

Plasmax™ formulation and comparison with other available media

	Plasmax™	MEM	IMDM	DMEM	DMEM/ F-12	F-12	RPMI 1640
Proteinogenic Amino Acids							
L-Alanine	510		281		50	100	
L-Arginine	64	597	399	398	699	1000	1149
L-Asparagine	41		189		50	100	379
L-Aspartic acid	6		226		50	100	150
L-Cysteine	33				100	200	
L-Glutamate	98		510		50	100	136
L-Glutamine	650	2000	4000	4000	2500	1000	2055
Glycine	330		400	400	250	100	133
L-Histidine	120	200	200	200	150	100	97
L-Isoleucine	140	397	802	802	416	31	382
L-Leucine	170	397	802	802	451	100	382
L-Lysine	220	399	798	798	499	199	219
L-Methionine	30	101	201	201	116	30	101
L-Phenylalanine	68	194	400	400	215	30	91
L-Proline	360		348		150	300	174
L-Serine	140		400	400	250	100	286
L-Threonine	240	403	798	798	449	100	168
L-Tryptophan	78	49	78	78	44	10	25
L-Tyrosine	74	199	462	399	214	30	111
L-Valine	230	393	803	803	452	100	171
Non-proteinogenic Amino Acids							
α-Aminobutyrate	41						
L-Citrulline	55						
L-Cystine	65	99	292	201.3	100		207.7
L-Homocysteine	9						
4-Hydroxy-L-proline	13						152.7
L-Ornithine	80						
L-Pyroglutamate	20						
Amino Acids Derivatives							
L-Acetyl glycine	70						
L-Carnosine	6						
Glutathione (reduced)	37						3.3
Putrescine					0.5	1.0	
Taurine	130						
N-Trimethylglycine (Betaine)	72						
Other Components							
Acetate	42						
Acetone	55						
Acetyl carnitine	5						
Citrate	114						
Carnitine	46						
Creatine	37						
Creatinine	74						
Formate	33						
D-Glucose	5556	5556	25000	25000	17506	10011	11111
Glycerol	82						
2-Hydroxybutyrate	31						
3-Hydroxybutyrate	77						
3-Hydroxyisobutyrate	20						
Hypoxanthine	5				15	30	
Lactate	500						
Linoleic Acid					0.15	0.30	

Plasmax™ formulation



Lipoic Acid					0.5	1.0	
Methyl acetoacetate	41						
Phenol Red	25.0	26.6	39.9	39.9	21.5	3.2	13.3
Pyruvate	100		1000	1000	500	1000	
Succinate	23						
Thymidine					1.5	2.9	
Uracil	2						
Urate	270						
Urea	3000						
Uridine	3						
Inorganic Salts							
Ammonium Chloride	50						
Calcium Chloride	1800	1802	1487	1802	1050	299	
Calcium Nitrate							424
Magnesium Chloride					302	602	
Magnesium Sulfate	813	814	814	814	407		407
Potassium Chloride	5330	5333	4400	5333	4157	2981	5333
Potassium Nitrate			1				
Sodium Bicarbonate	26191	26191	36000	44048	29024	14000	23810
Sodium Chloride	118706	117241	77672	110345	120612	131017	103448
Sodium Phosphate monobasic	1010	1014	906	906	453		
Sodium Phosphate dibasic					500	1000	5634
Trace elements							
Ammonium Metavanadate	0.0026						
Cupric Sulfate	0.0052				0.0052	0.0100	
Ferric Chloride			2				
Ferric Nitrate	0.1238			0.2475	0.1238		
Ferric Sulfate	1.0428				1.5000	3.0000	
Manganous Chloride	0.0002						
Sodium Selenite	0.0289		0.0980				
Zinc Sulfate	1.50		0.49		1.50	2.90	
Vitamins							
p-Aminobenzoate							7.3
Ascorbate	62						
D-Biotin	4.100		0.530		0.014	0.030	0.820
Choline	7.1	7.1	28.6	28.6	64.1	100	21.4
Folate	2.30	2.30	9.10	9.10	6.00	2.90	2.27
myo-Inositol	11.1	11.1	40.0	40.0	70.0	100.0	194.4
Niacinamide	8.2	8.2	32.8	32.8	16.6	0.3	8.2
D-Calcium pantothenate	2.10	2.10	8.40	8.40	4.70	1.05	0.52
Pyridoxal	4.90	4.90	19.60				
Pyridoxin				19.40	9.80	0.29	4.90
Riboflavin	0.30	0.27	1.10	1.10	0.58	0.01	0.53
Thiamine	3.0	3.0	11.9	11.2	6.4	0.9	3.0
Vitamin B12	0.0050		0.0096		0.5000	1.0000	0.0037

Plasmax™ formulation compared to historic media. The concentrations are reported in μM . The colors represent the concentration of each component relative to Plasmax™ (white), blue and red represent lower and higher concentrations respectively. The cutoff on color scale is eightfold. Grey: not present.