

## Ham's F-12 Medium Formulation

Cat. No.	10-080	50-040
	1x, Liquid	Powder
	mg/L	mg/L
<b>Inorganic Salts</b>		
CaCl <sub>2</sub> (anhydrous)	33.30	33.30
CuSO <sub>4</sub> (anhydrous)	0.0016	0.0016
FeSO <sub>4</sub> • 7H <sub>2</sub> O	0.834	0.834
KCl	223.60	223.60
MgSO <sub>4</sub> (anhydrous)	72.20	72.20
NaCl	7600.00	7600.00
Na <sub>2</sub> HPO <sub>4</sub> (anhydrous)	142.00	142.00
NaHCO <sub>3</sub>	1176.00	--
ZnSO <sub>4</sub> • 7H <sub>2</sub> O	0.863	0.863
<b>Amino Acids</b>		
L-Alanine	8.9	8.9
L-Arginine • HCl	211.00	211.00
L-Asparagine • H <sub>2</sub> O	15.00	15.00
L-Aspartic acid	13.30	13.30
L-Cysteine • HCl • H <sub>2</sub> O	35.12	35.12
L-Glutamic acid	14.70	14.70
L-Glutamine	146.20	146.20
Glycine	7.50	7.50
L-Histidine • HCl • H <sub>2</sub> O	20.96	20.96
L-Isoleucine	3.94	3.94
L-Leucine	13.10	13.10
L-Lysine • HCl	36.50	36.50
L-Methionine	4.48	4.48
L-Phenylalanine	4.96	4.96
L-Proline	34.50	34.50
L-Serine	10.50	10.50
L-Threonine	11.90	11.90
L-Tryptophan	2.04	2.04
L-Tyrosine • 2Na • 2H <sub>2</sub> O	7.84	7.84
L-Valine	11.70	11.70

<b>Vitamins</b>		
Biotin	0.0073	0.0073
D-Calcium Pantothenate	0.48	0.48
Choline chloride	13.96	13.96
Folic acid	1.30	1.30
i-Inositol	18.02	18.02
Nicotinamide	0.037	0.037
Pyridoxine • HCl	0.062	0.062
Riboflavin	0.038	0.038
Thiamine • HCl	0.34	0.34
Vitamin B12	1.36	1.36
<b>Other</b>		
D-Glucose	1802.00	1802.00
Hypoxanthine, Na	4.77	4.77
DL-Thioctic Acid	0.21	0.21
Methyl lineoleate	0.088	0.088
Phenol red, Na	1.20	1.20
Putrescine • 2HCl	0.16	0.16
Sodium pyruvate	110.00	110.00
Thymidine	0.73	0.73
<b>Add</b>		
NaHCO <sub>3</sub> Powder (g/L)	--	1.176
7.5 % Solution (mL/L)	--	15.70
<b>Specifications</b>		
pH (before buffer)	--	6.5 ± 0.5
Final pH	7.2 ± 0.2	7.5 ± 0.5
Osmolality (mOsm/kg)	290 ± 30	290 ± 30
Grams of powder required to prepare 1L (1x Solution)	--	10.64

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Corning Incorporated, One Riverfront Plaza, Corning, NY 14831-0001

Mediatech, Inc.  
A Corning Subsidiary  
9345 Discovery Blvd.  
Manassas, VA 20109  
t 800.235.5476  
f 703.471.0363

[www.cellgro.com](http://www.cellgro.com)