Storage	Shelf life
05703-CGE-0100	Powder	100 g	Dry, RT	3 years

Preparation

Add 62 g of the dry medium to 1 L of distilled water, mix well and heat to dissolve the medium. Distribute about 20 mL per Petri dish. Do not autoclave.

Identification

Inoculate the slime in oral or vaginal secreta with a sterilised swab and spread on the surface of the medium. Incubate at 35 –37 °C for 2 –3 days.

Candida forms specific colonies with round or oval shape (3 -5 mm diameter). Colonies are opaque with a specific odor and luster.

C. albicans forms colonies of creamy or off-white color after 48 –72 hours incubation, which gradually turn pale brownish.

C. krusei forms flat and irregularly shaped colonies with no luster, while the other Candida forms brown or pale brown colonies.

Remarks

- The medium inhibits the growth of bacterias and specificaly permits the growth of Candida.
- Nitrofuran derivative significantly or completely inhibits gram-negative bacilli.

Formula

Components	*In 62.0 g/L*
Yeast Extract	10.0 g
Peptone	8.5 g
Dextrose	30.0 g
Nitrofuran derivative	0.5 g
Agar	13.0 g
	pH 6.0±0.2

Trypto-Soya Broth (SCD Broth)

(Soybean-Casein-Digest Broth)

DEHYDRATED MEDIUM
Viable bacteria

Product number	Form	Package	Storage	Shelf life
05630-TSB-0300	Granule	300 g	Dry, RT	3 years

Preparation

Add 30 g of the dry medium to 1 L of distilled water, mix well and heat to dissolve. Distribute into appropriate containers and sterilise by autoclaving at 121 °C for 15 minutes.

Remarks

The medium is commonly used for culturing fastidious bacteria such as Neisseria, Brucella, streptococci and pneumococci.

As the bacteria grow rapidly in the medium, they tend to die out quickly, so it is not suitable as a stock culture medium. It is not recommended to subculture pneumococci, streptococci and Neisseria repeatedly on this medium.

For hemo culture, inoculate 5 ml of blood sample into 50 ml of medium to isolate the bacteria from bacteremia and septicemia.

Formula

Components	*In 30.0 g/L*
Peptone	20.0 g
Sodium Chloride	5.0 g
Dextrose	2.5 g
Dipotassium Phosphate	2.5 g
	pH 7.3±0.2

Trypto-Soya Agar (SCD Agar)

(Soybean-Casein-Digest Agar)

DEHYDRATED MEDIUM
Viable bacteria

Product number	Form	Package	Storage	Shelf life
05516-0TP-0300	Granule	300 g	Dry, RT	3 years

Preparation

Add 40 g of the dry medium to 1 L of distilled water, mix well and heat to dissolve. Sterilise by autoclaving at 121 °C for 15 minutes. Use as plates or slants.

Remarks

The medium is multi-purposes as it allows the growth of fastidious bacteria that grow on Nutrient Agar or Heart Infusion Agar.

Formula

Components	*In 40.0 g/L*
Peptone	15.0 g
Soya Peptone	5.0 g
Sodium Chloride	5.0 g
Agar	15.0 g
	pH 7.3±0.2

TGC Broth Medium without Indicator

DEHYDRATED MEDIUM
Viable bacteria

Product number	Form	Package	Storage	Shelf life
05629-TGC-0300	Granule	300 g	Dry, RT	3 years

Preparation

Add 30 g of the dry medium to 1 L of distilled water, mix well and heat to dissolve. Distribute about 18 mL per tube. Sterilise by autoclaving at 121 °C for 15 minutes, and immediately cool down for use.

If the medium is stored, re-heat in boiling water to degas, then rapidly cool down before use.

Remarks

This medium is Vera modified for clinical use and capable of growing a wide range of aerobic and anaerobic bacteria. It's also used for blood culture. Do not store positive sample in the medium, as they can be destroyed by dextrose fermentation bacteria that grow using dextrose in the medium.

It is also possible to culture *Trichomonas vaginalis* by adding 10% serum to the medium.

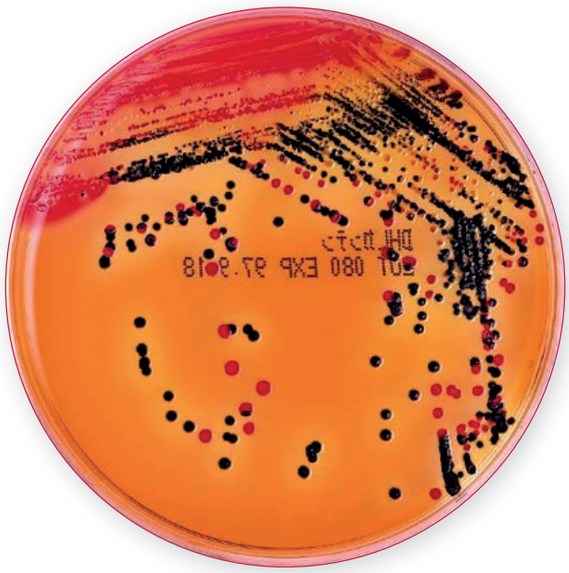
Formula

Components	*In 30.0 g/L*
Peptone	17.0 g
Soya Peptone	3.0 g
Dextrose	6.0 g
Sodium Chloride	2.5 g
Agar	0.7 g
Sodium Thioglycollate	0.5 g
L-Cystine	0.25 g
Sodium sulfite	0.1 g
	pH 7.1±0.2

DHL Agar

(Desoxycholate Hydrogen Sulfide Lactose Agar)

DEHYDRATED MEDIUM
Enterobacteria Differentiation



Product number	Form	Package	Storage	Shelf life
05040-DHS-0300	Granule	300 g	Dry, RT	3 years

Preparation

Add 63.3 g of dry medium to 1 L of distilled water, mix well and heat to dissolve. Distribute 20 mL per Petri dish and leave to solidify before use.

Identification

Incubate at 37 °C for 20 hours. Avoid inoculating too much sample, approximately the same amount of sample used for MacConkey Agar is recommended.

Lactose, saccharose non-fermenting organisms form colorless transparent colonies relatively larger than those on SS Agar. Lactose, saccharose fermenting organisms form red opaque colonies. So, differentiation between the two organisms is simple.

Organisms producing hydrogen sulfide are liable to form black colonies.

Remarks

Although this medium has low selectivity, it supports excellent growth of Shigella and Salmonella that do not grow well on SS Agar. It is also used for the isolation of pathogenic coli.

Formula

Components	*In 63.3 g/L*
Meat Extract	3.0 g
Peptone	20.0 g
Lactose	10.0 g
Sucrose	10.0 g
Sodium Desoxycholate	1.0 g
Sodium Thiosulfate	2.3 g
Sodium Citrate	1.0 g
Ferric Ammonium Citrate	1.0 g
Neutral Red	0.03 g
Agar	15.0 g
	pH 7.4±0.2

Lactobacilli Inoculum Broth

Product number	Form	Package	Storage	Shelf life
05801-LIB-0100	Powder	100 g	Dry, RT	3 years

Preparation

Add 39.6 g of the dry medium to 1 L of distilled water, mix well and heat to dissolve. Distribute into test tubes and sterilise by autoclaving at 121 °C for 10 minutes.

Remarks

The medium is used for inoculation of Lactobacilli.

Formula

Components	*In 39.6 g/L*
Yeast Extract	3.0 g
Peptone	20.0 g
Dextrose	10.0 g
Potassium Dihydrogen Phosphate	10.0 g
Dipotassium Phosphate	1.0 g
Sodium Acetate	2.3 g
Magnesium Sulfate	1.0 g
Manganèse Sulfate	1.0 g
Ferrous Sulfate	0.03 g
	pH 6.8±0.2

B12 Assay Medium (set)

Product number	Form	Package	Storage	Shelf life
05819-B12-0050	6 x2mL 10% Polysorbate 80	50 g	Cool	3 years

Preparation

Add 8.3 g of dry medium to 90 mL of distilled water, mix well, heat to dissolve, then cool down the solution. After adjusting the pH to 6.2 ±0.1, add 2.0 mL of Polysorbate 80 then adjust the volume to 100 mL with distilled water.
Distribute into test tubes. Double the total volume with the distilled water after adding the sample. Sterilise by autoclaving at 121 °C for 5 minutes. Inoculate the strain for culture at 37 °C for 16 –24 hours.
Incubate 72 hours for the purpose of acidimetry.

Remarks

Strain to be used is *Lactobacillus leichmannii* ATCC7830.
Range of response:
0.01 ng –0.2 ng/tube (5 mL)
Incubation temperature should be constant (within ±0.5°C).

Storage

Cap tightly and keep at cool place (2 –10 °C).

Formula

As directed in U.S.P.XIX (1975) pH 6.2 ±0.1.

Pyridoxine Assay Medium

Product number	Form	Package	Storage	Shelf life
05815-PAM-0050	Powder	50 g	Cool	3 years

Preparation

Add 13 g of dry medium to 90 mL of distilled water, mix well, heat to dissolve, and cool down the solution. After adjusting the pH to 5.2 ±0.1, add distilled water to a total volume 100 mL.

Dispense 5 mL of medium per test tube, add the test sample/standard and adjust the volume to 10 mL with distilled water. Sterilise by boiling at 100 °C for 10 -20 minutes.

Inoculate the strain for culture at 30 °C for 16 –24 hours.

Remarks

Strain to be used is *Saccharomyces uvarum (carlsbergensis)* strain 4228 ATCC9080.

Range of response:

2.5 ng –25 ng/tube (10 mL)

If using test tubes, they should be tilted at least 25 degree.

Storage

Cap tightly and refrigerate (2 –10 °C).

Formula

Improved formula of Atkin et al. method pH 5.2 ±0.1.

Folic Acid Assay Medium

Product number	Form	Package	Storage	Shelf life
05814-FAM-0050	Powder	50 g	Cool	3 years

Preparation

Add 11.4 g of the dry medium to 50 mL of distilled water, mix well and heat to dissolve, then cool down the solution. After adjusting the pH to 7.1 ±0.1, adjust the volume to 100 mL with distilled water.

Dispense 5 mL of medium in test tubes, add the test sample/standard and adjust the volume to 10 mL with distilled water.

Sterilise by autoclaving at 121 °C for 5 minutes. Inoculate the strain for culture at 30 °C for 16 –24 hours.

Incubate 72 hours for the purpose of acidimetry.

Range of response:

0.2 ng–2 ng/tube (5 mL)

0.05 ng–0.5 ng/tube (2 mL)

Storage

Cap tightly and store between 2 –10 °C.

Formula

As directed in AOAC 12th Ed. (1975) pH 7.1 ±0.1.

Biotin Assay Medium

Product number	Form	Package	Storage	Shelf life
05818-BAM-0050	Powder	50 g	Cool	3 years

Preparation

Add 7.7 g of dry medium to 90 mL of distilled water, mix well and heat to dissolve then cool down the solution. After adjusting the pH to 7.1±0.1, adjust the volume to 100 mL with distilled water.

Dispense 5 mL of medium in test tubes, add the test sample/standard and adjust the volume to 10mL with distilled water.

Sterilise by autoclaving at 121 °C for 5 minutes. Inoculate the strain for culture at 37 °C for 16 –24 hours.

Incubate 72 hours for the purpose of acidimetry.

Remarks

Strain to be used is *Lactobacillus arabinosus* strain 17-5 ATCC8014

Range of response:

0.2 ng–2 ng/tube (10 mL)

0.1 ng–1 ng/tube (5 mL)

0.05 ng–0.5 ng/tube (2 mL)

Storage

Cap tightly and store between 2 –10°C.

Formula

Remove biotin from the formula of Pantothenate Assay Medium, and replace by 400 µg of pantothenate. All other ingredients remain unchanged.

pH 7.1 ±0.1.

EAGLE' S MEM①

(With Kanamycin, Phenol Red, Without L-Glutamine and Sodium Bicarbonate, Autoclavable)

CELL CULTURE MEDIA

Product number	Form	Package	Storage	Shelf life
05900-EM1-0100	Powder	100 g	Cool	1 years

Preparation

Dissolve 9.4 g of medium in distilled water and adjust the volume to 1 L. Autoclave medium at 121 °C for 15 minutes, then cool down to room temperature. Add sterile 10% sodium bicarbonate solution to get pH 7.1 –7.4 at 37 °C in an atmosphere of 5% CO2. This mixture should be capped tightly and stored in a cool and dark place. At the time of use, aseptically add 0.292 g of L-glutamine (sterilised) and the appropriate amount of serum.

Summary

Eagle's MEM 1 is a powdered medium prepared according to prescription published by Harry Eagle in 1959. Up to now, such media were not autoclavable because of decomposition or deterioration of the constituents, so that sterilisation was performed by filtration using a membrane filter. Shimadzu Diagnostics Corporation has succeeded in preparing an autoclavable powder medium. This medium is specially manufactured so that constituents of the medium and growth of cells with this medium are not impaired. This medium has a growth-promoting effect for cells such as HeLa and other cell lines.

Storage and Expiration

Close tightly and store between 2-5 °C in a dark and dry place. May be stored up to one year.

Precautions

Do not use the product after its expiry date. Quality of the product is not warranted after its shelf life. If medium or reagent is in direct contact with eyes or mouth, immediately wash with plenty of water, and consult a physician. Any medium, reagent and materials must be sterilised by autoclaving or boiling water after use, and then disposed as industrial waste according to the law and local regulation.

Components	*In 9.4 g/L*
Sodium Chloride	6,800.0 mg
Potassium Chloride	400.0 mg
Calcium Chloride	200.0 mg
Magnesium Sulfate	93.5 mg
Sodium Dihydrogen Phosphate	115.0 mg
Glucose	1,000.0 mg
L-Arginine Hydrochloride	126.0 mg
L-Cystine Dihydrochloride, H_2O	31.4 mg
L-Tyrosine	36.0 mg
L-Histidine Dihydrochloride, H_2O	42.0 mg
L-Isoleucine	52.0 mg
L-Leucine	52.0 mg
L-Lysine Hydrochloride	73.0 mg
L-Methionine	15.0 mg
L-Phenylalanine	32.0 mg
L-Threonine	48.0 mg
L-Tryptophan	10.0 mg
L-Valine	46.0 mg
Succinic Acid	75.0 mg
Sodium Succinate, $6H_2O$	100.0 mg
Choline Bitartrate	1.8 mg
Folic Acid	1.0 mg
Inositol	2.0 mg
Nicotinamide	1.0 mg
Calcium Pantothenate	1.0 mg
Pyridoxal Hydrochloride	1.0 mg
Riboflavin	1.0 mg
Thiamin Hydrochloride	1.0 mg
Biotin	0.02 mg
Kanamycin	60.0 mg (Titer)
Phenol Red	6.0 mg

EAGLE' S MEM②

(With Kanamycin, Without Phenol Red, L-Glutamine and Sodium Bicarbonate, Autoclavable)

Product number	Form	Package	Storage	Shelf life
05901-EM2-0100	Powder	100 g	Cool	1 years

Preparation

Dissolve 9.4 g of medium in distilled water and adjust the volume to 1 L. Autoclave medium at 121 °C for 15 minutes, then cool down to room temperature. Add sterile 10% sodium bicarbonate solution to get pH 7.1 –7.4 at 37 °C in an atmosphere of 5% CO2. This mixture should be capped tightly and stored in a cool and dark place. At the time of use, aseptically add 0.292 g of L-glutamine (sterilised) and the appropriate amount of serum.

Summary

Eagle's MEM 2 is a powdered medium prepared according to prescription published by Harry Eagle in 1959. Up to now, such media were not autoclavable because of decomposition or deterioration of the constituents, so that sterilisation was performed by filtration using a membrane filter.

Shimadzu Diagnostics Corporation has succeeded in preparing an autoclavable-powdered medium.

This medium is specially manufactured so that constituents of the medium and growth of cells with this medium are not impaired. This medium has a growth-promoting effect for cells such as HeLa and other cell lines.

Storage and Expiration

Close tightly and store between 2-5 °C in a dark and dry place. May be stored up to one year.

Precautions

Do not use the product after its expiry date. Quality of the product is not warranted after its shelf life. If medium or reagent is in direct contact with eyes or mouth, immediately wash with plenty of water, and consult a physician.

Any medium, reagent and materials must be sterilised by autoclaving or boiling water after use, and then disposed as industrial waste according to the law and local regulation.

Components	*In 9.4 g/L*
Sodium Chloride	6,800.0 mg
Potassium Chloride	400.0 mg
Calcium Chloride	200.0 mg
Magnesium Sulfate	93.5 mg
Sodium Dihydrogen Phosphate	115.0 mg
Glucose	1,000.0 mg
L-Arginine Hydrochloride	126.0 mg
L-Cystine Dihydrochloride, H_2O	31.4 mg
L-Tyrosine	36.0 mg
L-Histidine Dihydrochloride, H_2O	42.0 mg
L-Isoleucine	52.0 mg
L-Leucine	52.0 mg
L-Lysine Hydrochloride	73.0 mg
L-Methionine	15.0 mg
L-Phenylalanine	32.0 mg
L-Threonine	48.0 mg
L-Tryptophan	10.0 mg
L-Valine	46.0 mg
Succinic Acid	75.0 mg
Sodium Succinate, $6H_2O$	100.0 mg
Choline Bitartrate	1.8 mg
Folic Acid	1.0 mg
Inositol	2.0 mg
Nicotinamide	1.0 mg
Calcium Pantothenate	1.0 mg
Pyridoxal Hydrochloride	1.0 mg
Riboflavin	1.0 mg
Thiamin Hydrochloride	1.0 mg
Biotin	0.02 mg
Kanamycin	60.0 mg (Titer)

SHIMADZU
Excellence in Science

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