

# Bordetella Supplement

Cat. 6015

Selective Supplement for the isolation of Bordetella spp.

## Practical information

Applications	Categories
Selective isolation	Bordetella
Detection	Bordetella
Industry: Clinical	

## Principles and uses

Bordet-Gengou Agar Base is used with the addition of horse blood for isolating Bordetella pertussis and other Bordetella species.

The genus Bordetella consists of 4 species, all being respiratory pathogens: Bordetella pertussis, B. parapertussis, B. bronchiseptica and B. avium.

Potato infusion and Proteose peptone provide nitrogen, vitamins, minerals and amino acids essential for growth. Glycerol provides carbon. Sodium chloride supplies essential electrolytes for transport and osmotic balance, and Bacteriological agar is the solidifying agent. The addition of blood provides extra growth nutrients for Bordetella species. Starch from the potato infusion absorbs fatty acids from nasal secretions on cotton swabs which inhibit growth of B. pertussis.

## Formula per vial

Cephalexin (mg)	20
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## Preparation

Aseptically reconstitute 1 vial with 5 ml of sterile distilled water. Mix gently until complete dissolution and add aseptically to 500 ml of Bordet-Gengou Agar Base (Cat. 1107), autoclaved, cooled to 50 °C and with 5-10% defibrinated sterile blood added. Mix well and distribute into sterile containers.

## Instructions for use

For clinical diagnosis, the type of sample is bacteria isolated from any clinical sample.

- Inoculate and incubate the plates at 35±2 °C for 48-72 hours in a humid environment. Use 2 plates per sample: one with supplement, one without.
  - After 48-72 hours, colonies of B. pertussis are small, white, opaque with an unclear edge as the hemolysis zone merges into medium, smooth, slightly elevated, shiny and less than 1 mm in diameter. They are surrounded by hazy zone of hemolysis.
- Colonies of B. parapertussis grow faster and at 48 hours are well developed with a similar appearance to B. pertussis, giving a green-black tint to the medium. Colonies of Gram positive cocci are usually opaque and darker.
- After 24-48 hours, colonies of B. bronchiseptica, grow similar to B. pertussis colonies but they are larger with a rough, pitted surface.
  - All suspect colonies should be identified by serological methods.

## Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Lyophilized tablet	N/A	Transparent	N/A

## Microbiological test

Incubation conditions: (35±2 °C / 48-72 h).

Microrganisms	Specification	Characteristic reaction
Bordetella parapertussis ATCC 15311	Good growth	Gamma hemolysis

Bordetella bronchiseptica ATCC 4617  
Bordetella pertussis ATCC 8467

Good growth  
Good growth

Gamma hemolysis  
Beta hemolysis

## Storage

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Temp. Min.:2 °C  
Temp. Max.:8 °C

## Bibliography

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MacFaddin, J.F. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1. Williams & Wilkins, Baltimore, M.D.

Marcon, M.J. 1995. Bordetella, p. 566-573. In P.R. Murray, E.J. Baron, M.A. Pfaller, F.C. Tenover, and R.H. Tenover (ed.), Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D.C.