# Product Data Sheet

**BORDET GENGOU AGAR BASE W/ 1.6% AGAR**
**Product No.** GB-DCM-00106-1A

## INTENDED USE

For detection and isolation of Bordetella pertussis and Bordetella parapertussis.

## PRODUCT SUMMARY

Bordet Gengou Agar Media were originally formulated by Bordet and Gengou for cultivation of Bordetella species. Bordet Gengou Agar Base w/ 1.6% Agar is similar in composition to Bordet Gengou Agar Base with the exception being the difference in agar concentration. Bordetella pertussis is the causative agent of whooping cough and with the help of cough-plate technique, B. pertussis can be isolated from pharyngeal extracts, nasopharyngeal secretions and pre-nasal swabs. Kendrick and Eldering modified the original media by replacing 50% human or rabbit blood with 15% sheep blood to make the medium more enriched for detection of B. pertussis by the virtue of its haemolytic reaction. Enrichment of the basal media with 25% human blood aids in the detection of Mycobacterium species from small sputum inocula and in Streptomycin sensitivity testing. The medium is highly nutritious thus supports luxuriant growth of Bordetella species and can also be used for mass cultivation of B. pertussis for vaccine production and for maintaining stock cultures. Incubation should be carried out in a moist chamber (60% humidity) at 37°C for upto 7 days. Medium should not be over dried before use. After 40 hours B.pertussis colonies appear smooth, raised, glistening with a zone of haemolysis. Some strains of Bordetella are not haemolytic. For confirmation, serodiagnosis and biochemical test should be performed. This medium can be made more selective for Bordetella, by using antibiotics like penicillin, methicillin, cephalexin of which, cephalexin was found to be superior. Cephalexin suppresses unwanted nasopharyngeal growth and significantly increases the isolation rate of Bordetella species. Cephalexin is used at a concentration of 40 mg/liter. Amphotericin B (10 µg/ml) can be added as an antifungal agent to the medium. For isolation of B. pertussis from specimens, use standard procedures. Incubate the plates in a moist chamber at 35-37°C for 7 days and examine daily with or without dissecting microscope (oblique illumination) to detect the presence of B. pertussis. Sometimes the accompanying mold colonies can mask the B. pertussis colonies. Use sterile scalpel or needle to remove the portion of the agar that contains spreading colonies of moulds. B. pertussis colonies may not be visible without the aid of a microscope for 2-4 days. After 7 days of incubation plates may be discarded as negative. Some Haemophilus species will grow on Bordetella isolation media and cross-react with B. pertussis antisera. It may be prudent to rule out X and V factor dependence.

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## Product Specifications

| Ingredients | Gms / Ltr |
|---|---|
| Potatoes, infusion from | 125.000 |
| Peptone | 10.000 |
| Sodium chloride | 5.500 |
| Agar | 16.000 |

### INSTRUCTION FOR USE

- Dissolve 36.0 grams in 1000 ml purified/distilled water containing 10 ml glycerol.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add 15-20 % sterile, fresh defibrinated blood (sheep, rabbit, human or horse).
- For selectivity aseptically add rehydrated contents of two vials of Bordetella Selective Supplement.
- Mix thoroughly, taking care to avoid incorporation of air bubbles and pour into sterile Petri plates.

### PRINCIPLE

Potato infusion and peptone serve as carbon and nitrogen, long chain amino acids, source while glycerol and blood enrichment provides additional nutrients. Sodium chloride maintains osmotic equilibrium.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow Appearance homogeneous free flowing powder. Appearance of prepared medium : Basal medium: Light yellow coloured clear to slightly opalescent gel. After addition of 15-20% sterile defibrinated blood: Cherry red coloured opaque gel forms in Petri plates.

pH (at 25°C) : 6.7±0.2

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Haemolysis | Incubation Temperature | Incubation Period |
|---|---|---|---|---|---|---|---|
| Bordetella bronchiseptica | 4617 | 50-100 | Good-luxuriant | >=50% | Gamma | 35-37°C | 3-4 Days |
| Bordetella parapertussis | 15311 | 50-100 | Good-luxuriant | >=50% | Gamma | 35-37°C | 3-4 Days |
| Bordetella pertussis | 8467 | 50-100 | Good-luxuriant | >=50% | Beta | 35-37°C | 3-4 Days |
| Staphylococcus aureus subsp.aureus | 25923 | >=104 | Inhibited | 0% | - | 35-37°C | 3-4 Days |

**STORAGE**

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

**Product Deterioration**: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

**DISPOSAL**

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

**This product is for research use only.**

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