

# **Technical Data**

# **Liquoid Broth**

**M817** 

#### Recommended for screening of blood specimens from suspected bacteremic cases

## **Composition\*\***

**Intended Use:** 

Ingredients	<b>g</b> / L
HM Infusion powder #	12.500
BHI Powder \$	5.000
Proteose peptone	10.000
Sodium chloride	5.000
Disodium hydrogen phosphate	2.500
Dextrose (Glucose)	2.000
Sodium polyanethol sulphonate	0.500
Final pH ( at 25°C)	7.4±0.2

\*\*Formula adjusted, standardized to suit performance parameters

# Equivalent to Calf brain, infusion from

\$ Equivalent to Beef heart, infusion from

### Directions

Suspend 37.5 grams in 1000 ml purified / distilled water. Heat if necessary to ensure complete solution. Dispense into bottles or tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. If desired, 1 gm/litre agar can be added to encourage growth of anaerobic organisms. For best results, use the medium on the day it is prepared otherwise boil or steam it to remove dissolved oxygen just before use.

### **Principle And Interpretation**

In most bacteriemic conditions in man, the organisms are not numerous. Therefore, for their demonstration by blood culture, relatively large amount of blood e.g. 5-10 ml should be used as inoculum. As the bloods natural bactericidal or bacteriostatic action may interfere with the growth of any bacteria present, diluting the blood with medium should annul this effect. The technology of blood culture was revised by Gould and Duerden (1). Upto 10 ml or more blood may be added to 100 ml of broth without a detectable antibacterial effect. The antibacterial effect may be further prevented by incorporation of substances such as sodium polyanethol sulphonate (SPS). Liquoid Broth is used for the culturing of blood specimens from suspected bacterimia cases (2). Liquoid (Sodium polyanethol sulphonate) is a good anticoagulant. Moreover, it is not inhibitory and has the added advantage of annulling the natural bactericidal action of blood (3).

The medium is composed of rich ingredients for blood culture. HM Infusion powder and proteose peptone provide the necessary carbonaceous and nitrogenous nutrients, vitamins and growth factors to the organisms. Dextrose is the carbon source and sodium chloride maintain the osmotic equilibrium of the medium. It is advisable to seed more than one medium for blood culture. One of each set of bottles should be incubated in an atmosphere of air with 10% CO<sub>2</sub>. It is essential to loosen the caps of bottles during incubation. Growth may produce a generalized turbidity; make subculture from all bottles to solid media.

# **Type of specimen**

Clinical samples - Blood

# **Specimen Collection and Handling**

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5). After use, contaminated materials must be sterilized by autoclaving before discarding.

#### Warning and Precautions

In Vitro diagnostic Use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

#### Limitations

1.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium. 2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

### **Performance and Evaluation**

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

# **Quality Control**

#### Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured, clear solution without any precipitate

#### Reaction

Reaction of 3.75% w/v aqueous solution at 25°C. pH : 7.4±0.2

#### pН

7.20-7.60

#### **Cultural Response**

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	luxuriant
Salmonella Typhi ATCC 6539	50-100	luxuriant
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	50-100	luxuriant
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant

Key : (\*) Corresponding WDCM numbers.

#### **Storage and Shelf Life**

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

#### Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

#### Reference

1.Gould J. C., Duerden B. I., 1983 (Ed.), J. Clin. Pathol., 36: 963-977

2.Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1996, 14th Edition, Churchill Livingstone.

3. Von Haebler T., Miles A. A., The Journal of Pathology and Bacteriology, Vol. 46, Issue 2, Pages 245-252.

4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

5.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.





HiMedia Laboratories Pvt. Limited, Plot No.C-40, Road No.21Y, MIDC, Wagle Industrial Area,



Thane (W) -400604, MS, India



In vitro diagnostic

medical device

IVD



-30°C Storage temperature

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