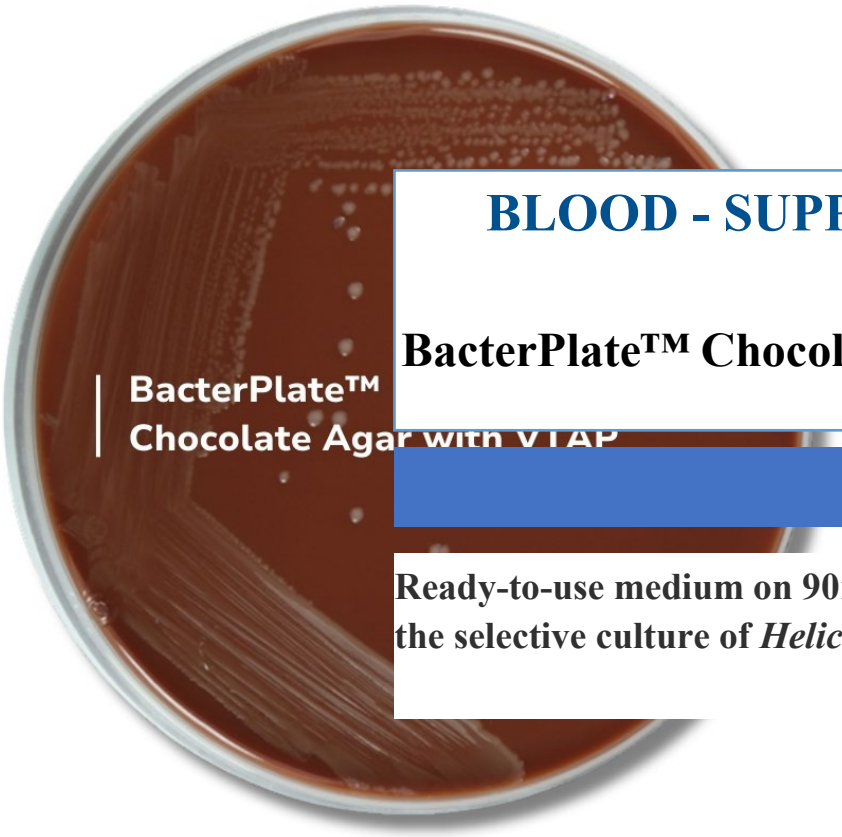
BacterLab Division

Issue date: 02/01/2025
Version: 01.2025



BLOOD - SUPPLEMENTED CULTURE MEDIUM

BacterPlate™ Chocolate Agar with VTAP (HP VTAP)

Ready-to-use medium on 90mm plates supplemented with VTAP for the selective culture of *Helicobacter pylori*

Code: 05011

1. INTENDED USE

BacterPlate™ Chocolate Agar with VTAP (HP VTAP) is selective medium designed for the cultivation and isolation of *Helicobacter pylori* from clinical specimens. This medium, supplemented with Vancomycin, Trimethoprim, Amphotericin B, and Polymyxin B, effectively inhibits the growth of contaminants such as Gram-positive bacteria, Gram-negative bacteria, and fungi, making it highly specific for *H. pylori*. It is ideal for clinical diagnostic applications and microbiological quality control testing.

The typical composition of base medium (Columbia Agar) corresponds to that defined in European (EP), United States (UP) and Japanese (JP) Pharmacopeias.

The packaging with semi-permeable Cellophane film helps balance the humidity of the environment during storage.

2. PRINCIPLES

- Peptones included in the composition of the medium favor the excellent growth of colonies.
- Yeast extract is a source of vitamin B complex.
- Starch is a detoxifying agent and also an energy source.
- The heat treatment of blood in the medium lyses red blood cells, releasing growth factors such as hemin (X factor) and NAD (V factor), which are essential for the growth of certain bacteria.
- Vancomycin inhibits Gram-positive bacteria.
- Trimethoprim suppresses Gram-negative bacteria by interfering with folate synthesis.
- Amphotericin B prevents fungal contamination.
- Polymyxin B targets Gram-negative bacteria, enhancing selectivity for *H. pylori.*

3. TYPICAL COMPOSITION

For 1 liter of medium

Polypeptone	23,0 g
Starch	1,0 g
Sodium chloride	5,0 g
Defibrinated horse blood	50 – 70 mL
VTAP supplement	1 set
Agar	13,5 g

pH of the ready-to-use medium at 25^{0}C: 7,3 ± 0,2

4. PREPARATION

The environmental plates are ready-to-use, no preparation required.

5. INSTRUCTIONS FOR USE

- Allow the agar plates to reach room temperature. Dry the plates in an incubator by slightly opening the lid.
- Inoculate in order to obtain isolated colonies.

- Incubate at 37 °C, 5 – 10% CO_2 for 3 to 5 days in optimal conditions for the culture of the inoculated germs.

6. RESULTS

- After incubation for the required duration, observe the colonies growing on the surface of the plate for characteristic traits such as colony size, color, and morphology.
  - *Helicobacter pylori*: Small, round, translucent colonies with a smooth appearance, often greyish-white
  - Contaminants (Gram-positive, Gram-negative bacteria, or fungi) should be inhibited by the VTAP selective agents.
- Identification of the isolated bacteria must be carried out through appropriate subsequent tests

7. QUALITY CONTROL

BacterLab ensures the quality of each product batch by testing with ATCC reference strains.

Reference strains	Incubation Conditions	Expected results
H. pylori ATCC 43504	35 – 37^{0}C, 5 – 10 % CO_2, 3 – 5 days	Growth with colony size 1 – 2 mm
E. coli ATCC 35218		Weak growth or no growth
S. aureus ATCC 25923		Weak growth or no growth

8. STORAGE AND TRANSPORT CONDITIONS

- Storage: 2 – 8°C.
- Transportation: Ambient temperature.

9. PACKAGING

- Packaging: 10 plates/ box or as per customer request.

10. SHELF LIFE

- Expiration Date: 3 months from the manufacturing date.

11. BIBLIOGRAPHY

- Neter, E.. 1947. The effect of yeast concentrate on the growth and survival of Haemophilus influenza in infusion broth. Journal of Bacteriology, 54 : 70-71.
- Thayer, J.D. and Martin, J.E.. 1966. Improved medium selective for cultivation of Neisseria gonorrhoeae and Neisseria meningitidis. Public Health Report, 81 : 559-562.
- llner, P.D., Stoessel, C.J., Drakeford, E. and Vasi, F.. 1966. A new culture medium for medical bacteriology. American Journal of Clinical Pathology, 45 : 502-504.
- NF V08-405. December 1986. Microbiology of food products. Preserves. Detection of {Clostridium} thermophilus..
- NF U47-108. December 2012. Animal health analysis methods - Isolation and identification of Taylorella equigenitalis from Equidae genital sampling.

- NF EN ISO 10272-1. July 2017. Microbiology of the food chain - Horizontal method for detection and enumeration of Campylobacter spp. - Part 1 : Detection method. Modified by NF EN ISO 10272-1/A1 : 2023.
- NF EN ISO 10272-2. July 2017. Microbiology of the food chain — Horizontal method for detection and enumeration of Campylobacter spp. — Part 2: Colony-count technique. Modified by NF EN ISO 10272-2/A1 : 2023.
- NF EN ISO 15213-1. February 2023. Microbiology of the food chain - Horizontal method for the detection and enumeration of Clostridium spp. - Part 1 : enumeration of sulfite-reducing Clostridium spp. by colony-count technique
- European Pharmacopoeia. Chapiter 2.6.13. Microbial examination of non-sterile products: test for specified micro organisms. Harmonized method. The United States Pharmacopeia. Chapter Microbiological examination of non-sterile products: Microbial enumeration tests and Chapter Microbiological examination of non-sterile products: Test for specified products.
- The Japanese Pharmacopoeia. Chapter 4.05 Microbial Limit Test I. Microbiological examination of non-sterile products: Total viable aerobic count and II. Microbiological examination of non-sterile products: Test for specified products.