

#### PM1 MicroPlate™ Carbon Sources

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

#### PM2A MicroPlate™ Carbon Sources

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A1 Negative Control	A2 Chondroitin Sulfate C	A3 α-Cyclodextrin	A4 β-Cyclodextrin	A5 γ-Cyclodextrin	A6 Dextrin	A7 Gelatin	A8 Glycogen	A9 Inulin	A10 Laminarin	A11 Mannan	A12 Pectin
B1 N-Acetyl-D- Galactosamine	B2 N-Acetyl- Neuraminic Acid	B3 β-D-Allose	B4 Amygdalin	B5 D-Arabinose	B6 D-Arabitol	B7 L-Arabitol	B8 Arbutin	B9 2-Deoxy-D- Ribose	B10 i-Erythritol	B11 D-Fucose	B12 3-0-8-D- Galactopyranosyl D-Arabinose
C1 Gentiobiose	C2 L-Glucose	C3 Lactitol	C4 D-Melezitose	C5 Maltitol	C6 α-Methyl-D- Glucoside	C7 B-Methyl-D- Galactoside	C8 3-Methyl Glucose	C9 B-Methyl-D- Glucuronic Acid	C10 α-Methyl-D- Mannoside	C11 B-Methyl-D- Xyloside	C12 Palatinose
D1 D-Raffinose	D2 Salicin	D3 Sedoheptulosan	D4 L-Sorbose	D5 Stachyose	D6 D-Tagatose	D7 Turanose	D8 Xylitol	D9 N-Acetyl-D- Glucosaminitol	D10 γ-Amino Butyric Acid	D11 δ-Amino Valeric Acid	D12 Butyric Acid
E1 Capric Acid	E2 Caproic Acid	E3 Citraconic Acid	E4 Citramalic Acid	E5 D-Glucosamine	E6 2-Hydroxy Benzoic Acid	E7 4-Hydroxy Benzoic Acid	E8 B-Hydroxy Butyric Acid	E9 Glycolic Acid	E10 α-Keto-Valeric Acid	E11 Itaconic Acid	E12 5-Keto-D- Gluconic Acid
F1 D-Lactic Acid Methyl Ester	F2 Malonic Acid	F3 Melibionic Acid	F4 Oxalic Acid	F5 Oxalomalic Acid	F6 Quinic Acid	F7 D-Ribono-1,4- Lactone	F8 Sebacic Acid	F9 Sorbic Acid	F10 Succinamic Acid	F11 D-Tartaric Acid	F12 L-Tartaric Acid
G1 Acetamide	G2 L-Alaninamide	G3 N-Acetyl-L- Glutamic Acid	G4 L-Arginine	G5 Glycine	G6 L-Histidine	G7 L-Homoserine	G8 Hydroxy-LProline	G9 L-Isoleucine	G10 L-Leucine	G11 L-Lysine	G12 L-Methionine
H1 L-Ornithine	H2 L-Phenylalanine	H3 L-Pyroglutamic Acid	H4 L-Valine	H5 D,L-Carnitine	H6 Sec-Butylamine	H7 D,L-Octopamine	H8 Putrescine	H9 Dihydroxy Acetone	H10 2,3-Butanediol	H11 2,3-Butanedione	H12 3-Hydroxy-2- Butanone



## PM3B MicroPlate™ Nitrogen Sources

A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
Ammonia	Nitrite	Nitrate	Urea	Biuret	L-Alanine	L-Arginine	L-Asparagine	L-Aspartic Acid	L-Cysteine	L-Glutamic Acid
B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
Glycine	L-Histidine	L-Isoleucine	L-Leucine	L-Lysine	L-Methionine	L-Phenylalanine	L-Proline	L-Serine	L-Threonine	L-Tryptophan
C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
L-Valine	D-Alanine	D-Asparagine	D-Aspartic Acid	D-Glutamic Acid	D-Lysine	D-Serine	D-Valine	L-Citrulline	L-Homoserine	L-Ornithine
D2 N-Phthaloyl-L- Glutamic Acid	D3 L-Pyroglutamic Acid	D4 Hydroxylamine	D5 Methylamine	D6 N-Amylamine	D7 N-Butylamine	D8 Ethylamine	D9 Ethanolamine	D10 Ethylenediamine	D11 Putrescine	D12 Agmatine
E2 8-Phenylethyl- amine	E3 Tyramine	E4 Acetamide	E5 Formamide	E6 Glucuronamide	E7 D,L-Lactamide	E8 D-Glucosamine	E9 D-Galactosamine	E10 D-Mannosamine	E11 N-Acetyl-D- Glucosamine	E12 N-Acetyl-D- Galactosamine
F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
Adenine	Adenosine	Cytidine	Cytosine	Guanine	Guanosine	Thymine	Thymidine	Uracil	Uridine	Inosine
G2 Xanthosine	G3 Uric Acid	G4 Alloxan	G5 Allantoin	G6 Parabanic Acid	G7 D,L-α-Amino-N- Butyric Acid	G8 γ-Amino-N- Butyric Acid	G9 ε-Amino-N- Caproic Acid	G10 D,L-α-Amino- Caprylic Acid	G11 δ-Amino-N- Valeric Acid	G12 α-Amino-N- Valeric Acid
H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
Ala-Gin	Ala-Glu	Ala-Gly	Ala-His	Ala-Leu	Ala-Thr	Gly-Asn	Gly-Gln	Gly-Glu	Gly-Met	Met-Ala
	B2 Glycine  C2 L-Valine  D2 N-Phthaloyl-L- Glutamic Acid  E2 B-Phenylethyl- amine  F2 Adenine  G2 Xanthosine	Ammonia Nitrite  B2 Glycine L-Histidine  C2 L-Valine D-Alanine  D3 N-Phthaloyl-L-Glutamic Acid Acid L-Pyroglutamic Acid L-Pyroglutamic Acid Tyramine  F2 B-Phenylethyl-amine  F2 Adenine G3 Xanthosine G3 Xanthosine G3 Uric Acid	Ammonia Nitrite Nitrate  B2 Glycine B3 L-Histidine L-Isoleucine  C2 L-Valine D-Alanine D-Asparagine  D2 N-Phthaloyl-L- Glutamic Acid L-Pyroglutamic Acid Hydroxylamine  E2 B-Phenylethyl- amine F2 Adenine F3 Adenosine F4 Cytidine  G2 Xanthosine G3 Xanthosine G4 Alloxan  H2 H3 H4	Ammonia Nitrite Nitrate Urea  B2 Glycine B3 L-Histidine B4 L-Isoleucine L-Leucine  C2 L-Valine D-Alanine D-Asparagine D-Aspartic Acid  D2 N-Phthaloyl-L- Glutamic Acid L-Pyroglutamic Acid Hydroxylamine Methylamine  E2 B-Phenylethyl- amine F2 Adenosine F4 Cytidine Cytosine  G2 Xanthosine G3 Xanthosine G3 Vric Acid H4  H5	Ammonia Nitrite Nitrate Urea Biuret  B2 Glycine B3 L-Histidine B4 L-Isoleucine B5 L-Leucine B6 L-Leucine B6 L-Leucine B6 L-Leucine B6 L-Leucine B7 B6 L-Leucine B6 L-L	Ammonia Nitrite Nitrate Urea Biuret L-Alanine  B2 Glycine B3 L-Histidine L-Isoleucine B5 L-Leucine B6 L-Lysine B7 L-Methionine  C2 L-Valine D-Alanine C4 D-Asparagine D5 N-Phthaloyl-L-Glutamic Acid D-Asparagine Acid D5 Methylamine D6 N-Amylamine D7 N-Butylamine D7 N-Butylamine D6 N-Amylamine D7 N-Butylamine D6 N-Amylamine D7 N-Butylamine D7 N-Butyla	Ammonia Nitrite Nitrate Urea Biuret L-Alanine L-Arginine  B2 B3 B4 L-Histidine L-Isoleucine L-Leucine L-Leucine L-Leucine L-Leucine L-Phenylalanine  C2 C3 C3 D-Alanine D-Asparagine D-Aspartic Acid D-Glutamic Acid D-Lysine D-Serine  D2 N-Phthaloyl-L-Glutamic Acid L-Pyroglutamic Acid D-Hydroxylamine Acid D-Hydroxylamine D-Serine D-Serin	Ammonia Nitrite Nitrate Urea Biuret L-Alanine L-Arginine L-Asparagine  B2 Glycine B3 L-Histidine L-Isoleucine B6 L-Leucine B6 L-Leucine B7 L-Methionine B7 L-Methionine B8 L-Prolline B9 L-Prolline B8 L-Prolline B9 L-Prolline B8 L-Prolline B9 L-Prolline B8 L-Prolline B9 L-Prolline B9 L-Prolline B9 L-Prolline B8 L-Prolline B9	Ammonia Nitrite Nitrate Urea Biuret L-Alanine L-Arginine L-Asparagine L-Asparatic Acid  B2 B3 B4 L-Histidine L-Isoleucine L-Leucine L-Leucine L-Leucine L-Leucine L-Leucine L-Leucine L-Leucine L-Leucine L-Methionine L-Phenylalanine L-Profine L-Serine  C2 C3 C4 C5 D-Asparagine D-Asparatic Acid D-Asparatic Acid D-Lysine D-Serine D-Valine L-Citrulline  C4 D-Asparagine D-Asparagine D-Asparatic Acid D-Glutamic Acid D-Lysine D-Serine D-Valine L-Citrulline D-Valine L-Citrulline D-Valine D-Val	Ammonia Nitrite Nitrate Urea Biuret L-Alanine L-Arginine L-Asparagine L-Asparagine L-Asparatic Acid L-Cysteine  B2

# PM4A MicroPlate<sup>™</sup> Phosphorus and Sulfur Sources

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



## PM5 MicroPlate™ Nutrient Supplements

A1 Negative Control	A2 Positive Control	A3 L-Alanine	A4 L-Arginine	A5 L-Asparagine	A6 L-Aspartic Acid	A7 L-Cysteine	A8 L-Glutamic Acid	A9 Adenosine-3',5'- cyclic monophosphate	A10 Adenine	A11 Adenosine	A12 2'-Deoxy Adenosine
B1 L-Glutamine	B2 Glycine	B3 L-Histidine	B4 L-Isoleucine		B6 L-Lysine	B7 L-Methionine	B8 L-Phenylalanine	B9 Guanosine-3',5'- cyclic monophosphate	B10 Guanine	B11 Guanosine	B12 2'-Deoxy Guanosine
C1 L-Proline	C2 L-Serine	C3 L-Threonine	C4 L-Tryptophan	C5 L-Tyrosine	C6 L-Valine	C7 L-Isoleucine + L-Valine	C8 trans-4-Hydroxy L-Proline	C9 (5) 4-Amino Imidazole-4(5)- Carboxamide	C10 Hypoxanthine	C11 Inosine	C12 2'-Deoxy Inosine
D1 L-Ornithine	D2 L-Citrulline	D3 Chorismic Acid	D4 (-)Shikimic Acid	D5 L-Homoserine Lactone	D6 D-Alanine	D7 D-Aspartic Acid	D8 D-Glutamic Acid	D9 D,L-α,ε- Diaminopimelic Acid	D10 Cytosine	D11 Cytidine	D12 2'-Deoxy Cytidine
E1 Putrescine	E2 Spermidine	E3 Spermine		E5 Pyridoxal	E6 Pyridoxamine	E7 β-Alanine	E8 D-Pantothenic Acid	E9 Orotic Acid	E10 Uracil	E11 Uridine	E12 2'-Deoxy Uridine
F1 Quinolinic Acid	F2 Nicotinic Acid	F3 Nicotinamide		F5 δ-Amino- Levulinic Acid	F6 Hematin	F7 Deferoxamine Mesylate	F8 D-(+)-Glucose	F9 N-Acetyl D-Glucosamine	F10 Thymine	F11 Glutathione (reduced form)	F12 Thymidine
G1 Oxaloacetic Acid	G2 D-Biotin	G3 Cyano- Cobalamine		G5 Folic Acid	G6 Inosine + Thiamine	G7 Thiamine	G8 Thiamine Pyrophosphate	G9 Riboflavin	G10 Pyrrolo-Quinoline Quinone	G11 Menadione	G12 myo-Inositol
H1 Butyric Acid	H2 D,L-α-Hydroxy- Butyric Acid	H3 α-Keto- Butyric Acid		H5 D,L-α-Lipoic Acid (oxidized form)	H6 D,L-Mevalonic Acid	H7 D,L-Carnitine	H8 Choline	H9 Tween 20	H10 Tween 40	H11 Tween 60	H12 Tween 80

## PM6 MicroPlate™ Peptide Nitrogen sources

A1 Negative Control	A2 Positive Control: L-Glutamine	A3 Ala-Ala	A4 Ala-Arg	A5 Ala-Asn	A6 Ala-Glu	A7 Ala-Gly	A8 Ala-His	A9 Ala-Leu	A10 Ala-Lys	A11 Ala-Phe	A12 Ala-Pro
31	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
Ja-Ser	Ala-Thr	Ala-Trp	Ala-Tyr	Arg-Ala	Arg-Arg	Arg-Asp	Arg-Gln	Arg-Glu	Arg-lle	Arg-Leu	Arg-Lys
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
Arg-Met	Arg-Phe	Arg-Ser	Arg-Trp	Arg-Tyr	Arg-Val	Asn-Glu	Asn-Val	Asp-Asp	Asp-Glu	Asp-Leu	Asp-Lys
01	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12
Asp-Phe	Asp-Trp	Asp-Val	Cys-Gly	Gln-Gln	Gln-Gly	Glu-Asp	Glu-Glu	Glu-Gly	Glu-Ser	Glu-Trp	Glu-Tyr
:1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12
Glu-Val	Gly-Ala	Gly-Arg	Gly-Cys	Gly-Gly	Gly-His	Gly-Leu	Gly-Lys	Gly-Met	Gly-Phe	Gly-Pro	Gly-Ser
1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
Gly-Thr	Gly-Trp	Gly-Tyr	Gly-Val	His-Asp	His-Gly	His-Leu	His-Lys	His-Met	His-Pro	His-Ser	His-Trp
i1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
lis-Tyr	His-Val	Ile-Ala	Ile-Arg	Ile-Gln	Ile-Gly	Ile-His	Ile-Ile	Ile-Met	Ile-Phe	Ile-Pro	Ile-Ser
l1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
le-Trp	Ile-Tyr	Ile-Val	Leu-Ala	Leu-Arg	Leu-Asp	Leu-Glu	Leu-Gly	Leu-Ile	Leu-Leu	Leu-Met	Leu-Phe



# PM7 MicroPlate™ Peptide Nitrogen sources

	A2 Positive Control: L-Glutamine	A3 Leu-Ser	A4 Leu-Trp	A5 Leu-Val	A6 Lys-Ala	A7 Lys-Arg	A8 Lys-Glu	A9 Lys-lle	A10 Lys-Leu	A11 Lys-Lys	A12 Lys-Phe
	B2 Lys-Ser	B3 Lys-Thr	B4 Lys-Trp	B5	B6 Lys-Val	B7 Met-Arg	B8 Met-Asp	B9 Met-Gin	B10 Met-Glu	B11 Met-Gly	B12 Met-His
Lys-Pro	Lys-ser	Lys-Inr	Lys-1rp	Lys-Tyr	Lys-vai	Met-Arg	Met-Asp	Met-Gin	Met-Glu	Met-Gly	Met-HIS
	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
	Met-Leu	Met-Lys	Met-Met	Met-Phe	Met-Pro	Met-Trp	Met-Val	Phe-Ala	Phe-Gly	Phe-Ile	Phe-Phe
	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12
	Phe-Ser	Phe-Trp	Pro-Ala	Pro-Asp	Pro-Gln	Pro-Gly	Pro-Hyp	Pro-Leu	Pro-Phe	Pro-Pro	Pro-Tyr
E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12
Ser-Ala	Ser-Gly	Ser-His	Ser-Leu	Ser-Met	Ser-Phe	Ser-Pro	Ser-Ser	Ser-Tyr	Ser-Val	Thr-Ala	Thr-Arg
F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
Thr-Glu	Thr-Gly	Thr-Leu	Thr-Met	Thr-Pro	Trp-Ala	Trp-Arg	Trp-Asp	Trp-Glu	Trp-Gly	Trp-Leu	Trp-Lys
G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
Trp-Phe	Trp-Ser	Trp-Trp	Trp-Tyr	Tyr-Ala	Tyr-Gin	Tyr-Glu	Tyr-Gly	Tyr-His	Tyr-Leu	Tyr-Lys	Tyr-Phe
H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
Tyr-Trp	Tyr-Tyr	Val-Arg	Val-Asn	Val-Asp	Val-Gly	Val-His	Val-Ile	Val-Leu	Val-Tyr	Val-Val	γ-Glu-Gly

# PM8 MicroPlate™ Peptide Nitrogen sources

A1 Negative Control	A2 Positive Control: L-Glutamine	A3 Ala-Asp	A4 Ala-Gin	A5 Ala-Ile	A6 Ala-Met	A7 Ala-Val	A8 Asp-Ala	A9 Asp-Gin	A10 Asp-Gly	A11 Glu-Ala	A12 Gly-Asn
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
Gly-Asp	Gly-lle	His-Ala	His-Glu	His-His	Ile-Asn	Ile-Leu	Leu-Asn	Leu-His	Leu-Pro	Leu-Tyr	Lys-Asp
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
Lys-Gly	Lys-Met	Met-Thr	Met-Tyr	Phe-Asp	Phe-Glu	Gln-Glu	Phe-Met	Phe-Tyr	Phe-Val	Pro-Arg	Pro-Asn
D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12
Pro-Glu	Pro-lle	Pro-Lys	Pro-Ser	Pro-Trp	Pro-Val	Ser-Asn	Ser-Asp	Ser-Gln	Ser-Glu	Thr-Asp	Thr-Gln
E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12
Thr-Phe	Thr-Ser	Trp-Val	Tyr-lle	Tyr-Val	Val-Ala	Val-Gln	Val-Glu	Val-Lys	Val-Met	Val-Phe	Val-Pro
F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
Val-Ser	<b>B</b> -Ala-Ala	B-Ala-Gly	B-Ala-His	Met- <b>B</b> -Ala	B-Ala-Phe	D-Ala-D-Ala	D-Ala-Gly	D-Ala-Leu	D-Leu-D-Leu	D-Leu-Gly	D-Leu-Tyr
G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
γ-Glu-Gly	γ-D-Glu-Gly	Gly-D-Ala	Gly-D-Asp	Gly-D-Ser	Gly-D-Thr	Gly-D-Val	Leu-β-Ala	Leu-D-Leu	Phe-ß-Ala	Ala-Ala-Ala	D-Ala-Gly-Gly
H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
Gly-Gly-Ala	Gly-Gly-D-Leu	Gly-Gly-Gly	Gly-Gly-lle	Gly-Gly-Leu	Gly-Gly-Phe	Val-Tyr-Val	Gly-Phe-Phe	Leu-Gly-Gly	Leu-Leu-Leu	Phe-Gly-Gly	Tyr-Gly-Gly



## PM9 MicroPlate<sup>™</sup> Osmolytes

A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
NaCl 1%	NaCl 2%	NaCl 3%	NaCl 4%	NaCl 5%	NaCl 5.5%	NaCl 6%	NaCl 6.5%	NaCl 7%	NaCl 8%	NaCl 9%	NaCl 10%
B1 NaCl 6%	B2 NaCl 6% + Betaine	B3 NaCl 6% + N-N Dimethyl Glycine	B4 NaCl 6% + Sarcosine	B5 NaCl 6% + Dimethyl sulphonyl propionate	B6 NaCl 6% + MOPS	B7 NaCl 6% + Ectoine	B8 NaCl 6% + Choline	B9 NaCl 6% + Phosphoryl Choline	B10 NaCl 6% + Creatine	B11 NaCl 6% + Creatinine	B12 NaCl 6% + L- Carnitine
C1 NaCl 6% + KCl	C2 NaCl 6% + L-Proline	C3 NaCl 6% + N-Acetyl L-Glutamine	C4 NaCl 6% + β- Glutamic Acid	C5 NaCl 6% + γ-Amino-N- Butyric Acid	C6 NaCl 6% + Glutathione	C7 NaCl 6% + Glycerol	C8 NaCl 6% + Trehalose	C9 NaCl 6% + Trimethylamine- N-oxide	C10 NaCl 6% + Trimethylamine	C11 NaCl 6% + Octopine	C12 NaCl 6% + Trigonelline
D1 Potassium chloride 3%	D2 Potassium chloride 4%	D3 Potassium chloride 5%	D4 Potassium chloride 6%	D5 Sodium sulfate 2%	D6 Sodium sulfate 3%	D7 Sodium sulfate 4%	D8 Sodium sulfate 5%	D9 Ethylene glycol 5%	D10 Ethylene glycol 10%	D11 Ethylene glycol 15%	D12 Ethylene glycol 20%
E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12
Sodium formate	Sodium formate	Sodium formate	Sodium formate	Sodium formate	Sodium formate	Urea	Urea	Urea	Urea	Urea	Urea
1%	2%	3%	4%	5%	6%	2%	3%	4%	5%	6%	7%
F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
Sodium Lactate	Sodium Lactate	Sodium Lactate	Sodium Lactate	Sodium Lactate	Sodium Lactate	Sodium Lactate	Sodium Lactate	Sodium Lactate	Sodium Lactate	Sodium Lactate	Sodium Lactate
1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
Sodium	Sodium	Sodium	Sodium	Sodium	Sodium	Sodium	Sodium	Ammonium	Ammonium	Ammonium	Ammonium
Phosphate pH 7	Phosphate pH 7	Phosphate pH 7	Phosphate pH 7	Benzoate pH 5.2	Benzoate pH 5.2	Benzoate pH 5.2	Benzoate pH 5.2	sulfate pH 8	sulfate pH 8	sulfate pH 8	sulfate pH 8
20mM	50mM	100mM	200mM	20mM	50mM	100mM	200mM	10mM	20mM	50mM	100mM
H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
Sodium Nitrate	Sodium Nitrate	Sodium Nitrate	Sodium Nitrate	Sodium Nitrate	Sodium Nitrate	Sodium Nitrite	Sodium Nitrite	Sodium Nitrite	Sodium Nitrite	Sodium Nitrite	Sodium Nitrite
10mM	20mM	40mM	60mM	80mM	100mM	10mM	20mM	40mM	60mM	80mM	100mM

#### PM10 MicroPlate™ pH

A2 pH 4	A3 pH 4.5	A4 pH 5	A5 pH 5.5	A6	A7	A8	A9	A10	A11	A12
			pi i 3.3	pH 6	pH 7	pH 8	pH 8.5	pH 9	pH 9.5	pH 10
B2 pH 4.5 + L-Alanine	B3 pH 4.5 + L-Arginine	B4 pH 4.5 + L-Asparagine	B5 pH 4.5 + L-Aspartic Acid	B6 pH 4.5 + L-Glutamic Acid	B7 pH 4.5 + L-Glutamine	B8 pH 4.5 + Glycine	B9 pH 4.5 + L-Histidine	B10 pH 4.5 + L-Isoleucine	B11 pH 4.5 + L-Leucine	B12 pH 4.5 + L-Lysine
C2 pH 4.5 + L-Phenylalanine	C3 pH 4.5 + L-Proline	C4 pH 4.5 + L-Serine	C5 pH 4.5 + L-Threonine	C6 pH 4.5 + L-Tryptophan	C7 pH 4.5 + L-Citrulline	C8 pH 4.5 + L-Valine	C9 pH 4.5 + Hydroxy- L-Proline	C10 pH 4.5 + L-Ornithine	C11 pH 4.5 + L-Homoarginine	C12 pH 4.5 + L-Homoserine
D2 pH 4.5 + L-Norleucine	D3 pH 4.5 + L-Norvaline	D4 pH 4.5 + α-Amino-N- Butyric Acid	D5 pH 4.5 + p-Amino- Benzoic Acid	D6 pH 4.5 + L-Cysteic Acid	D7 pH 4.5 + D-Lysine	D8 pH 4.5 + 5-Hydroxy Lysine	pH 4.5 +	pH 4.5 +	D11 pH 4.5 + Trimethylamine- N-oxide	D12 pH 4.5 + Urea
E2 pH 9.5 + L-Alanine	E3 pH 9.5 + L-Arginine	E4 pH 9.5 + L-Asparagine	E5 pH 9.5 + L-Aspartic Acid	E6 pH 9.5 + L-Glutamic Acid	E7 pH 9.5 + L-Glutamine	E8 pH 9.5 + Glycine	E9 pH 9.5 + L-Histidine	E10 pH 9.5 + L-Isoleucine	E11 pH 9.5 + L-Leucine	E12 pH 9.5 + L-Lysine
F2 pH 9.5 + L-Phenylalanine	F3 pH 9.5 + L-Proline	F4 pH 9.5 + L-Serine	F5 pH 9.5 + L-Threonine	F6 pH 9.5 + L-Tryptophan	F7 pH 9.5 + L-Tyrosine	F8 pH 9.5 + L-Valine	F9 pH 9.5 + Hydroxy- L-Proline	F10 pH 9.5 + L-Ornithine	F11 pH 9.5 + L-Homoarginine	F12 pH 9.5 + L-Homoserine
G2 pH 9.5 + L-Norleucine	G3 pH 9.5 + L-Norvaline	G4 pH 9.5 + Agmatine	G5 pH 9.5 + Cadaverine	G6 pH 9.5 + Putrescine	G7 pH 9.5 + Histamine	G8 pH 9.5 + Phenylethylamine	G9 pH 9.5 + Tyramine	G10 pH 9.5 + Creatine	G11 pH 9.5 + Trimethylamine- N-oxide	G12 pH 9.5 + Urea
H2 X-α-D-Glucoside	H3 X-β-D- Glucoside	H4 X-α-D- Galactoside	H5 X-β-D- Galactoside	H6 X-α-D- Glucuronide	H7 X-β-D- Glucuronide	H8 X-β-D- Glucosaminide	H9 X-β-D- Galactosaminide	H10 X-α-D- Mannoside	H11 X-PO4	H12 X-SO4
	L-Alanine  C2 pH 4.5 + L-Phenylalanine  D2 pH 4.5 + L-Norleucine  E2 pH 9.5 + L-Alanine  F2 pH 9.5 + L-Phenylalanine  G2 pH 9.5 + L-Norleucine	L-Alanine  C2 pH 4.5 + L-Phenylalanine  D3 pH 4.5 + L-Norleucine  D3 pH 9.5 + L-Alanine  E2 pH 9.5 + L-Alanine  F2 pH 9.5 + L-Phenylalanine  F3 pH 9.5 + L-Phenylalanine  C3 pH 9.5 + L-Phenylalanine  C4 pH 9.5 + L-Phenylalanine  C5 pH 9.5 + L-Phonylalanine  C6 pH 9.5 + L-Phonylalanine  C7 pH 9.5 + L-Phonylalanine  C8 pH 9.5 + L-Phonylalanine  C9 pH 9.5 + L-Phonylalanine  C9 pH 9.5 + L-Norleucine  C9 pH 9.5 + L-Norleucine  H2 X-c-D-Glucoside  X-P-D-	L-Alanine         L-Arginine         L-Asparagine           C2 pH 4.5 + L-Phenylalanine         C4 pH 4.5 + L-Serine           D2 pH 4.5 + L-Norleucine         D3 pH 4.5 + DH 4.5	L-Alanine         L-Arginine         L-Asparagine         L-Aspartic Acid           C2 pH 4.5 + L-Proline         C4 pH 4.5 + L-Serine         C5 pH 4.5 + L-Threonine           D2 pH 4.5 + L-Norleucine         D3 pH 4.5 + pH 4.5 + c-Amino-N-Butyric Acid         D5 pH 4.5 + pH 9.5 + pH 9	L-Alanine  L-Arginine  L-Asparagine  L-Aspartic Acid  L-Glutamic Acid  L-Glutamic Acid  C2 pH 4.5 + L-Proline  D3 pH 4.5 + L-Norleucine  D4 pH 4.5 + L-Norvaline  D5 pH 4.5 + L-Norvaline  D6 pH 4.5 + L-Norvaline  E2 pH 9.5 + L-Alanine  E3 pH 9.5 + L-Arginine  E4 pH 9.5 + L-Arginine  E5 pH 9.5 + L-Asparagine  E5 pH 9.5 + L-Asparagine  E6 pH 9.5 + L-Asparatic Acid  D6 pH 9.5 + L-Asparatic Acid  D6 pH 9.5 + L-Asparatic Acid  E6 pH 9.5 + L-Asparatic Acid  E7 pH 9.5 + L-Asparagine  E4 pH 9.5 + L-Asparatic Acid  E6 pH 9.5 + L-Asparatic Acid  E7 pH 9.5 + L-Asparatic Acid  E7 pH 9.5 + L-Asparatic Acid  E6 pH 9.5 + L-Asparatic Acid  E7 pH 9.5 + L-Asparatic Acid  E6 pH 9.5 + L-Asparatic Acid  E7 pH 9.5 + L-Asparatic Acid  E6 pH 9.5 + L-Tryptophan  E7 pH 9.5 + L-Tryptophan  E8 pH 9.5 + L-Asparatic Acid  E6 pH 9.5 + L-Asparatic Acid  E7 pH 9.5 + L-	L-Alanine  L-Asparagine  L-Asparatic	L-Alanine         L-Asparagine         L-Asparatic Acid         L-Glutamic Acid         L-Glutamine         Glycine           C2 pH 4.5 + L-Proline         D4 pH 4.5 + L-Serine         C5 pH 4.5 + L-Threonine         C7 pH 4.5 + L-Citrulline         D4 pH 4.5 + L-Valine         D4 pH 4.5 + L-Valine         D4 pH 4.5 + L-Valine         D5 pH 4.5 + L-Valine         D6 pH 4.5 + L-Valine         D7 pH 4.5 + L-Valine         D8 pH 4.5 + L-Valine         D7 pH 4.5 + L-Valine         D8 pH 4.5 + L-Valine         D7 pH 4.5 + L-Valine         D8 pH 4.5 + L-Valine         D9 pH 9.5 + L-Valine	L-Alanine         L-Asparagine         L-Asparatic Acid         L-Glutamic Acid         L-Glutamine         Glycine         L-Histidine           C2 pH 4.5 + L-Phenylalanine         C3 pH 4.5 + L-Proline         C4 pH 4.5 + L-Proline         C5 pH 4.5 + L-Tryptophan         C6 pH 4.5 + L-Valine         C9 pH 9.5 + L-Valine         <	L-Alanine  L-Arginine  L-Asparagine  L-Asparatic Acid  L-Glutamic Acid  L-Glutamine  Glycine  L-Histidine  L-Histidine  L-Insoleucine  L-Ins	L-Alanine         L-Arginine         L-Asparagine         L-Aspartic Acid         L-Glutamine         Glycine         L-Histidine         L-Isoleucine         L-Leucine           C2 pH 4.5+ L-Phenylalanine         C3 pH 4.5+ L-Proline         C4 pH 4.5+ L-Tryptophan         C6 pH 4.5+ L-Tryptophan         C7 pH 4.5+ L-Tryptophan         C7 pH 4.5+ L-Tryptophan         C8 pH 4.5+ L-Valine         C9 pH 4.5+ L-Omithine L-Omithine         C10 pH 4.5+ L-Omithine L-Omithine         C10 pH 4.5+ L-Omithine L-Omithine         C10 pH 4.5+ L-Indicated         C10 pH 4.5+ L-Omithine         C10 pH 4.5+ L-Indicated         C10 pH 4.5+ L-Indicated         C10 pH 4.5+ L-Indicated         C10 pH 4.5+ L-Indicated         C10 pH 4.5+ L-Indicated </td