

Helicobacter pylori Selective Agar Plate

MP5390

Intended Use:

Recommended for selective isolation of *Helicobacter pylori* from clinical samples.

Composition**

Ingredients	g/ L
Peptone, special	23.000
Corn starch	1.000
Sodium chloride	5.000
Agar	15.000
Sterile Defibrinated Sheep Blood	70 ml
Vancomycin	0.010
Trimethoprim	0.005
Cefsulodin	0.005
Amphotericin B	0.005
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate. The plate should be directly inoculated with the clinical specimen or the transport medium or broth that has been inoculated with the clinical specimen. It should be incubated immediately under CO₂ to minimize the recovery loss.

Principle And Interpretation

Helicobacter organisms is known cause of peptic ulcers in humans. It is a common type of bacteria that grows in the digestive tract and has a tendency to attack the stomach lining. They attack stomach and small intestine. They cause sores, called ulcers, in the lining of stomach or the upper part of your small intestine. At times this infection often lead to stomach cancer (1,2) *Helicobacter pylori*, previously known as *Campylobacter pylori*, is a Gram-negative, microaerophilic bacterium usually found in the stomach (3).

Helicobacter pylori Selective Agar Base which is with different combinations of antimicrobial agents are used for isolation and cultivation of *Helicobacter pylori* (4) . Corn starch serves as an energy source and also neutralizes toxic metabolites. Peptone special provides nitrogenous sources. Sodium chloride maintains osmotic equilibrium of the medium. Vancomycin inhibits gram positive *Staphylococcus*, *Streptococcus* and *Bacillus* species. Amphotericin inhibits contaminating fungi while other enteric bacteria can be inhibited by Trimethoprim. Cefsulodin inhibits *Pseudomonas aeruginosa*. Sheep blood permits the detection of hemolysis and also provides heme (X factor) which is required for the growth of *Helicobacter* species. In general *Campylobacter* species are best grown at 42°C in a micro aerophilic atmosphere. Plates may be incubated in an atmosphere containing approximately 3-10% CO₂ for recovery of *Helicobacter* species. Confirm the identity of the isolates as Gram negative, curved or spiral bacillus, Catalase positive, Oxidase positive, Urease positive and Hippurate negative.

Type of specimen

Clinical samples : Fresh Gastric biopsy specimen

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

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. *Helicobacter* species are very sensitive to aerobic atmosphere therefore inoculate the specimen on suitable medium as soon as possible to avoid viability loss.
2. Other *Helicobacter* species may also grow on this media. Therefore carry our biochemical and confirmatory tests of the suspected *Helicobacter* colonies.
3. Faeces specimens are not recommended as Helicobacteria are present in a non- culturable (coccoid) form.
4. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
5. 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

Sterile *Helicobacter pylori* Selective Agar Plate in 90 mm disposable plate with smooth surface and absence of black particles/cracks/bubbles

Colour of medium

Red coloured medium

Quantity of medium

25 ml of medium in 90 mm Petri plate

pH

7.10 - 7.50

Sterility check

Passes release criteria

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours under microaerophilic conditions (5-10% CO₂).

Organism	Inoculum (CFU)	Growth	Recovery	Haemolysis
<i>Helicobacter pylori</i> ATCC 43526	50-100	luxuriant	≥50%	none
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	≥10 ³	inhibited	0%	-
<i>Candida albicans</i> ATCC 10231 (00054*)	≥10 ³	inhibited	0%	-

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

On receipt store between 2-8°C. Use before expiry date on the label. 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 (5,6).

Reference

1. Graham, D.Y., 2014, World J Gastroenterol. 20(18): 5191.
2. Marshall B. K et al., 1988 The Lancet, December 24/31, No 8626/8627.
3. Owen, R.J., 1998, British Medical Bulletin, 54 (No. 1): 17.

4. Ellner P. P., Stoessel C. J., Drakeford E. and Vasi F., 1966, Am. J. Clin. Pathol., 45:502.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
6. 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.

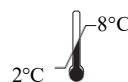
Revision : 01/2024



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**



Storage temperature



CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu



CE Marking



**Do not use if
package is damaged**

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.