



Formulation

HyClone™ classical media

Minimum Essential Medium

Liquid media

Component description	Product code SH30024, SH30310		Product code SH30235 suspension		Product code SH30244	
	mg/L	mmol/L	mg/L	mmol/L	mg/L	mmol/L
Inorganic salts						
Calcium chloride (anhydrous)	200	1.8021	0	0	200	1.8021
Potassium chloride	400	5.3655	400	5.3655	400	5.3655
Magnesium sulfate (anhydrous)	97.67	0.8112	0	0	97.67	0.8112
Magnesium chloride-6H ₂ O	0	0	0	0	0	0
Magnesium sulfate-7H ₂ O	0	0	0	0	0	0
Sodium chloride	6800	116.3587	6800	116.3587	6800	116.3587
Sodium phosphate monobasic H ₂ O	140	1.0146	1400	10.0146	140	1.0146
Ferric chloride-6H ₂ O	0	0	0	0	0	0
Zinc sulfate-7H ₂ O	0	0	0	0	0	0
Linoleic acid	0	0	0	0	0	0
Amino acids						
L-Alanine	0	0	0	0	0	0
L-Arginine-HCl	126.98	0.6028	126.98	0.6028	126.98	0.6028
L-Asparagine-H ₂ O	0	0	0	0	0	0
L-Aspartic acid	0	0	0	0	0	0
L-Cysteine-HCl-H ₂ O	0	0	0	0	0	0
L-Cystine-2HCl	31.28	0.0999	31.28	0.0999	31.28	0.0999
L-Glutamic acid	0	0	0	0	0	0
L-Glutamine	292	1.9979	292	1.9979	0	0
Glycine	0	0	0	0	0	0
L-Histidine-HCl-H ₂ O	41.88	0.1998	41.88	0.1998	41.88	0.1998
L-Isoleucine	52	0.3964	52	0.3964	52	0.3964
L-Leucine	52	0.3964	52	0.3964	52	0.3964
L-Lysine-HCl	72.47	0.3968	72.47	0.3968	72.47	0.3968
L-Methionine	15	0.1005	15	0.1005	15	0.1005
L-Phenylalanine	32	0.1937	32	0.1937	32	0.1937
L-Proline	0	0	0	0	0	0
L-Serine	0	0	0	0	0	0
L-Threonine	48	0.403	48	0.403	48	0.403
L-Tryptophan	10	0.049	10	0.049	10	0.049
L-Tyrosine-2Na-2H ₂ O	51.9	0.1987	51.9	0.1987	51.9	0.1987
L-Valine	46	0.3927	46	0.3927	46	0.3927
Vitamins						
L-Ascorbic acid	0	0	0	0	0	0
D-Biotin	0	0	0	0	0	0
Calcium D-pantothenate	1	0.0021	1	0.0021	1	0.0021
Choline chloride	1	0.0072	1	0.0072	1	0.0072
Folic acid	1	0.0023	1	0.0023	1	0.0023
Myo-inositol	2	0.0111	2	0.0111	2	0.0111
Niacinamide	1	0.0082	1	0.0082	1	0.0082
Pyridoxal hydrochloride	1	0.0049	1	0.0049	1	0.0049
Pyridoxine-HCl	0	0	0	0	0	0
Riboflavin	0.1	0.0003	0.1	0.0003	0.1	0.0003
Thiamine-HCl	1	0.003	1	0.003	1	0.003
Vitamin B12	0	0	0	0	0	0
Putrescine-2HCl	0	0	0	0	0	0
Other						
Adenosine	0	0	0	0	0	0
Cytidine	0	0	0	0	0	0
D-Glucose (anhydrous)	1000	5.5506	1000	5.5506	1000	5.5506
Guanosine	0	0	0	0	0	0
DL- α -Lipoic acid	0	0	0	0	0	0
Phenol red-Na	11	0.0292	11	0.0292	11	0.0292
Sodium pyruvate	0	0	0	0	0	0
Thymidine	0	0	0	0	0	0
2'-Deoxyadenosine-H ₂ O	0	0	0	0	0	0
2'-Deoxycytidine-HCl	0	0	0	0	0	0
2'-Deoxyguanosine	0	0	0	0	0	0
Uridine	0	0	0	0	0	0
Sodium bicarbonate	2200	26.1874	2200	26.1874	2200	26.1874

Component description	Product code SH30318		Product code SH30600		Product code SH30601	
	mg/L	mmol/L	mg/L	mmol/L	mg/L	mmol/L
Inorganic salts						
Calcium chloride (anhydrous)	200	1.8021	200	1.8021	200	1.8021
Potassium chloride	400	5.3655	400	5.3655	400	5.3655
Magnesium sulfate (anhydrous)	97.67	0.8112	0	0	0	0
Magnesium chloride-6H ₂ O	0	0	183	0.9001	183	0.9001
Magnesium sulfate-7H ₂ O	0	0	25	0.1014	25	0.1014
Sodium chloride	6800	116.3587	6800	116.3587	6800	116.3587
Sodium phosphate monobasic H ₂ O	140	1.0146	150	1.087	150	1.087
Ferric chloride-6H ₂ O	0	0	0.54	0.002	0.54	0.002
Zinc sulfate-7H ₂ O	0	0	0.14	0.0005	0.14	0.0005
Linoleic acid	0	0	0.09	0.0003	0.09	0.0003
Amino acids						
L-Alanine	0	0	0	0	0	0
L-Arginine-HCl	126.98	0.6028	127	0.6029	127	0.6029
L-Asparagine-H ₂ O	0	0	60	0.3997	60	0.3997
L-Aspartic acid	0	0	0	0	0	0
L-Cysteine-HCl-H ₂ O	0	0	0	0	0	0
L-Cystine-2HCl	31.28	0.0999	31.28	0.0999	31.28	0.0999
L-Glutamic acid	0	0	0	0	0	0
L-Glutamine	0	0	292	1.9979	292	1.9979
Glycine	0	0	0	0	0	0
L-Histidine-HCl-H ₂ O	41.88	0.1998	42	0.2004	42	0.2004
L-Isoleucine	52	0.3964	52	0.3964	52	0.3964
L-Leucine	52	0.3964	131.2	1.0002	131.2	1.0002
L-Lysine-HCl	72.47	0.3968	72.6	0.3975	72.6	0.3975
L-Methionine	15	0.1005	15	0.1005	15	0.1005
L-Phenylalanine	32	0.1937	32	0.1937	32	0.1937
L-Proline	0	0	0	0	0	0
L-Serine	0	0	42	0.3997	42	0.3997
L-Threonine	48	0.403	48	0.403	48	0.403
L-Tryptophan	10	0.049	10	0.049	10	0.049
L-Tyrosine-2Na-2H ₂ O	51.9	0.1987	51.9	0.1987	51.9	0.1987
L-Valine	46	0.3927	46	0.3927	46	0.3927
Vitamins						
L-Ascorbic acid	0	0	0	0	0	0
D-Biotin	0	0	0.1	0.0004	0.1	0.0004
Calcium D-pantothenate	1	0.0021	1	0.0021	1	0.0021
Choline chloride	1	0.0072	56	0.4011	56	0.4011
Folic acid	1	0.0023	2.2	0.0158	2.2	0.0158
Myo-inositol	2	0.0111	36	0.2578	36	0.2578
Niacinamide	1	0.0082	1	0.0082	1	0.0082
Pyridoxal hydrochloride	1	0.0049	0	0	0	0
Pyridoxine-HCl	0	0	1	0.0048	1	0.0048
Riboflavin	0.1	0.0003	0.1	0.0003	0.1	0.0003
Thiamine-HCl	1	0.003	1	0.003	1	0.003
Vitamin B12	0	0	1.36	0.001	1.36	0.001
Putrescine-2HCl	0	0	0.16	0.001	0.16	0.001
Other						
Adenosine	0	0	0	0	0	0
Cytidine	0	0	0	0	0	0
D-Glucose (anhydrous)	1000	5.5506	2000	16.7898	2000	16.7898
Guanosine	0	0	0	0	0	0
DL- α -Lipoic acid	0	0	0.2	0.001	0.2	0.001
Phenol red-Na	11	0.0292	0	0	10	0.0266
Sodium pyruvate	0	0	110	0.9996	110	0.9996
Thymidine	0	0	0	0	0	0
2'-Deoxyadenosine-H ₂ O	0	0	0	0	0	0
2'-Deoxycytidine-HCl	0	0	0	0	0	0
2'-Deoxyguanosine	0	0	0	0	0	0
Uridine	0	0	0	0	0	0
Sodium bicarbonate	2200	26.1874	2200	26.1874	2200	26.1874

Component description	Product code SH30265 (Alpha mod.)		Product code SH30568 (Alpha mod.)		Product code SH30603 suspension	
	mg/L	mmol/L	mg/L	mmol/L	mg/L	mmol/L
Inorganic salts						
Calcium chloride (anhydrous)	200	1.8021	265	1.8026	0	0
Potassium chloride	400	5.3655	400	5.3655	400	5.3655
Magnesium sulfate (anhydrous)	97.67	0.8112	0.00	0.00	0.00	0.00
Magnesium chloride-6H ₂ O	0	0	0	0	0	0
Magnesium sulfate-7H ₂ O	0	0	200	0.8114	0	0
Sodium chloride	6800	116.3587	6800	116.3587	6800	116.3587
Sodium phosphate monobasic H ₂ O	140	1.0146	140	1.0146	140	1.0146
Ferric chloride-6H ₂ O	0	0	0	0	0	0
Zinc sulfate-7H ₂ O	0	0	0	0	0	0
Linoleic acid	0	0	0	0	0	0
Amino acids						
L-Alanine	25	0.2806	25	0.2806	0	0
L-Arginine-HCl	126.98	0.6028	126.4	0.60	126.98	0.6028
L-Asparagine-H ₂ O	50	0.333	50	0.333	0	0
L-Aspartic acid	30	0.2254	30	0.2254	0	0
L-Cysteine-HCl-H ₂ O	100	0.5693	100	0.5693	0	0
L-Cystine-2HCl	31.28	0.0999	24	0.999	31.28	0.0999
L-Glutamic acid	75	0.5098	75	0.5098	0	0
L-Glutamine	292	1.9979	0	0	0	0
Glycine	50	0.666	50	0.666	0	0
L-Histidine-HCl-H ₂ O	41.88	0.1998	42	0.2004	41.88	0.1998
L-Isoleucine	52.5	0.4002	52.4	0.3995	52	0.3964
L-Leucine	52.4	0.3995	52.4	0.3995	52	0.3964
L-Lysine-HCl	72.47	0.3968	73	0.3997	72.47	0.3968
L-Methionine	15	0.1005	15	0.1005	15	0.1005
L-Phenylalanine	32	0.1937	33	0.1998	32	0.1937
L-Proline	40	0.3474	40	0.3474	0	0
L-Serine	25	0.2379	25	0.2379	25	0.2379
L-Threonine	48	0.403	47.6	0.3996	48	0.403
L-Tryptophan	10	0.049	10.2	0.0499	10	0.049
L-Tyrosine-2Na-2H ₂ O	51.9	0.1987	36.2	0.1386	51.9	0.1987
L-Valine	46	0.3927	46.8	0.3995	46	0.3927
Vitamins						
L-Ascorbic acid	50	0.2839	50	0.2839	0	0
D-Biotin	0.1	0.0004	0.1	0.0004	0	0
Calcium D-pantothenate	1	0.0021	1	0.0021	1	0.0021
Choline chloride	1	0.0072	1	0.0072	1	0.0072
Folic acid	1	0.0023	1	0.0023	1	0.0023
Myo-inositol	2	0.0111	2	0.0111	2	0.0111
Niacinamide	1	0.0082	1	0.0082	1	0.0082
Pyridoxal hydrochloride	1	0.0049	0	0	1	0.0049
Pyridoxine-HCl	0	0	1	0.0049	0	0
Riboflavin	0.1	0.0003	0.1	0.0003	0.1	0.0003
Thiamine-HCl	1	0.003	1	0.003	1	0.003
Vitamin B12	1.36	0.001	1.33	0.001	0	0
Putrescine-2HCl	0	0	0	0	0	0
Other						
Adenosine	10	0.0374	0	0	0	0
Cytidine	10	0.0411	0	0	0	0
D-Glucose (anhydrous)	1000	5.5506	1000	5.5506	1000	5.5506
Guanosine	10	0.0353	0	0	0	0
DL- α -Lipoic acid	0.2	0.001	0.2	0.001	0	0
Phenol red-Na	11	0.0292	10	0.0266	11	0.0292
Sodium pyruvate	110	0.9996	110	0.9996	0	0
Thymidine	10	0.0413	0	0	0	0
2'-Deoxyadenosine-H ₂ O	10	0.0371	0	0	0	0
2'-Deoxycytidine-HCl	11	0.0417	0	0	0	0
2'-Deoxyguanosine	10	0.0351	0	0	0	0
Uridine	10	0.041	0	0	0	0
Sodium bicarbonate	2200	26.1874	2200	26.1874	2200	26.1874

Draft

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