

	Ham's F-12	Ham's F-12K	D-MEM/Ham's F-12				
Code No.	087-08335	080-08565	048-29785	046-32275	042-30555	045-30665	042-30795
L-Glutamine	●	●	●	-	●	●	-
Phenol Red	●	●	●	●	●	-	●
Sodium Pyruvate	●	●	●	●	●	●	●
HEPES	-	-	-	-	●	-	●
Components	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Inorganic component:							
CaCl ₂ (anhyd.)	33.2200	102.0000	116.6000	116.6000	116.6000	116.6000	-
CaCl ₂ 2H ₂ O	-	-	-	-	-	-	154.5000
KCl	223.6000	285.0000	311.8000	311.8000	311.8000	311.8000	311.8000
MgCl ₂ (anhyd.)	57.2200	49.5000	28.6400	28.6400	28.6400	28.6400	-
MgCl ₂ 6H ₂ O	-	-	-	-	-	-	61.2000
MgSO ₄ (anhyd.)	-	192.0000	48.8400	48.8400	48.8400	48.8400	48.8400
NaCl	7,599.0000	7,530.0000	6,995.5000	6,995.5000	6,995.5000	6,995.5000	6,996.0000
NaHCO ₃	1,176.0000	2,500.0000	2,438.0000	2,438.0000	1,200.0000	2,438.0000	1,200.0000
Na ₂ HPO ₄ (anhyd.)	142.0000	115.5000	71.0200	71.0200	71.0200	71.0200	71.0200
NaH ₂ PO ₄ (anhyd.)	-	-	54.3400	54.3400	54.3400	54.3400	54.3000
KH ₂ PO ₄	-	58.5200	-	-	-	-	-
Trace elements:							
CuSO ₄ 5H ₂ O	0.0025	0.0030	0.0013	0.0013	0.0013	0.0013	0.0013
Fe (NO ₃) ₃ 9H ₂ O	-	-	0.0500	0.0500	0.0500	0.0500	0.0500
FeSO ₄ 7H ₂ O	0.8300	0.8300	0.4170	0.4170	0.4170	0.4170	0.4170
ZnSO ₄ 7H ₂ O	0.8600	0.1440	0.4320	0.4320	0.4320	0.4320	0.4320
Amino acids:							
L-Alanine	8.9000	18.0000	4.4500	4.4500	4.4500	4.4500	4.5000
L-Alanyl-L-Glutamine	-	-	-	542.0000	-	-	-
L-Arginine HCl	211.0000	422.0000	147.5000	147.5000	147.5000	147.5000	147.5000
L-Asparagine H ₂ O	15.0000	30.0000	7.5000	7.5000	7.5000	7.5000	7.5000
L-Aspartic Acid	13.0000	26.6000	6.6500	6.6500	6.6500	6.6500	6.6500
L-Cystine	-	-	24.0050	24.0050	24.0050	24.0050	24.0050
L-Cysteine HCl H ₂ O	35.0000	70.0000	17.5600	17.5600	17.5600	17.5600	17.5600
L-Glutamic Acid	14.7000	29.4000	7.3500	7.3500	7.3500	7.3500	7.3500
L-Glutamine	146.0000	292.0000	365.0000	-	365.0000	365.0000	-
Glycine	7.5000	15.0000	18.7500	18.7500	18.7500	18.7500	18.7500
L-Histidine HCl H ₂ O	21.0000	42.0000	31.4800	31.4800	31.4800	31.4800	31.4800
L-Isoleucine	4.0000	7.8800	54.4700	54.4700	54.4700	54.4700	54.4700
L-Leucine	13.0000	26.2000	59.0500	59.0500	59.0500	59.0500	59.0500
L-Lysine HCl	36.5000	73.0000	91.2500	91.2500	91.2500	91.2500	91.2500
L-Methionine	4.5000	8.9600	17.2400	17.2400	17.2400	17.2400	17.2400
L-Phenylalanine	5.0000	9.9200	35.4800	35.4800	35.4800	35.4800	35.4800
L-Proline	34.5000	69.0000	17.2500	17.2500	17.2500	17.2500	17.2500
L-Serine	10.5000	21.0000	26.2500	26.2500	26.2500	26.2500	26.2500
L-Threonine	12.0000	23.8000	53.4500	53.4500	53.4500	53.4500	53.4500
L-Tryptophan	2.0000	4.1000	9.0200	9.0200	9.0200	9.0200	9.0200
L-Tyrosine	5.3700	9.3650	38.6900	38.6900	38.6900	38.6900	38.6900
L-Valine	11.7000	23.0000	52.8500	52.8500	52.8500	52.8500	52.8500
Vitamins:							
D-Biotin	0.0073	0.0700	0.0035	0.0035	0.0035	0.0035	0.0035
D-1/2Ca Pantothenate	0.5000	0.4800	2.2400	2.2400	2.2400	2.2400	2.2400
Choline Chloride	14.0000	14.0000	8.9800	8.9800	8.9800	8.9800	8.9800
Folic Acid	1.3000	1.3000	2.6500	2.6500	2.6500	2.6500	2.6500
i-Inositol	18.0000	18.0000	12.6000	12.6000	12.6000	12.6000	12.6000
Niacinamide	0.0400	0.0370	2.0200	2.0200	2.0200	2.0200	2.0200
Pyridoxine HCl	0.0600	0.0600	2.0310	2.0310	2.0310	2.0310	2.0310
Riboflavin	0.0400	0.0400	0.2190	0.2190	0.2190	0.2190	0.2190
Thiamine HCl	0.3000	0.3000	2.1700	2.1700	2.1700	2.1700	2.1700
Vitamin B ₁₂	1.4000	1.4000	0.6800	0.6800	0.6800	0.6800	0.6800
Other components:							
D-Glucose	1,802.0000	1,260.0000	3,151.0000	3,151.0000	3,151.0000	3,151.0000	3,150.0000
Phenol Red	1.2000	3.0000	8.1000	8.1000	8.1000	-	-
Phenol Red Na	-	-	-	-	-	-	8.6300
Sodium Pyruvate	110.0000	220.0000	55.0000	55.0000	55.0000	55.0000	55.0000
Hypoxanthine	4.0810	4.0800	2.0445	2.0445	2.0445	2.0445	2.0445
Linoleic Acid	0.0800	-	0.0420	0.0420	0.0420	0.0420	0.0420
Lipoic Acid	0.2100	0.2100	0.1050	0.1050	0.1050	0.1050	0.1050
Putrescine 2HCl	0.1610	0.3200	0.0810	0.0810	0.0810	0.0810	0.0810
Thymidine	0.7000	0.7300	0.3650	0.3650	0.3650	0.3650	0.3650
HEPES	-	-	-	-	3,574.5000	-	3,574.5000