

**PM1 MicroPlate™**

*Ralstonia pickettii*

|  |  |                                    |                                    |                                     |  |   |  |  |  |                                 |                                    |
|--|--|------------------------------------|------------------------------------|-------------------------------------|--|---|--|--|--|---------------------------------|------------------------------------|
| A1<br>Negative Control                   | A2<br>L-Arabinose<br><b>+</b>                          | A3<br>N-Acetyl-D-Glucosamine       | A4<br>D-Saccharic Acid<br><b>+</b> | A5<br>Succinic Acid<br><b>+</b>     | A6<br>D-Galactose<br><b>+</b>                            | A7<br>L-Aspartic Acid<br><b>+</b>             | A8<br>L-Proline<br><b>+</b>            | A9<br>D-Alanine<br><b>+</b>                | A10<br>D-Trehalose                     | A11<br>D-Mannose                | A12<br>Dulcitol                    |
| B1<br>D-Serine                           | B2<br>D-Sorbitol                                       | B3<br>Glycerol<br><b>+</b>         | B4<br>L-Fucose                     | B5<br>D-Glucuronic Acid<br><b>+</b> | B6<br>D-Gluconic Acid<br><b>+</b>                        | B7<br>D,L- $\alpha$ -Glycerol-Phosphate       | B8<br>D-Xylose<br><b>+</b>             | B9<br>L-Lactic Acid<br><b>+</b>            | B10<br>Formic Acid<br><b>W</b>         | B11<br>D-Mannitol               | B12<br>L-Glutamic Acid<br><b>+</b> |
| C1<br>Glucose-6-Phosphate                | C2<br>D-Galactonic Acid- $\gamma$ -Lactone<br><b>+</b> | C3<br>D,L-Malic Acid<br><b>+</b>   | C4<br>D-Ribose                     | C5<br>Tween 20<br><b>+</b>          | C6<br>L-Rhamnose   | C7<br>D-Fructose<br><b>+</b>                  | C8<br>Acetic Acid<br><b>+</b>          | C9<br>$\alpha$ -D-Glucose<br><b>+</b>      | C10<br>Maltose                         | C11<br>D-Melibiose              | C12<br>Thymidine                   |
| D1<br>L-Asparagine<br><b>+</b>           | D2<br>D-Aspartic Acid<br><b>+</b>                      | D3<br>D-Glucosaminic Acid          | D4<br>1,2-Propanediol              | D5<br>Tween 40<br><b>+</b>          | D6<br>$\alpha$ -Keto-Glutaric Acid<br><b>+</b>           | D7<br>$\alpha$ -Keto-Butyric Acid<br><b>W</b> | D8<br>$\alpha$ -Methyl-D-Galactoside   | D9<br>$\alpha$ -D-Lactose                  | D10<br>Lactulose                       | D11<br>Sucrose                  | D12<br>Uridine                     |
| E1<br>L-Glutamine<br><b>+</b>            | E2<br>M-Tartaric Acid                                  | E3<br>Glucose-1-Phosphate          | E4<br>Fructose-6-Phosphate         | E5<br>Tween 80<br><b>+</b>          | E6<br>$\alpha$ -Hydroxy Glutaric Acid- $\gamma$ -Lactone | E7<br>$\alpha$ -Hydroxy Butyric Acid          | E8<br>$\beta$ -Methyl-D-Glucoside      | E9<br>Adonitol                             | E10<br>Maltotriose                     | E11<br>2-Deoxy Adenosine        | E12<br>Adenosine                   |
| F1<br>Glycyl-L-Aspartic Acid<br><b>+</b> | F2<br>Citric Acid<br><b>+</b>                          | F3<br>M-Inositol                   | F4<br>D-Threonine                  | F5<br>Fumaric Acid<br><b>+</b>      | F6<br>Bromo Succinic Acid<br><b>+</b>                    | F7<br>Propionic Acid<br><b>+</b>              | F8<br>Mucic Acid<br><b>+</b>           | F9<br>Glycolic Acid<br><b>+</b>            | F10<br>Glyoxylic Acid<br><b>+</b>      | F11<br>D-Cellobiose             | F12<br>Inosine                     |
| G1<br>Glycyl-L-Glutamic Acid<br><b>+</b> | G2<br>Tricarballic Acid                                | G3<br>L-Serine<br><b>+</b>         | G4<br>L-Threonine<br><b>+</b>      | G5<br>L-Alanine<br><b>+</b>         | G6<br>L-Alanyl-Glycine<br><b>+</b>                       | G7<br>Acetoacetic Acid                        | G8<br>N-Acetyl- $\beta$ -D-Mannosamine | G9<br>Mono Methyl Succinate<br><b>+</b>    | G10<br>Methyl Pyruvate<br><b>+</b>     | G11<br>D-Malic Acid<br><b>+</b> | G12<br>L-Malic Acid<br><b>+</b>    |
| H1<br>Glycyl-L-Proline                   | H2<br>P-Hydroxy Phenyl Acetic Acid                     | H3<br>M-Hydroxy Phenyl Acetic Acid | H4<br>Tyramine                     | H5<br>D-Psicose                     | H6<br>L-Lyxose   | H7<br>Glucuronamide                           | H8<br>Pyruvic Acid<br><b>+</b>         | H9<br>L-Galactonic Acid- $\gamma$ -Lactone | H10<br>D-Galacturonic Acid<br><b>+</b> | H11<br>Phenylethyl-Amine        | H12<br>2-Aminoethanol              |

FIGURE 1. Carbon Sources in PM1 MicroPlate

**PM2 MicroPlate™**

*Ralstonia pickettii*

|  |                                |  |                             |                                   |                                      |                                     |   |  |   |                                   |   |
|--|--------------------------------|--|-----------------------------|-----------------------------------|--------------------------------------|-------------------------------------|---|--|---|-----------------------------------|---|
| A1<br>Negative Control                       | A2<br>Chondroitin Sulfate C    | A3<br>$\alpha$ -Cyclodextrin               | A4<br>$\beta$ -Cyclodextrin | A5<br>$\gamma$ -Cyclodextrin      | A6<br>Dextrin                        | A7<br>Gelatin                       | A8<br>Glycogen                                  | A9<br>Inulin                                     | A10<br>Laminarin                                | A11<br>Mannan                     | A12<br>Pectin                                       |
| B1<br>N-Acetyl-D-Galactosamine               | B2<br>N-Acetyl-Neuraminic Acid | B3<br>$\beta$ -D-Allose                    | B4<br>Amygdalin             | B5<br>D-Arabinose                 | B6<br>D-Arabitol                     | B7<br>L-Arabitol                    | B8<br>Arbutin                                   | B9<br>2-Deoxy-D-Ribose                           | B10<br>l-Erythritol                             | B11<br>D-Fucose                   | B12<br>3-O- $\beta$ -D-Galactopyranosyl-D-Arabinose |
| C1<br>Gentiobiose                            | C2<br>L-Glucose                | C3<br>Lactitol                             | C4<br>D-Lyxose              | C5<br>Maltitol                    | C6<br>$\alpha$ -Methyl-D-Galactoside | C7<br>$\beta$ -Methyl-D-Galactoside | C8<br>3-Methyl Glucose                          | C9<br>$\beta$ -Methyl-D-Glucuronic Acid          | C10<br>$\alpha$ -Methyl-D-Mannoside             | C11<br>$\beta$ -Methyl-D-Xyloside | C12<br>Palatinose                                   |
| D1<br>D-Raffinose                            | D2<br>Salicin                  | D3<br>Sedoheptulosan                       | D4<br>L-Sorbose             | D5<br>Stachyose                   | D6<br>D-Tagatose                     | D7<br>Turanose                      | D8<br>Xylitol                                   | D9<br>L-Xylose                                   | D10<br>$\gamma$ -Amino Butyric Acid<br><b>+</b> | D11<br>D-Amino Valeric Acid       | D12<br>Butyric Acid<br><b>+</b>                     |
| E1<br>Capric Acid                            | E2<br>Caproic Acid<br><b>+</b> | E3<br>Citraconic Acid<br><b>+</b>          | E4<br>Citramalic Acid       | E5<br>Dihydroxy Fumaric Acid      | E6<br>2-Hydroxy Benzoic Acid         | E7<br>4-Hydroxy Benzoic Acid        | E8<br>$\beta$ -Hydroxy Butyric Acid<br><b>+</b> | E9<br>$\gamma$ -Hydroxy Butyric Acid<br><b>W</b> | E10<br>$\beta$ -Hydroxy Pyruvic Acid            | E11<br>Itaconic Acid              | E12<br>5-Keto-D-Gluconic Acid                       |
| F1<br>D-Lactic Acid Methyl Ester<br><b>W</b> | F2<br>Malonic Acid<br><b>+</b> | F3<br>Melibionc Acid                       | F4<br>Oxalic Acid           | F5<br>Oxalomalic Acid<br><b>W</b> | F6<br>Quinic Acid<br><b>+</b>        | F7<br>D-Ribono-1,4-Lactone          | F8<br>Sebacic Acid<br><b>+</b>                  | F9<br>Sorbic Acid<br><b>+</b>                    | F10<br>Succinamic Acid<br><b>+</b>              | F11<br>D-Tartaric Acid            | F12<br>L-Tartaric Acid<br><b>+</b>                  |
| G1<br>Acetamide                              | G2<br>L-Alaninamide            | G3<br>N-Acetyl-L-Glutamic Acid<br><b>+</b> | G4<br>L-Arginine            | G5<br>Glycine<br><b>+</b>         | G6<br>L-Histidine<br><b>+</b>        | G7<br>L-Homoserine                  | G8<br>Hydroxy-L-Proline                         | G9<br>L-Isoleucine                               | G10<br>L-Leucine<br><b>W</b>                    | G11<br>L-Lysine                   | G12<br>L-Methionine                                 |
| H1<br>L-Ornithine                            | H2<br>L-Phenylalanine          | H3<br>L-Pyrogutamic Acid<br><b>+</b>       | H4<br>L-Valine<br><b>+</b>  | H5<br>D,L-Carnitine               | H6<br>Sec-Butylamine                 | H7<br>D,L-Octopamine                | H8<br>Putrescine                                | H9<br>Dihydroxy Acetone                          | H10<br>2,3-Butanediol                           | H11<br>2,3-Butanone               | H12<br>3-Hydroxy 2-Butanone                         |

FIGURE 2. Carbon Sources in PM2 MicroPlate

**PM3 MicroPlate™**

*Ralstonia pickettii*

|                                   |                                   |                           |                     |                       |                       |                                  |                              |                              |                                  |                               |                                 |
|-----------------------------------|-----------------------------------|---------------------------|---------------------|-----------------------|-----------------------|----------------------------------|------------------------------|------------------------------|----------------------------------|-------------------------------|---------------------------------|
| A1<br>Negative Control            | A2<br>Ammonia                     | A3<br>Nitrite             | A4<br>Nitrate       | A5<br>Urea            | A6<br>Biuret          | A7<br>L-Alanine                  | A8<br>L-Arginine             | A9<br>L-Asparagine           | A10<br>L-Aspartic Acid           | A11<br>L-Cysteine             | A12<br>L-Glutamic Acid          |
|                                   | +                                 | +                         | +                   | +                     |                       | +                                | W                            | +                            | +                                |                               | +                               |
| B1<br>L-Glutamine                 | B2<br>Glycine                     | B3<br>L-Histidine         | B4<br>L-Isoleucine  | B5<br>L-Leucine       | B6<br>L-Lysine        | B7<br>L-Methionine               | B8<br>L-Phenylalanine        | B9<br>L-Proline              | B10<br>L-Serine                  | B11<br>L-Threonine            | B12<br>L-Tryptophan             |
| +                                 | +                                 | +                         | +                   | +                     |                       | W                                | +                            | +                            | +                                | +                             | +                               |
| C1<br>L-Tyrosine                  | C2<br>L-Valine                    | C3<br>D-Alanine           | C4<br>D-Asparagine  | C5<br>D-Aspartic Acid | C6<br>D-Glutamic Acid | C7<br>D-Lysine                   | C8<br>D-Serine               | C9<br>D-Valine               | C10<br>L-Citrulline              | C11<br>L-Homoserine           | C12<br>L-Ornithine              |
| +                                 | +                                 | +                         | +                   | +                     | W                     |                                  | W                            | W                            | +                                |                               | +                               |
| D-1<br>N-Acetyl-D,L-Glutamic Acid | D2<br>N-Phthaloyl-L-Glutamic Acid | D3<br>L-Pyroglytamic Acid | D4<br>Hydroxylamine | D5<br>Methylamine     | D6<br>N-Amylamine     | D7<br>N-Butylamine               | D8<br>Ethylamine             | D9<br>Ethanolamine           | D10<br>Ethylenediamine           | D11<br>Putrescine             | D12<br>Agmatine                 |
| W                                 |                                   | +                         |                     |                       |                       |                                  |                              |                              |                                  |                               |                                 |
| E1<br>Histamine                   | E2<br>β-Phenylethylamine          | E3<br>Tyramine            | E4<br>Acetamide     | E5<br>Formamide       | E6<br>Glucuronamide   | E7<br>D,L-Lactamide              | E8<br>D-Glucosamine          | E9<br>D-Galactosamine        | E10<br>D-Mannosamine             | E11<br>N-Acetyl-D-Glucosamine | E12<br>N-Acetyl-D-Galactosamine |
|                                   |                                   |                           |                     |                       | W                     |                                  | W                            |                              | W                                |                               |                                 |
| F1<br>N-Acetyl-D-Mannosamine      | F2<br>Adenine                     | F3<br>Adenosine           | F4<br>Cytidine      | F5<br>Cytosine        | F6<br>Guanine         | F7<br>Guanosine                  | F8<br>Thymine                | F9<br>Thymidine              | F10<br>Uracil                    | F11<br>Uridine                | F12<br>Inosine                  |
|                                   | +                                 |                           |                     |                       |                       | +                                |                              |                              |                                  |                               | +                               |
| G1<br>Xanthine                    | G2<br>Xanthosine                  | G3<br>Uric Acid           | G4<br>Alloxan       | G5<br>Allantoin       | G6<br>Parabanic Acid  | G7<br>D,L-α-Amino-N-Butyric Acid | G8<br>γ-Amino-N-Butyric Acid | G9<br>ε-Amino-N-Caproic Acid | G10<br>D,L-α-Amino-Caprylic Acid | G11<br>D-Amino-N-Valeric Acid | G12<br>2-Amino-N-Valeric Acid   |
| +                                 |                                   |                           | +                   | W                     | +                     |                                  | +                            |                              |                                  |                               | +                               |
| H1<br>Ala-Asp                     | H2<br>Ala-Gln                     | H3<br>Ala-Glu             | H4<br>Ala-Gly       | H5<br>Ala-His         | H6<br>Ala-Leu         | H7<br>Ala-Thr                    | H8<br>Gly-Asn                | H9<br>Gly-Gln                | H10<br>Gly-Glu                   | H11<br>Gly-Met                | H12<br>Met-Ala                  |
| +                                 | +                                 | +                         | +                   | +                     | +                     | +                                | +                            | +                            | +                                | +                             | +                               |

FIGURE 3. Nitrogen Sources in PM3 MicroPlate

**PM4 MicroPlate™**

*Ralstonia pickettii*

|                             |                              |                                |                             |                                     |                                 |                                    |                                     |                                   |                                      |  |  |
|-----------------------------|------------------------------|--------------------------------|-----------------------------|-------------------------------------|---------------------------------|------------------------------------|-------------------------------------|-----------------------------------|--------------------------------------|--|--|
| A1<br>Negative Control      | A2<br>Phosphate              | A3<br>Pyrophosphate            | A4<br>Trimeta-phosphate     | A5<br>Tripoly-phosphate             | A6<br>Triethyl Phosphate        | A7<br>Hypophosphite                | A8<br>Adenosine- 2'-monophosphate   | A9<br>Adenosine- 3'-monophosphate | A10<br>Adenosine- 5'-monophosphate   | A11<br>Adenosine- 2',3'-cyclic monophosphate | A12<br>Adenosine- 3',5'-cyclic monophosphate |
|                             | +                            | +                              | +                           | +                                   | +                               | +                                  | +                                   | +                                 | +                                    | +  | +  |
| B1<br>Thiophosphate         | B2<br>Dithiophosphate        | B3<br>D,L-α-Glycerol Phosphate | B4<br>β-Glycerol Phosphate  | B5<br>L-α-Phosphatidyl-D,L-Glycerol | B6<br>D-2-Phospho-Glyceric Acid | B7<br>D-3-Phospho-Glyceric Acid    | B8<br>Guanosine- 2'-monophosphate   | B9<br>Guanosine- 3'-monophosphate | B10<br>Guanosine- 5'-monophosphate   | B11<br>Guanosine- 2',3'-cyclic monophosphate | B12<br>Guanosine- 3',5'-cyclic monophosphate |
| +                           | +                            | +                              | +                           | +                                   | +                               | +                                  | +                                   | +                                 | +                                    | +  | +  |
| C1<br>Phosphoenol Pyruvate  | C2<br>Phospho- Glycolic Acid | C3<br>D-Glucose-1-Phosphate    | C4<br>D-Glucose-6-Phosphate | C5<br>2-Deoxy-D-Glucose 6-Phosphate | C6<br>D-Glucosamine-6-Phosphate | C7<br>6-Phospho-Gluconic Acid      | C8<br>Cytidine- 2'-monophosphate    | C9<br>Cytidine- 3'-monophosphate  | C10<br>Cytidine- 5'-monophosphate    | C11<br>Cytidine- 2',3'-cyclic monophosphate  | C12<br>Cytidine- 3',5'-cyclic monophosphate  |
| +                           | +                            | +                              | +                           | +                                   | +                               | +                                  | +                                   | +                                 | +                                    | +  | +  |
| D1<br>D-Mannose-1-Phosphate | D2<br>D-Mannose-6-Phosphate  | D3<br>Cysteamine-S-Phosphate   | D4<br>Phospho-L-Arginine    | D5<br>O-Phospho-D-Serine            | D6<br>O-Phospho-L-Serine        | D7<br>O-Phospho-L-Threonine        | D8<br>Uridine- 2'-monophosphate     | D9<br>Uridine- 3'-monophosphate   | D10<br>Uridine- 5'-monophosphate     | D11<br>Uridine- 2',3'-cyclic monophosphate   | D12<br>Uridine- 3',5'-cyclic monophosphate   |
| +                           | +                            | +                              | +                           | +                                   | +                               | +                                  | +                                   | +                                 | +                                    | +  | +  |
| E1<br>O-Phospho-D-Tyrosine  | E2<br>O-Phospho-L-Tyrosine   | E3<br>Phosphocreatine          | E4<br>Phosphoryl Choline    | E5<br>O-Phosphoryl-Ethanolamine     | E6<br>Phosphono Acetic Acid     | E7<br>2-Aminoethyl Phosphonic Acid | E8<br>Methylene Diphosphonic Acid   | E9<br>Thymidine- 3'-Monophosphate | E10<br>Thymidine- 5'-Monophosphate   | E11<br>Inositol Hexaphosphate                | E12<br>Thymidine 3',5'-cyclic monophosphate  |
| +                           | +                            | +                              | +                           | +                                   | +                               | +                                  | +                                   | +                                 | +                                    | +  | +  |
| F1<br>Negative Control      | F2<br>Sulfate                | F3<br>Thiosulfate              | F4<br>Tetrathionate         | F5<br>Thiophosphate                 | F6<br>Dithiophosphate           | F7<br>L-Cysteine                   | F8<br>D-Cysteine                    | F9<br>L-Cysteiny-L-Glycine        | F10<br>L-Cysteic Acid                | F11<br>Cysteamine                            | F12<br>L-Cysteine Sulfonic Acid              |
|                             | +                            | +                              | +                           | +                                   | +                               | +                                  | +                                   | +                                 | +                                    | +  | +  |
| G1<br>N-Acetyl-L-Cysteine   | G2<br>S-Methyl-L-Cysteine    | G3<br>Cystathionine            | G4<br>Lanthionine           | G5<br>Glutathione                   | G6<br>D,L-Ethionine             | G7<br>L-Methionine                 | G8<br>D-Methionine                  | G9<br>Glycyl-L-Methionine         | G10<br>N-Acetyl-D,L-Methionine       | G11<br>L-Methionine Sulfoxide                | G12<br>L-Methionine Sulfone                  |
| +                           | +                            | +                              | +                           | +                                   | W                               | +                                  | +                                   | +                                 | +                                    | +  | +  |
| H1<br>L-Djenkolic Acid      | H2<br>Thiourea               | H3<br>1-Thio-β-D-Glucose       | H4<br>D,L-Lipoamide         | H5<br>Taurocholic Acid              | H6<br>Taurine                   | H7<br>Hypotaurine                  | H8<br>P-Amino Benzene Sulfonic Acid | H9<br>Butane Sulfonic Acid        | H10<br>2-Hydroxyethane Sulfonic Acid | H11<br>Methane Sulfonic Acid                 | H12<br>Tetramethylene Sulfone                |
| +                           | +                            | W                              | W                           | +                                   | +                               | +                                  | +                                   | +                                 | +                                    | +  | W  |

FIGURE 4. Phosphorus & Sulfur Sources in PM4 MicroPlate