

**Document:** IngList DMFG01  
**Created on:** 30 APR 2025  
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**Created by:** Julian Arjuna Bisten  
**Last approved by:** Julian Arjuna Bisten

## Ingredient List Food Grade DMEM/F12

Multus DMEM/F12-FG01			Commercial Non Food Grade DMEM/F12		
Components	MW	mg/L	Components	MW	mg/L
Glycine	75.07	18.75	Glycine	75.0	18.75
L-Alanine	89.09	4.45	L-Alanine	89.0	4.45
L-Arginine HCl	210.66	147.5	L-Arginine HCl	211.0	147.5
L-Asparagine H2O	150.13	7.5	L-Asparagine H2O	150.0	7.5
L-Aspartic acid	133.11	6.65	L-Aspartic acid	133.0	6.65
L-Cysteine HCl H2O	175.64	17.56	L-Cysteine HCl H2O	176.0	17.56
L-Cystine 2HCl	313.22	31.29	L-Cystine 2HCl	313.0	31.29
L-Glutamic acid	147.13	7.35	L-Glutamic acid	147.0	7.35
L-Glutamine	146.14	365.0	L-Glutamine	146.0	365.0
L-Histidine HCl H2O	209.63	31.48	L-Histidine HCl H2O	210.0	31.48
L-Isoleucine	131.17	54.47	L-Isoleucine	131.0	54.47
L-Leucine	131.17	59.05	L-Leucine	131.0	59.05
L-Lysine HCl	182.65	91.25	L-Lysine HCl	183.0	91.25
L-Methionine	149.21	17.24	L-Methionine	149.0	17.24
L-Phenylalanine	165.19	35.48	L-Phenylalanine	165.0	35.48
L-Proline	115.13	17.25	L-Proline	115.0	17.25

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It should not be used for production, diagnostics, therapeutics, or consumption purposes.

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L-Serine	105.09	26.25	L-Serine	105.0	26.25
L-Threonine	119.12	53.45	L-Threonine	119.0	53.45
L-Tryptophan	204.23	9.02	L-Tryptophan	204.0	9.02
L-Valine	117.15	52.85	L-Valine	117.0	52.85
Biotin	244.31	0.0035	Biotin	244.0	0.0035
D-Calcium pantothenate	476.53	2.24	D-Calcium pantothenate	477.0	2.24
Folic acid	441.40	2.65	Folic acid	441.0	2.65
Niacinamide	122.12	2.02	Niacinamide	122.0	2.02
Pyridoxine HCl	205.64	2.013	Pyridoxine HCl	206.0	2.013
Riboflavin	376.36	0.219	Riboflavin	376.0	0.219
Thiamine HCl	337.3	2.17	Thiamine HCl	337.0	2.17
Vitamin B12	1355.37	0.68	Vitamin B12	1355.0	0.68
myo-Inositol	180.16	12.60	myo-Inositol	180.0	12.6
Calcium chloride (CaCl <sub>2</sub> ) (anhydrous)	110.98	116.60	Calcium chloride (CaCl <sub>2</sub> ) (anhydrous)	111.0	116.6
Copper sulfate (CuSO <sub>4</sub> 5H <sub>2</sub> O)	249.68	0.0013	Copper sulfate (CuSO <sub>4</sub> 5H <sub>2</sub> O)	250.0	0.0013
Ferric sulfate (FeSO <sub>4</sub> 7H <sub>2</sub> O)	278.02	0.417	Ferric sulfate (FeSO <sub>4</sub> 7H <sub>2</sub> O)	278.0	0.417
Magnesium chloride 6H <sub>2</sub> O	203.30	61.15	Magnesium chloride (anhydrous)	95.0	28.64
Magnesium sulfate (dried)	120.37	65.12	Magnesium sulfate (MgSO <sub>4</sub> ) (anhydrous)	120.0	48.84
Potassium chloride	74.55	311.80	Potassium chloride	75.0	311.8
Sodium chloride	58.44	6995.5	Sodium chloride	58.0	6995.5

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Sodium phosphate dibasic (anhydrous)	141.96	71.02	Sodium phosphate dibasic (anhydrous)	142.0	71.02
Sodium phosphate monobasic (anhydrous)	119.98	54.34	Sodium phosphate monobasic H2O	138.0	62.5
Zinc sulfate ZnSO4 7H2O	287.56	0.432	Zinc sulfate ZnSO4 7H2O	288.0	0.432
D-Glucose	180.16	3151.00	D-Glucose	180.0	3151.0
Sodium bicarbonate	84.0	2438.0	Sodium bicarbonate	84.0	2438.0
Choline bitartrate	253.25	16.29	Choline chloride	140.0	8.98
Disodium inosinate (7.5 H2O) / disodium guanylate (7 H2O) (50:50)	530*	7.97	Hypoxanthine Na	159.0	2.39
α-lipoic acid	206.33	0.525	Lipoic acid	206.0	0.105
Uridine monophosphate (UMP)	368.15	0.555	Thymidine	242.0	0.365
L-Tyrosine	181.19	52.65	L-Tyrosine disodium salt dihydrate	261.0	55.79
Ferrous sulfate heptahydrate	278.01*	0.034	Ferric nitrate (Fe(NO3)3 9H2O)	404.0	0.05
			Putrescine 2HCl	161.0	0.081
			Sodium pyruvate	110.0	55.0
			Linoleic acid	280.0	0.042
			Phenol red	376.4	8.1

\* assumed molecular weight