

#### INTENDED USE

Pro-Lab *Bordetella* Selective Supplement is an antibiotic supplement used to enhance the transport and culture of *Bordetella pertussis*.

#### SUMMARY AND EXPLANATION

*Bordetella pertussis* was first isolated in 1906 by Bordet and Gengou, as the main causative agent in whooping cough. It is often difficult to isolate, since this organism is susceptible to traces of fatty acids found in culture media (Field and Parker, 1979)<sup>1</sup>. Only media containing blood or albumin, charcoal, starch or anion exchange resins which bind fatty acids can be used.

One of the most widely used media for the culture of *Bordetella pertussis* was Bordet-Gengou medium (Bordet and Gengou, 1906)<sup>2</sup>, which contains sheep blood and glycerol. To overcome the problem of overgrowth by commensal organisms (Bradforth and Slavin, 1940)<sup>3</sup>, penicillin and 4,4'-diamidino-diphenylamine dihydrochloride (May and Baker 938) were added (Lacey, 1954)<sup>4</sup>.

Charcoal agar is recognized as an effective substitute for Bordet-Gengou medium (Ensminger, Culbertson and Powell, 1953<sup>5</sup>; Mishulow, Sharpe and Cohen, 1953<sup>6</sup>; Brumfitt, 1959<sup>7</sup>). The recovery of *Bordetella pertussis* was enhanced by using cephalixin at 40 mg/liter in place of penicillin and May and Baker 938 (Regan and Lowe, 1977<sup>8</sup>). Most commensal organisms are inhibited, but *Pseudomonas aeruginosa* and some fungi will grow. In addition, half-strength charcoal agar supplemented with cephalixin and horse blood can be utilized as a transport medium.

#### DESCRIPTION

An accurate quantity of cephalixin is lyophilized and provided in individually labelled vials, each vial being sufficient to supplement 500 mls of prepared medium.

#### FORMULA

Each vial contains:

Cephalixin 20 mg

#### PROCEDURE

To reconstitute each vial of Pro-Lab *Bordetella* Selective Supplement, aseptically, add 10 ml of sterile distilled water. After reclosing the vial, gently agitate to assist reconstitution. The resultant solution should be clear and free from visible particulate matter.

#### 1. Selective Culture:

Prepare charcoal agar according to the manufacturer's instruc-

tions, autoclave and cool to 55°C. Add 10% sterile defibrinated horse blood and mix thoroughly. Add the reconstituted contents of one vial of Pro-Lab *Bordetella* Selective Supplement to a final volume 500 ml prepared medium. Mix gently and pour into sterile petri dishes. Overnight storage at 4°C is recommended to allow suitable equilibration. For extended storage at 4°C eg. up to 7 days, plates should be contained in sealed plastic sleeves or similar packaging.

#### 2. Transport Medium

Prepare charcoal agar at half-strength, autoclave and cool to 55°C. Add 10 % sterile defibrinated horse blood and mix thoroughly. Add the reconstituted contents of one vial of Pro-Lab *Bordetella* Selective Supplement to a final 500 ml prepared medium. Mix gently and pour into sterile Bijou bottles. The bottles should be inverted before setting to allow even distribution of the charcoal.

#### IN USE

1. When culturing post or per nasal swabs without delay, inoculate onto the surface of the Charcoal agar plates in such a manner as to encourage the growth of isolated colonies.
2. When delay in culturing is likely, place the swab in the half-strength agar and store at 4°C. As soon as possible, subculture onto the Charcoal agar plates.
3. Incubate plates at 35°C.
4. Examine after incubation (up to 3 days).
5. *Bordetella pertussis* will be seen as small, pale glistening colonies.

#### SAFETY PRECAUTIONS

1. Pro-Lab *Bordetella* Selective Supplement is offered only as an *in vitro* material and is in no way intended for a curative or prophylactic purpose.
2. During and after use, handle all materials in a manner conforming to Good Laboratory Practices and consider at all times that material under test should be regarded as a potential biohazard if mishandled.

#### PRESENTATION









Pro-Lab *Bordetella* Selective Supplement PL. 580 is supplied 10 vials per box (lyophilized).

#### STORAGE

Pro-Lab *Bordetella* Selective Supplement PL. 580 must be stored at 2°C to 8°C. Kept under these conditions it may be used up to date of expiry shown on product label.

#### REFERENCES

1. Field, L.H. and Parker, C.D. (1979). J. Clin. Micro. **9(6)**:651-653.
2. Bordet, J. and Gengou, O. (1906). Ann. Inst. Pasteur. **20**:731-741.
3. Bradford, W.L., and Slavin, B. (1940). Proc. Soc. Exp. Biol. **43**:590-593.
4. Lacey, B.W. (1954). J. Hyg. **52(3)**:273-303.
5. Ensminger, P.W., Culbertson, C.G. and Powell, H.M. (1953). J. Infect. Dis. **93(3)**:266-268.
6. Mishulow, L., Sharpe, L.S., Cohen, L.L. (1953). Amer. J. Pub. Health. **43(11)**:1466-1472.
7. Brumfitt, W. (1959). J. Path. Bact. **77(1)**:95-100.
8. Regan, J. and Lowe, F. (1977). J. Clin. Microbiol. **6**:303-309.

	= Use by
	= Lot number
	= Catalogue number
	= Manufacturer
	= Authorized Representative in the European Community
	= In vitro diagnostic medical device
	= Temperature limitation
	= Consult instructions for use