

**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 Dihydrochloride	31	31	31	31	31	31	31
L-Glutamine	292	292	–	–	292	–	–
L-Histidine Hydrochloride	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	–	100kU	–	100kU	–	–	–
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>							
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 Dihydrochloride	31	31	31	31	31	31	31
L-Glutamine	–	292	–	292	–	–	–
L-Histidine Hydrochloride Monohydrate	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 Dihydrochloride	31	31	31	31	31	31	31
L-Glutamine	292	292	–	–	292	–	–
L-Histidine Hydrochloride Monohydrate	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	–	–	–	–	–	–	–
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	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	–	100kU	–	100kU	–	–	–
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 Dihydrochloride	31	31	31	31	31	31	31
L-Glutamine	-	292	-	292	-	-	-
L-Histidine Hydrochloride Monohydrate	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	-	-	-	-	-	-	-
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	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 Dihydrochloride	31	31	31	31	31	31	31
L-Glutamine	292	–	292	–	–	–	292
L-Histidine Hydrochloride Monohydrate	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 Dihydrochloride	31	31	31	31	31	31	31
L-Glutamine	–	292	–	–	–	292	–
L-Histidine Hydrochloride Monohydrate	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 Dihydrochloride	31	31	31	31	31	31	31
L-Glutamine	292	-	-	-	292	-	292
L-Histidine Hydrochloride Monohydrate	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	-	-	-	-	-	-	-
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	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
KH <sub>2</sub> PO <sub>4</sub>	–	–	–	–	–
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
Na <sub>2</sub> HPO <sub>4</sub> (Anhydrous)	–	–	–	–	–
<b>Amino Acid</b>					
L-Alanyl-L-Glutamine	–	434	434	–	–
L-Arginine Hydrochloride	126	126	126	126	42
L-Cystine Dihydrochloride	31	31	31	31	31
L-Glutamine	–	–	–	292	292
L-Histidine Hydrochloride Monohydrate	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	–