

### Ham's F-12 Medium Ingredient Formula

Ingredient(mg/L) / Cat. No.	PM150810	PM150810A	PM150811	PM150812	PM150813	PM150814	PM150815
<b>Inorganic Salt</b>							
CaCl <sub>2</sub> (Anhydrous)	33.22	33.22	33.22	33.22	33.22	33.22	33.22
CuSO <sub>4</sub> ·5H <sub>2</sub> O	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
FeSO <sub>4</sub> ·7H <sub>2</sub> O	0.834	0.834	0.834	0.834	0.834	0.834	0.834
MgCl <sub>2</sub> (Anhydrous)	57.22	57.22	57.22	57.22	57.22	57.22	57.22
KCl	223.6	223.6	223.6	223.6	223.6	223.6	223.6
NaHCO <sub>3</sub>	1176	1176	1176	1176	1176	1176	1176
NaCl	7599	7599	7599	7599	7599	7100	7100
Na <sub>2</sub> HPO <sub>4</sub> (Anhydrous)	142	142	142	142	142	142	142
ZnSO <sub>4</sub> ·7H <sub>2</sub> O	0.863	0.863	0.863	0.863	0.863	0.863	0.863
<b>Amino Acid</b>							
L-Alanyl-L-Glutamine	–	–	–	217	–	–	–
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-Arginine Hydrochloride	211	211	211	211	211	211	211
L-Asparagine-H <sub>2</sub> O	15.01	15.01	15.01	15.01	15.01	15.01	15.01
L-Aspartic Acid	13.3	13.3	13.3	13.3	13.3	13.3	13.3
L-Cysteine Hydrochloride-H <sub>2</sub> O	35.12	35.12	35.12	35.12	35.12	35.12	35.12
L-Glutamic Acid	14.7	14.7	14.7	14.7	14.7	14.7	14.7
L-Glutamine	146	146	–	–	146	146	146
L-Histidine Hydrochloride-H <sub>2</sub> O	21	21	21	21	21	21	21
L-Isoleucine	4	4	4	4	4	4	4
L-Leucine	13.1	13.1	13.1	13.1	13.1	13.1	13.1
L-Lysine Hydrochloride	36.5	36.5	36.5	36.5	36.5	36.5	36.5
L-Methionine	4.5	4.5	4.5	4.5	4.5	4.5	4.5
L-Phenylalanine	5	5	5	5	5	5	5
L-Proline	34.5	34.5	34.5	34.5	34.5	34.5	34.5
L-Serine	10.5	10.5	10.5	10.5	10.5	10.5	10.5
L-Threonine	11.9	11.9	11.9	11.9	11.9	11.9	11.9
L-Tryptophan	2.04	2.04	2.04	2.04	2.04	2.04	2.04
L-Tyrosine Disodium Salt	7.81	7.81	7.81	7.81	7.81	7.81	7.81
L-Valine	11.7	11.7	11.7	11.7	11.7	11.7	11.7
<b>Vitamin</b>							
Biotin	0.0073	0.0073	0.0073	0.0073	0.0073	0.0073	0.0073
Choline Chloride	14	14	14	14	14	14	14
D-Calcium Pantothenate	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Folic Acid	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Niacinamide	0.036	0.036	0.036	0.036	0.036	0.036	0.036
Pyridoxine Hydrochloride	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Riboflavin	0.037	0.037	0.037	0.037	0.037	0.037	0.037
Thiamine Hydrochlorid	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Vitamin B12	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Meso-inositol	18	18	18	18	18	18	18
<b>Others</b>							
D-Glucose	1802	1802	1802	1802	1802	1802	–
Thymidine	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Hypoxanthine Sodium	4.77	4.77	4.77	4.77	4.77	4.77	4.77
Linoleic Acid	0.084	0.084	0.084	0.084	0.084	0.084	0.084
Lipoic Acid	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Putrescine Dihydrochloride	0.161	0.161	0.161	0.161	0.161	0.161	0.161
Sodium Pyruvate	110	110	110	110	110	110	110
HEPES	–	–	–	–	–	5958	–
Phenol Red	1.2	1.2	1.2	1.2	–	1.2	1.2
Penicillin G Sodium Salt	–	100 KU	–	–	–	–	–
Streptomycin Sulfate	–	100	–	–	–	–	–