

**MEM Medium Ingredient Formula\_Table 1**

Ingredient(mg/L) / Cat. No.	PM150410	PM150410A	PM150412	PM150412A	PM150414	PM150415	PM150416
<b>Inorganic Salt</b>							
CaCl <sub>2</sub> (Anhydrous)	200	200	200	200	200	200	200
MgSO <sub>4</sub> (Anhydrous)	97.67	97.67	97.67	97.67	97.67	97.67	97.67
KCl	400	400	400	400	400	400	400
NaHCO <sub>3</sub>	2200	2200	2200	2200	2200	2200	2200
NaCl	6800	6800	6800	6800	6350	6350	6800
NaH <sub>2</sub> PO <sub>4</sub> (Anhydrous)	122	122	122	122	122	122	122
<b>Amino Acid</b>							
L-Alanyl-L-Glutamine	-	-	-	-	-	-	434
L-Arginine Hydrochloride	126	126	126	126	126	126	126
L-Cystine 2HCl	31	31	31	31	31	31	31
L-Glutamine	292	292	-	-	292	-	-
L-Histidine Hydrochloride-H <sub>2</sub> O	42	42	42	42	42	42	42
L-Isoleucine	52	52	52	52	52	52	52
L-Leucine	52	52	52	52	52	52	52
L-Lysine Hydrochloride	73	73	73	73	73	73	73
L-Methionine	15	15	15	15	15	15	15
L-Phenylalanine	32	32	32	32	32	32	32
L-Threonine	48	48	48	48	48	48	48
L-Tryptophan	10	10	10	10	10	10	10
L-Tyrosine Disodium Salt Dihydrate	52	52	52	52	52	52	52
L-Valine	46	46	46	46	46	46	46
Glycine	7.5	7.5	7.5	7.5	7.5	7.5	7.5
L-Alanine	8.9	8.9	8.9	8.9	8.9	8.9	8.9
L-Asparagine Monohydrate	15	15	15	15	15	15	15
L-Aspartic Acid	13.3	13.3	13.3	13.3	13.3	13.3	13.3
L-Glutamic Acid	14.7	14.7	14.7	14.7	14.7	14.7	14.7
L-Proline	11.5	11.5	11.5	11.5	11.5	11.5	11.5
L-Serine	10.5	10.5	10.5	10.5	10.5	10.5	10.5
<b>Vitamin</b>							
Choline Chloride	1	1	1	1	1	1	1
D-Calcium Pantothenate	1	1	1	1	1	1	1
Folic Acid	1	1	1	1	1	1	1
Niacinamide	1	1	1	1	1	1	1
Pyridoxal Hydrochloride	1	1	1	1	1	1	1
Riboflavin	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Thiamine Hydrochlorid	1	1	1	1	1	1	1
Meso-inositol	2	2	2	2	2	2	2
<b>Others</b>							
D-Glucose	1000	1000	1000	1000	1000	1000	1000
HEPES	-	-	-	-	5958	5958	-
Phenol Red	10	10	10	10	10	10	10
Penicillin G Sodium Salt	-	100 KU	-	100 KU	-	-	-
Streptomycin Sulfate	-	100	-	100	-	-	-

**MEM Medium Ingredient Formula\_Table 2**

Ingredient(mg/L) / Cat. No.	PM150417	PM150418	PM150419	PM150420	PM150430	PM150431	PM150432
<b>Inorganic Salt</b>							
CaCl2 (Anhydrous)	200	200	200	200	200	200	200
MgSO4 (Anhydrous)	97.67	97.67	97.67	97.67	97.67	97.67	97.67
KCl	400	400	400	400	400	400	400
NaHCO3	2200	2200	2200	2200	2200	2200	2200
NaCl	6350	6800	6800	6350	6350	6800	6350
NaH2PO4 (Anhydrous)	122	122	122	122	122	122	122
<b>Amino Acid</b>							
L-Alanyl-L-Glutamine	434	—	—	—	—	434	434
L-Arginine Hydrochloride	126	126	126	126	126	126	126
L-Cystine 2HCl	31	31	31	31	31	31	31
L-Glutamine	—	292	—	292	—	—	—
L-Histidine Hydrochloride-H2O	42	42	42	42	42	42	42
L-Isoleucine	52	52	52	52	52	52	52
L-Leucine	52	52	52	52	52	52	52
L-Lysine Hydrochloride	73	73	73	73	73	73	73
L-Methionine	15	15	15	15	15	15	15
L-Phenylalanine	32	32	32	32	32	32	32
L-Threonine	48	48	48	48	48	48	48
L-Tryptophan	10	10	10	10	10	10	10
L-Tyrosine Disodium Salt Dihydrate	52	52	52	52	52	52	52
L-Valine	46	46	46	46	46	46	46
Glycine	7.5	7.5	7.5	7.5	7.5	7.5	7.5
L-Alanine	8.9	8.9	8.9	8.9	8.9	8.9	8.9
L-Asparagine Monohydrate	15	15	15	15	15	15	15
L-Aspartic Acid	13.3	13.3	13.3	13.3	13.3	13.3	13.3
L-Glutamic Acid	14.7	14.7	14.7	14.7	14.7	14.7	14.7
L-Proline	11.5	11.5	11.5	11.5	11.5	11.5	11.5
L-Serine	10.5	10.5	10.5	10.5	10.5	10.5	10.5
<b>Vitamin</b>							
Choline Chloride	1	1	1	1	1	1	1
D-Calcium Pantothenate	1	1	1	1	1	1	1
Folic Acid	1	1	1	1	1	1	1
Niacinamide	1	1	1	1	1	1	1
Pyridoxal Hydrochloride	1	1	1	1	1	1	1
Riboflavin	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Thiamine Hydrochlorid	1	1	1	1	1	1	1
Meso-inositol	2	2	2	2	2	2	2
<b>Others</b>							
D-Glucose	1000	1000	1000	1000	1000	1000	1000
HEPES	5958	—	—	5958	5958	—	5958
Phenol Red	10	—	—	—	—	—	—
Penicillin G Sodium Salt	—	—	—	—	—	—	—
Streptomycin Sulfate	—	—	—	—	—	—	—

**MEM Medium Ingredient Formula\_Table 3**

Ingredient(mg/L) / Cat. No.	PM150411	PM150411A	PM150413	PM150413A	PM150433	PM150434	PM150435
<b>Inorganic Salt</b>							
CaCl <sub>2</sub> (Anhydrous)	200	200	200	200	200	200	200
MgSO <sub>4</sub> (Anhydrous)	97.67	97.67	97.67	97.67	97.67	97.67	97.67
KCl	400	400	400	400	400	400	400
NaHCO <sub>3</sub>	2200	2200	2200	2200	2200	2200	2200
NaCl	6800	6800	6800	6800	6350	6350	6800
NaH <sub>2</sub> PO <sub>4</sub> (Anhydrous)	122	122	122	122	122	122	122
<b>Amino Acid</b>							
L-Alanyl-L-Glutamine	-	-	-	-	-	-	434
L-Arginine Hydrochloride	126	126	126	126	126	126	126
L-Cystine 2HCl	31	31	31	31	31	31	31
L-Glutamine	292	292	-	-	292	-	-
L-Histidine Hydrochloride-H <sub>2</sub> O	42	42	42	42	42	42	42
L-Isoleucine	52	52	52	52	52	52 <sup>®</sup>	52
L-Leucine	52	52	52	52	52	52	52
L-Lysine Hydrochloride	73	73	73	73	73	73	73
L-Methionine	15	15	15	15	15	15	15
L-Phenylalanine	32	32	32	32	32	32	32
L-Threonine	48	48	48	48	48	48	48
L-Tryptophan	10	10	10	10	10	10	10
L-Tyrosine Disodium Salt Dihydrate	52	52	52	52	52	52	52
L-Valine	46	46	46	46	46	46	46
Glycine	-	-	-	-	-	-	-
L-Alanine	-	-	-	-	-	-	-
L-Asparagine Monohydrate	-	-	-	-	-	-	-
L-Aspartic Acid	-	-	-	-	-	-	-
L-Glutamic Acid	-	-	-	-	-	-	-
L-Proline	-	-	-	-	-	-	-
L-Serine	-	-	-	-	-	-	-
<b>Vitamin</b>							
Choline Chloride	1	1	1	1	1	1	1
D-Calcium Pantothenate	1	1	1	1	1	1	1
Folic Acid	1	1	1	1	1	1 <sup>®</sup>	1
Niacinamide	1	1	1	1	1	1	1
Pyridoxal Hydrochloride	1	1	1	1	1	1	1
Riboflavin	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Thiamine Hydrochlorid	1	1	1	1	1	1	1
Meso-inositol	2	2	2	2	2	2	2
<b>Others</b>							
D-Glucose	1000	1000	1000	1000	1000	1000	1000
HEPES	-	-	-	-	5958	5958	-
Phenol Red	10	10	10	10	10	10	10
Penicillin G Sodium Salt	-	100 kU	-	100 kU	-	-	-
Streptomycin Sulfate	-	100	-	100	-	-	-

**MEM Medium Ingredient Formula\_Table 4**

Ingredient(mg/L) / Cat. No.	PM150436	PM150437	PM150438	PM150439	PM150440	PM150441	PM150442
<b>Inorganic Salt</b>							
CaCl <sub>2</sub> (Anhydrous)	200	200	200	200	200	200	200
MgSO <sub>4</sub> (Anhydrous)	97.67	97.67	97.67	97.67	97.67	97.67	97.67
KCl	400	400	400	400	400	400	400
NaHCO <sub>3</sub>	2200	2200	2200	2200	2200	2200	2200
NaCl	6350	6800	6800	6350	6350	6800	6350
NaH <sub>2</sub> PO <sub>4</sub> (Anhydrous)	122	122	122	122	122	122	122
<b>Amino Acid</b>							
L-Alanyl-L-Glutamine	434	—	—	—	—	434	434
L-Arginine Hydrochloride	126	126	126	126	126	126	126
L-Cystine 2HCl	31	31	31	31	31	31	31
L-Glutamine	—	292	—	292	—	—	—
L-Histidine Hydrochloride-H <sub>2</sub> O	42	42	42	42	42	42	42
L-Isoleucine	52	52	52	52	52	52 <sup>®</sup>	52
L-Leucine	52	52	52	52	52	52	52
L-Lysine Hydrochloride	73	73	73	73	73	73	73
L-Methionine	15	15	15	15	15	15	15
L-Phenylalanine	32	32	32	32	32	32	32
L-Threonine	48	48	48	48	48	48	48
L-Tryptophan	10	10	10	10	10	10	10
L-Tyrosine Disodium Salt Dihydrate	52	52	52	52	52	52	52
L-Valine	46	46	46	46	46	46	46
Glycine	—	—	—	—	—	—	—
L-Alanine	—	—	—	—	—	—	—
L-Asparagine Monohydrate	—	—	—	—	—	—	—
L-Aspartic Acid	—	—	—	—	—	—	—
L-Glutamic Acid	—	—	—	—	—	—	—
L-Proline	—	—	—	—	—	—	—
L-Serine	—	—	—	—	—	—	—
<b>Vitamin</b>							
Choline Chloride	1	1	1	1	1	1	1
D-Calcium Pantothenate	1	1	1	1	1	1	1
Folic Acid	1	1	1	1	1	1 <sup>®</sup>	1
Niacinamide	1	1	1	1	1	1	1
Pyridoxal Hydrochloride	1	1	1	1	1	1	1
Riboflavin	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Thiamine Hydrochlorid	1	1	1	1	1	1	1
Meso-inositol	2	2	2	2	2	2	2
<b>Others</b>							
D-Glucose	1000	1000	1000	1000	1000	1000	1000
HEPES	5958	—	—	5958	5958	5958	5958
Phenol Red	10	—	—	—	—	—	—
Penicillin G Sodium Salt	—	—	—	—	—	—	—
Streptomycin Sulfate	—	—	—	—	—	—	—

**MEM Medium Ingredient Formula\_Table 5**

Ingredient(mg/L) / Cat. No.	PM150443	PM150444	PM150445	PM150446	PM150447	PM150448	PM150449
<b>Inorganic Salt</b>							
CaCl <sub>2</sub> (Anhydrous)	200	200	200	200	200	200	200
MgSO <sub>4</sub> (Anhydrous)	97.67	97.67	97.67	97.67	97.67	97.67	97.67
KCl	400	400	400	400	400	400	400
NaHCO <sub>3</sub>	2200	2200	2200	2200	2200	2200	2200
NaCl	6800	6800	6350	6350	6800	6350	6800
NaH <sub>2</sub> PO <sub>4</sub> (Anhydrous)	122	122	122	122	122	122	122
<b>Amino Acid</b>							
L-Alanyl-L-Glutamine	–	–	–	–	434	434	–
L-Arginine Hydrochloride	126	126	126	126	126	126	126
L-Cystine 2HCl	31	31	31	31	31	31	31
L-Glutamine	292	–	292	–	–	–	292
L-Histidine Hydrochloride-H <sub>2</sub> O	42	42	42	42	42	42	42
L-Isoleucine	52	52	52	52	52	52	52
L-Leucine	52	52	52	52	52	52	52
L-Lysine Hydrochloride	73	73	73	73	73	73	73
L-Methionine	15	15	15	15	15	15	15
L-Phenylalanine	32	32	32	32	32	32	32
L-Threonine	48	48	48	48	48	48	48
L-Tryptophan	10	10	10	10	10	10	10
L-Tyrosine Disodium Salt Dihydrate	52	52	52	52	52	52	52
L-Valine	46	46	46	46	46	46	46
Glycine	7.5	7.5	7.5	7.5	7.5	7.5	7.5
L-Alanine	8.9	8.9	8.9	8.9	8.9	8.9	8.9
L-Asparagine Monohydrate	15	15	15	15	15	15	15
L-Aspartic Acid	13.3	13.3	13.3	13.3	13.3	13.3	13.3
L-Glutamic Acid	14.7	14.7	14.7	14.7	14.7	14.7	14.7
L-Proline	11.5	11.5	11.5	11.5	11.5	11.5	11.5
L-Serine	10.5	10.5	10.5	10.5	10.5	10.5	10.5
<b>Vitamin</b>							
Choline Chloride	1	1	1	1	1	1	1
D-Calcium Pantothenate	1	1	1	1	1	1	1
Folic Acid	1	1	1	1	1	1	1
Niacinamide	1	1	1	1	1	1	1
Pyridoxal Hydrochloride	1	1	1	1	1	1	1
Riboflavin	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Thiamine Hydrochlorid	1	1	1	1	1	1	1
Meso-inositol	2	2	2	2	2	2	2
<b>Others</b>							
D-Glucose	–	–	–	–	–	–	–
HEPES	–	–	5958	5958	–	5958	–
Phenol Red	10	10	10	10	10	10	–
Penicillin G Sodium Salt	–	–	–	–	–	–	–
Streptomycin Sulfate	–	–	–	–	–	–	–

**MEM Medium Ingredient Formula\_Table 6**

Ingredient(mg/L) / Cat. No.	PM150450	PM150451	PM150452	PM150453	PM150454	PM150455	PM150456
<b>Inorganic Salt</b>							
CaCl <sub>2</sub> (Anhydrous)	200	200	200	200	200	200	200
MgSO <sub>4</sub> (Anhydrous)	97.67	97.67	97.67	97.67	97.67	97.67	97.67
KCl	400	400	400	400	400	400	400
NaHCO <sub>3</sub>	2200	2200	2200	2200	2200	2200	2200
NaCl	6800	6350	6350	6800	6350	6800	6800
NaH <sub>2</sub> PO <sub>4</sub> (Anhydrous)	122	122	122	122	122	122	122
<b>Amino Acid</b>							
L-Alanyl-L-Glutamine	-	-	-	434	434	-	-
L-Arginine Hydrochloride	126	126	126	126	126	126	126
L-Cystine 2HCl	31	31	31	31	31	31	31
L-Glutamine	-	292	-	-	-	292	-
L-Histidine Hydrochloride-H <sub>2</sub> O	42	42	42	42	42	42	42
L-Isoleucine	52	52	52	52	52	52	52
L-Leucine	52	52	52	52	52	52	52
L-Lysine Hydrochloride	73	73	73	73	73	73	73
L-Methionine	15	15	15	15	15	15	15
L-Phenylalanine	32	32	32	32	32	32	32
L-Threonine	48	48	48	48	48	48	48
L-Tryptophan	10	10	10	10	10	10	10
L-Tyrosine Disodium Salt Dihydrate	52	52	52	52	52	52	52
L-Valine	46	46	46	46	46	46	46
Glycine	7.5	7.5	7.5	7.5	7.5	-	-
L-Alanine	8.9	8.9	8.9	8.9	8.9	-	-
L-Asparagine Monohydrate	15	15	15	15	15	-	-
L-Aspartic Acid	13.3	13.3	13.3	13.3	13.3	-	-
L-Glutamic Acid	14.7	14.7	14.7	14.7	14.7	-	-
L-Proline	11.5	11.5	11.5	11.5	11.5	-	-
L-Serine	10.5	10.5	10.5	10.5	10.5	-	-
<b>Vitamin</b>							
Choline Chloride	1	1	1	1	1	1	1
D-Calcium Pantothenate	1	1	1	1	1	1	1
Folic Acid	1	1	1	1	1	1	1
Niacinamide	1	1	1	1	1	1	1
Pyridoxal Hydrochloride	1	1	1	1	1	1	1
Riboflavin	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Thiamine Hydrochlorid	1	1	1	1	1	1	1
Meso-inositol	2	2	2	2	2	2	2
<b>Others</b>							
D-Glucose	-	-	-	-	-	-	-
HEPES	-	5958	5958	-	5958	-	-
Phenol Red	-	-	-	-	-	10	10
Penicillin G Sodium Salt	-	-	-	-	-	-	-
Streptomycin Sulfate	-	-	-	-	-	-	-

**MEM Medium Ingredient Formula\_Table 7**

Ingredient(mg/L) / Cat. No.	PM150457	PM150458	PM150459	PM150460	PM150461	PM150462	PM150463
<b>Inorganic Salt</b>							
CaCl <sub>2</sub> (Anhydrous)	200	200	200	200	200	200	200
MgSO <sub>4</sub> (Anhydrous)	97.67	97.67	97.67	97.67	97.67	97.67	97.67
KCl	400	400	400	400	400	400	400
NaHCO <sub>3</sub>	2200	2200	2200	2200	2200	2200	2200
NaCl	6350	6350	6800	6350	6800	6800	6350
NaH <sub>2</sub> PO <sub>4</sub> (Anhydrous)	122	122	122	122	122	122	122
<b>Amino Acid</b>							
L-Alanyl-L-Glutamine	-	-	434	434	-	-	-
L-Arginine Hydrochloride	126	126	126	126	126	126	126
L-Cystine 2HCl	31	31	31	31	31	31	31
L-Glutamine	292	-	-	-	292	-	292
L-Histidine Hydrochloride-H <sub>2</sub> O	42	42	42	42	42	42	42
L-Isoleucine	52	52	52	52	52	52 <sup>®</sup>	52
L-Leucine	52	52	52	52	52	52	52
L-Lysine Hydrochloride	73	73	73	73	73	73	73
L-Methionine	15	15	15	15	15	15	15
L-Phenylalanine	32	32	32	32	32	32	32
L-Threonine	48	48	48	48	48	48	48
L-Tryptophan	10	10	10	10	10	10	10
L-Tyrosine Disodium Salt Dihydrate	52	52	52	52	52	52	52
L-Valine	46	46	46	46	46	46	46
Glycine	-	-	-	-	-	-	-
L-Alanine	-	-	-	-	-	-	-
L-Asparagine Monohydrate	-	-	-	-	-	-	-
L-Aspartic Acid	-	-	-	-	-	-	-
L-Glutamic Acid	-	- <sup>®</sup>	-	-	-	-	-
L-Proline	-	-	-	-	-	-	-
L-Serine	-	-	-	-	-	-	-
<b>Vitamin</b>							
Choline Chloride	1	1	1	1	1	1	1
D-Calcium Pantothenate	1	1	1	1	1	1	1
Folic Acid	1	1	1	1	1	1	1
Niacinamide	1	1	1	1	1	1	1
Pyridoxal Hydrochloride	1	1	1	1	1	1	1
Riboflavin	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Thiamine Hydrochlorid	1	1	1	1	1	1	1
Meso-inositol	2	2	2	2	2	2	2
<b>Others</b>							
D-Glucose	-	-	-	-	-	-	-
HEPES	5958	5958	-	5958	-	-	5958
Phenol Red	10	10	10	10	-	-	-
Penicillin G Sodium Salt	-	-	-	-	-	-	-
Streptomycin Sulfate	-	-	-	-	-	-	-

**MEM Medium Ingredient Formula\_Table 8**

Ingredient(mg/L) / Cat. No.	PM150464	PM150465	PM150466	PM150467	PM150476
<b>Inorganic Salt</b>					
CaCl <sub>2</sub> (Anhydrous)	200	200	200	200	200
Fe(NO <sub>3</sub> ) <sub>3</sub> •9H <sub>2</sub> O	–	–	–	–	0.1
MgSO <sub>4</sub> (Anhydrous)	97.67	97.67	97.67	97.67	97.67
KCl	400	400	400	400	400
NaHCO <sub>3</sub>	2200	2200	2200	1500	2750
NaCl	6350	6800	6350	6800	6400
NaH <sub>2</sub> PO <sub>4</sub> (Anhydrous)	122	122	122	122	107.8
<b>Amino Acid</b>					
L-Alanyl-L-Glutamine	–	434	434	–	–
L-Arginine Hydrochloride	126	126	126	126	42
L-Cystine 2HCl	31	31	31	31	31
L-Glutamine	–	–	–	292	292
L-Histidine Hydrochloride -H <sub>2</sub> O	42	42	42	42	21
L-Isoleucine	52	52	52	52	52
L-Leucine	52	52	52	52	52
L-Lysine Hydrochloride	73	73	73	73	73
L-Methionine	15	15	15	15	15
L-Phenylalanine	32	32	32	32	33
L-Threonine	48	48	48	48	47.6
L-Tryptophan	10	10	10	10	8
L-Tyrosine Disodium Salt Dihydrate	52	52	52	52	52.19
L-Valine	46	46	46	46	46.8
Glycine	–	–	–	7.5	–
L-Alanine	–	–	–	8.9	–
L -Asparagine Monohydrate	–	–	–	15	–
L-Aspartic Acid	–	–	–	13.3	–
L-Glutamic Acid	–	–	–	14.7	–
L-Proline	–	–	–	11.5	–
L-Serine	–	–	–	10.5	–
<b>Vitamin</b>					
Choline Chloride	1	1	1	1	2
D-Calcium Pantothenate	1	1	1	1	2
Folic Acid	1	1	1	1	2
Niacinamide	1	1	1	1	2
Pyridoxal Hydrochloride	1	1	1	1	2
Riboflavin	0.1	0.1	0.1	0.1	0.2
Thiamine Hydrochlorid	1	1	1	1	2
Meso-inositol	2	2	2	2	3.6
<b>Others</b>					
D-Glucose	–	–	–	1000	4500
HEPES	5958	–	5958	–	–
Phenol Red	–	–	–	10	15
Sodium Pyruvate	–	–	–	110	–
Penicillin G Sodium Salt	–	–	–	–	–
Streptomycin Sulfate	–	–	–	–	–