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# APPENDIX

# CULTURE MEDIA

All media were dispensed and sterilized in autoclave for 15 minutes at 15 pound pressure (121°C) except for the carbon utilization test medium which was sterilized at 10 pound for 10 minutes.

## 1. Carbon utilization medium (ISP-9)

*Basal mineral salt agar*

| | | |
|---|---|---|
| Carbohydrate | 1.00 | g |
| $(NH_4)_2SO_4$ | 0.264 | g |
| $K_2HPO_4$(anhydrous) | 0.238 | g |
| $K_2HPO_4.3H_2O$ | 0.565 | g |
| $MgSO_4.7H_2O$ | 0.10 | g |
| Pridham and Gottlieb trace salt (B) | 0.10 | ml |
| Agar | 1.50 | g |
| Distilled water | 100 | ml |

*Pridham and Gottlieb trace salt (B)*

| | | |
|---|---|---|
| $CuSO_4.5H_2O$ | 0.64 | g |
| $FeSO_4.7H_2O$ | 0.11 | g |
| $MnCl_2.4H_2O$ | 0.79 | g |
| $ZnSO_4.7H_2O$ | 0.15 | g |
| Distilled water | 100 | ml |

2. Cellulose decomposition medium

*Czapek's solution, free from sucrose*

| | | |
|---|---|---|
| $K_2HPO_4$ | 0.10 | g |
| $MgSO_4$ | 0.05 | g |
| $NH_4Cl$ | 0.20 | g |
| KCl | 0.05 | g |
| $FeSO_4$ | 0.001 | g |
| Distilled water | 100 | ml |

3. Colloidal chitin agar

| | | |
|---|---|---|
| Colloidal chitin | 0.10-0.25 | g |
| Agar | 1.50 | g |
| Distilled water | 100 | ml |

4. Glucose beef extract peptone medium (GBP)

| | | |
|---|---|---|
| Glucose | 1.50 | g |
| Beef extract | 0.30 | g |
| Peptone | 0.60 | g |
| Yeast extract | 0.30 | g |
| $MgSO_4.7H_2O$ | 0.25 | g |
| Distilled water | 100 | ml |

pH 7.0-7.4

5. Glucose beef extract-yeast extract medium (GBY)

| | | |
|---|---|---|
| Glucose | 0.50 | g |
| Soluble starch | 2.00 | g |
| Beef extract | 0.30 | g |
| Yeast extract | 0.50 | g |
| Tryptone | 0.50 | g |
| $CaCO_3$ | 0.40 | g |
| NaCl | 0.40 | g |
| $Na_2SO_4$ | 0.10 | g |
| KCl | 0.05 | g |
| $MgCl_2$ | 0.20 | g |
| $KH_2PO_4$ | 0.05 | g |
| Distilled water | 100 | ml |
| pH 7.0-7.4 | | |

6. Glycerol-asparagine agar

| | | |
|---|---|---|
| L-asparagine (anhydrous basis) | 0.10 | g |
| Glycerol | 1.00 | g |
| $K_2HPO_4$ (anhydrous basis) | 0.10 | g |
| Pridham and Gottlieb trace salt (A) | 0.10 | ml |
| Agar | 1.50 | g |
| Distilled water | 100 | ml |

*Pridham and Gottlieb trace salt (A)*

| | | |
|---|---|---|
| $FeSO_4.7H_2O$ | 0.10 | g |
| $MnCl_2.4H_2O$ | 0.10 | g |
| $ZnSO_4.7H_2O$ | 0.10 | g |
| Distilled water | 100 | ml |

7. Inorganic salt-starch agar (ISP-4)

| | | |
|---|---|---|
| Soluble starch (Difco) | 10.00 | g |
| $K_2HPO_4$ (anhydrous) | 1.00 | g |
| $MgSO_4.7H_2O$ | 1.00 | g |
| NaCl | 1.00 | g |
| $(NH_4)_2SO_4$ | 2.00 | g |
| $CaCO_3$ | 2.00 | g |
| Pridham and Gottlieb trace salt (A) | 0.10 | ml |
| Agar | 1.50 | g |
| Distilled water | 100 | ml |
| pH 7.0-7.4 | | |

8. Muller-Hinton medium (MHM)

| | | |
|---|---|---|
| Muller-Hinton (Difco) | 3.40 | g |
| Distilled water | 100 | ml |

9. Nutrient agar

| | | |
|---|---|---|
| Nutrient agar (Difco) | 2.30 | g |
| Distilled water | 100 | ml |

10. Nutrient gelatin broth

| | | |
|---|---|---|
| Beef extract | 1.00 | g |
| Peptone | 1.00 | g |
| NaCl | 0.10 | g |
| Gelatin | 10.00 | g |
| Distilled water | 100 | ml |

11. Oatmeal agar

| | | |
|---|---|---|
| Oatmeal agar (Difco) | 1.80 | g |
| Distilled water | 100 | ml |
| pH 7.2 | | |

12. Peptone iron agar

| | | |
|---|---|---|
| Peptone iron agar (Difco) | 3.60 | g |
| Distilled water | 100 | ml |

13. Nitrate broth

| | | |
|---|---|---|
| Peptone | 1.00 | g |
| $KNO_3$ | 0.10 | g |
| NaCl | 0.50 | g |
| Distilled water | 100 | ml |
| pH 7.0 | | |

14. Peptone yeast extract medium (PY)

| | | |
|---|---|---|
| Glucose | 2.00 | g |
| Soluble starch | 1.00 | g |
| Yeast extract | 0.30 | g |
| Peptone | 0.50 | g |
| Beef extract | 0.50 | g |
| $CaCO_3$ | 0.30 | g |
| NaCl | 0.50 | g |
| Distilled water | 100 | ml |

15. Sabouraud dextrose agar (SDA)

| | | |
|---|---|---|
| Sabouraud dextrose agar | 3.00 | g |
| Distilled water | 100 | ml |

16. Skim milk

| | | |
|---|---|---|
| Skim milk (Difco) | 10.00 | g |
| Distilled water | 100 | ml |

17. Starch-casein nitrate agar

| | | |
|---|---|---|
| Starch | 1.00 | g |
| Sodium caseinate | 0.03 | g |
| $KNO_3$ | 0.20 | g |
| Agar | 1.50 | g |
| Sea water | 100 | ml |
| pH 7.0-7.4 | | |

18. Tyrosine agar

| | | |
|---|---|---|
| Glycerol | 1.50 | g |
| L-Tyrosine | 0.05 | g |
| L-Asparagine | 0.10 | g |
| $K_2HPO_4.7H_2O$ (anhydrous basis) | 0.05 | g |
| $MgSO_4.7H_2O$ | 0.05 | g |
| NaCl | 0.05 | g |
| $FeSO_4.7H_2O$ | 0.01 | g |
| Pridham and Gottlieb trace salt (A) | 0.10 | ml |
| Agar | 1.50 | g |

| | | |
|---|---|---|
| Distilled water | 100 | ml |
| pH 7.2-7.4 | | |

19. Yeast extract-malt extract broth (YM, ISP-2)

| | | |
|---|---|---|
| Glucose | 0.40 | g |
| Yeast extract | 0.40 | g |
| Malt extract | 1.00 | g |
| $CaCO_3$ | 0.10 | g |
| Distilled water | 100 | ml |

For preparing agar medium, 1.5 g agar powder was added.

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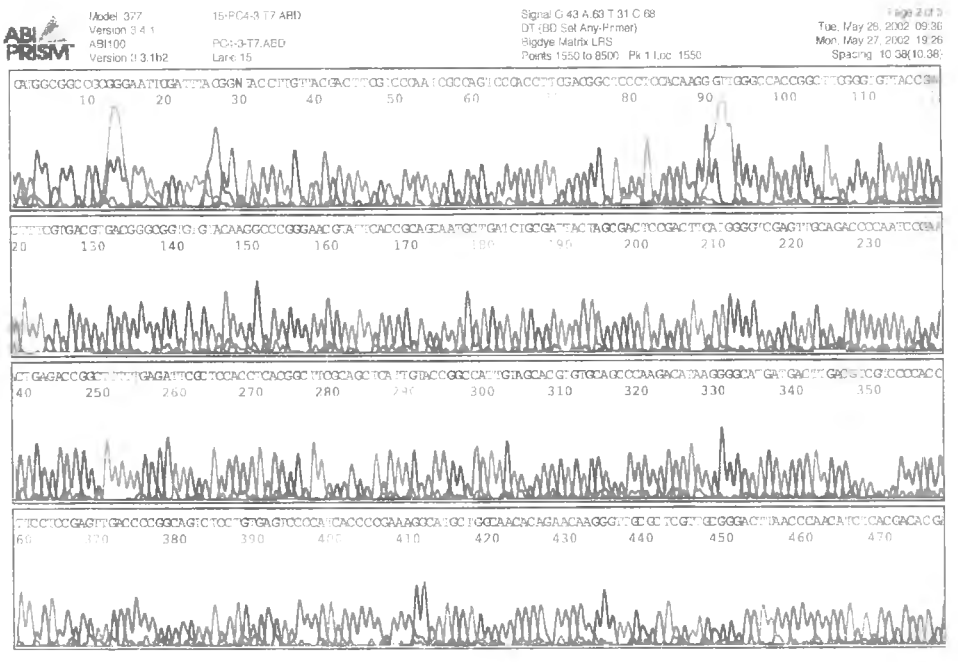


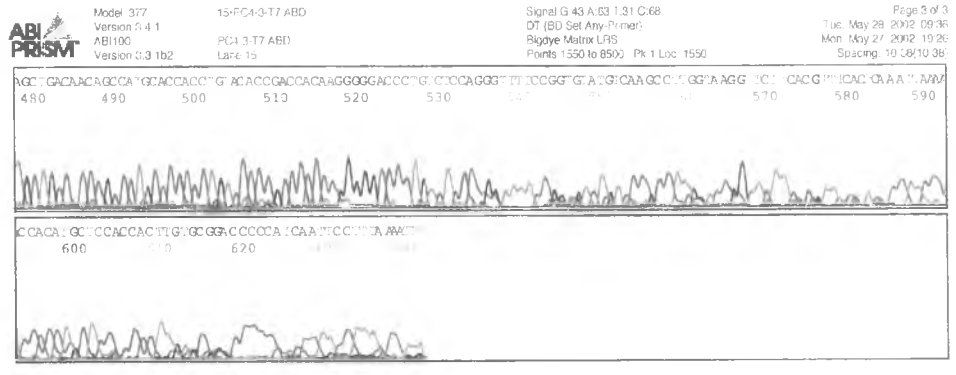

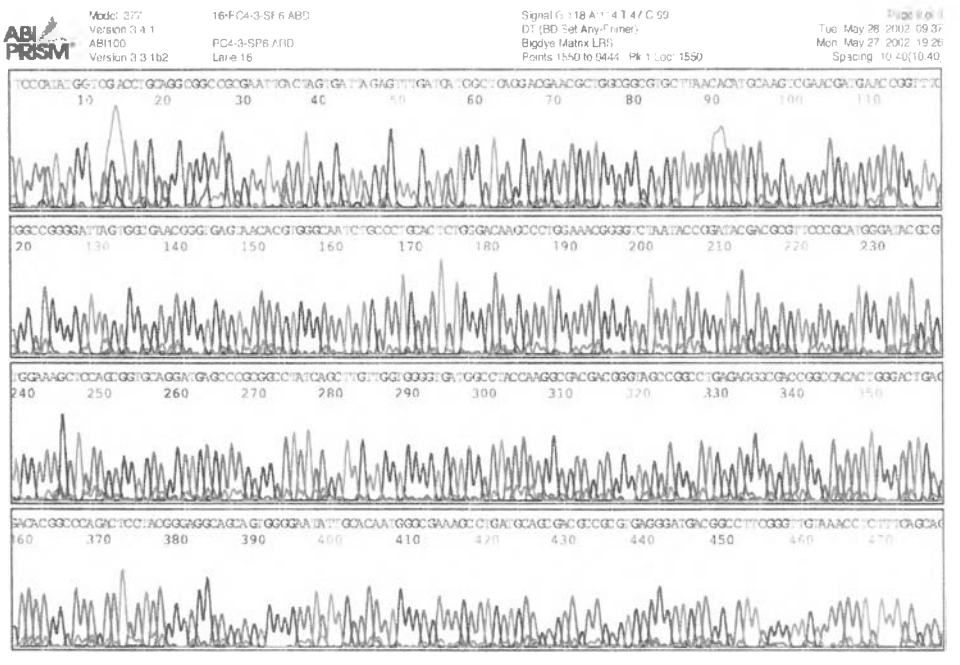
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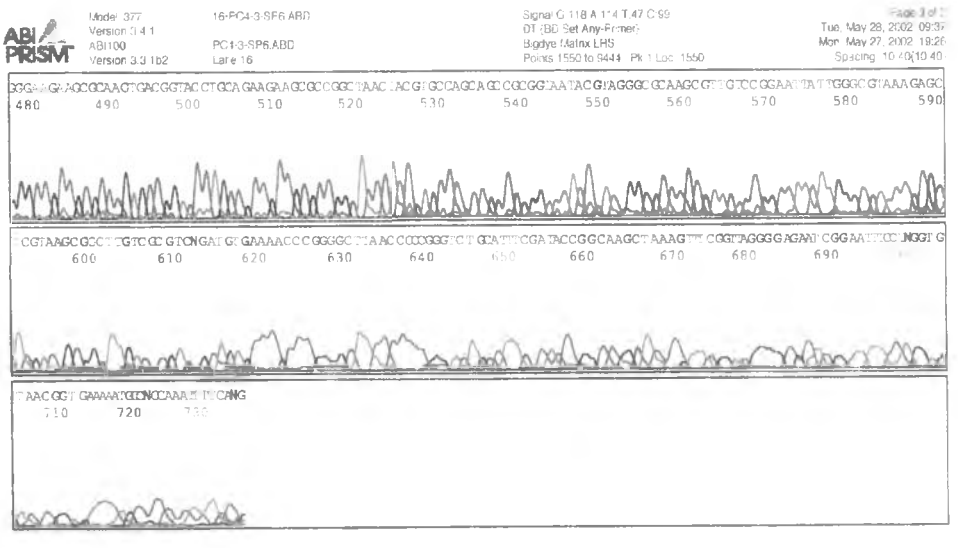
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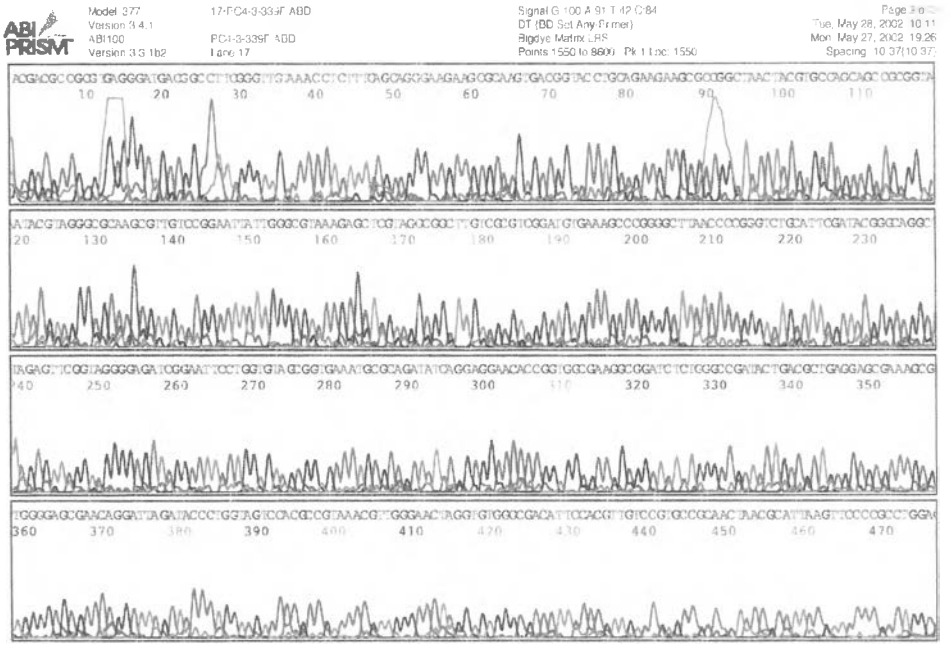
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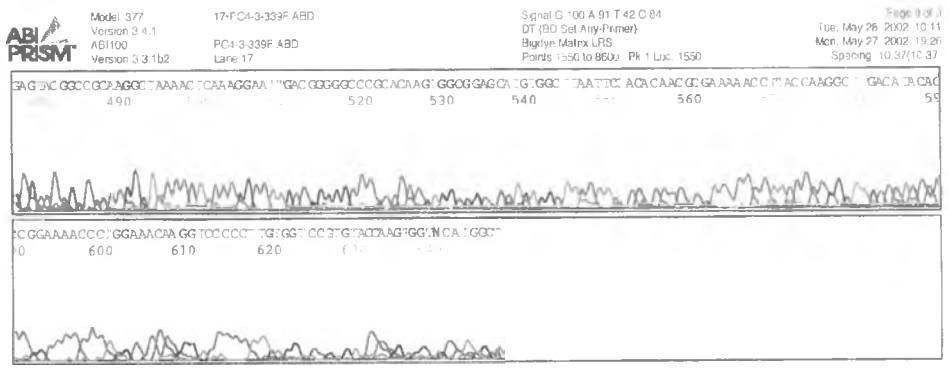
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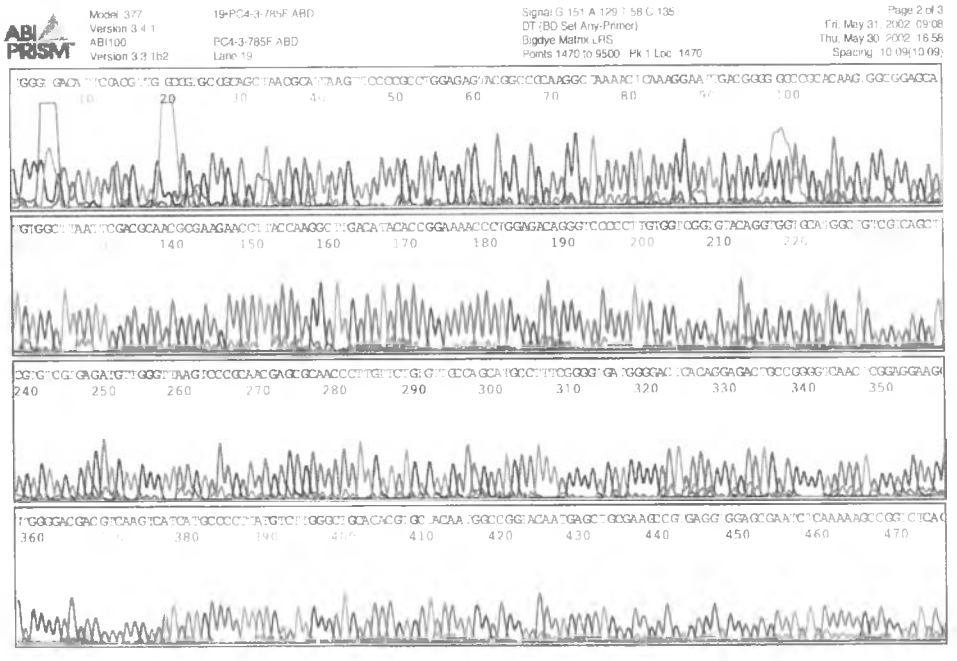
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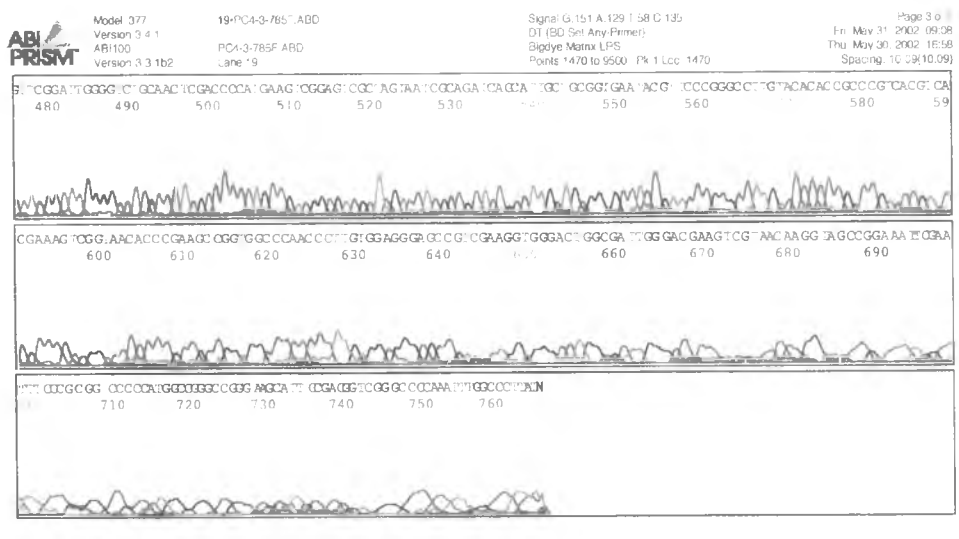
Model 377
Version 3.4.1
ABI100
Version 3.3.1b2
19-PC4-3-785F.ABD
PC4-3-785F.ABD
Lane 19
Signal: G 151 A 129 T 58 C 135
DT (BD Set Any-Primer)
Bigdye Matrix LPS
Points 1470 to 9500 Pk 1 Loc 1470
Page 3 of
Fri, May 31, 2002 09:08
Thu, May 30, 2002 16:58
Spacing: 10.09(10.09)

# VITA

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