

DMEM: Ham's F-12  
50:50 Mix

12-719



Description	CAS #	Chemical Formula	Concentration		Molarity	
			g/L	mg/L	mM	uM
Calcium Chloride Anhydrous	10043-52-4	CaCl <sub>2</sub>	0.116	116.000	1.045	1.045E+03
Cupric Sulfate Pentahydrate	7758-99-8	CuSO <sub>4</sub> • 5H <sub>2</sub> O	9.091E-07	9.091E-04	3.641E-06	3.641E-03
Dextrose	50-99-7	C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	3.151	3.151E+03	17.490	1.749E+04
Ferric Nitrate Nonahydrate	7782-61-8	Fe(NO <sub>3</sub> ) <sub>3</sub> • 9H <sub>2</sub> O	5.000E-05	5.000E-02	1.238E-04	0.124
Ferrous Sulfate Heptahydrate	7782-63-0	FeSO <sub>4</sub> • 7H <sub>2</sub> O	4.200E-04	0.420	1.511E-03	1.511
Magnesium Sulfate Anhydrous	7487-88-9	MgSO <sub>4</sub>	4.885E-02	48.850	0.406	405.832
Potassium Chloride	7447-40-7	KCl	0.312	311.830	4.185	4.185E+03
Sodium Bicarbonate	144-55-8	NaHCO <sub>3</sub>	1.200	1.200E+03	14.284	1.428E+04
Sodium Chloride	7647-14-5	NaCl	7.000	7.000E+03	1.198E+02	1.198E+05
Sodium Phosphate, Dibasic Anhydrous	7558-79-4	Na <sub>2</sub> HPO <sub>4</sub>	7.098E-02	70.980	0.500	499.859
Zinc Sulfate Heptahydrate	7446-20-0	ZnSO <sub>4</sub> • 7H <sub>2</sub> O	4.300E-04	0.430	1.496E-03	1.496
L-Alanine	56-41-7	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH <sub>3</sub>	4.450E-03	4.450	4.995E-02	49.949
L-Arginine Monohydrochloride	1119-34-2	C <sub>6</sub> H <sub>14</sub> N <sub>4</sub> O <sub>2</sub> • HCl	0.147	147.350	0.699	699.468
L-Asparagine Monohydrate	5794-13-8	NH <sub>2</sub> COCH <sub>2</sub> CH(NH <sub>2</sub> )COOH • H <sub>2</sub> O	7.500E-03	7.500	4.996E-02	49.957
L-Aspartic Acid	56-84-8	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH <sub>2</sub> CO <sub>2</sub> H	6.650E-03	6.650	4.996E-02	49.962
L-Cysteine Monohydrochloride Monohydrate	7048-04-6	C <sub>3</sub> H <sub>7</sub> NO <sub>2</sub> S • HCl • H <sub>2</sub> O	1.756E-02	17.560	0.100	100.000
L-Glutamic Acid	56-86-0	C <sub>5</sub> H <sub>9</sub> NO <sub>4</sub>	7.350E-03	7.350	4.997E-02	49.966
L-Glutamine	56-85-9	C <sub>5</sub> H <sub>10</sub> N <sub>2</sub> O <sub>3</sub>	0.365	365.100	2.498	2.498E+03
Glycine	56-40-6	HO <sub>2</sub> CCH <sub>2</sub> NH <sub>2</sub>	1.875E-02	18.750	0.250	249.767
L-Histidine Monohydrochloride Monohydrate	5934-29-2	C <sub>6</sub> H <sub>9</sub> N <sub>3</sub> O <sub>2</sub> • HCl • H <sub>2</sub> O	3.148E-02	31.480	0.150	150.191
L-Isoleucine	73-32-5	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH(CH <sub>3</sub> )CH <sub>2</sub> CH <sub>3</sub>	5.437E-02	54.370	0.415	414.500
L-Leucine	61-90-5	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	5.896E-02	58.960	0.449	449.493
L-Lysine Monohydrochloride	657-27-2	C <sub>6</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub> • HCl	9.137E-02	91.370	0.500	500.246
L-Methionine	63-68-3	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	1.724E-02	17.240	0.116	115.550
L-Phenylalanine	63-91-2	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>	3.548E-02	35.480	0.215	214.783
L-Proline	147-85-3	C <sub>5</sub> H <sub>9</sub> NO <sub>2</sub>	1.727E-02	17.270	0.150	150.004
L-Serine	56-45-1	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH <sub>2</sub> OH	2.625E-02	26.250	0.250	249.786
L-Threonine	72-19-5	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH(OH)CH <sub>3</sub>	5.355E-02	53.550	0.450	449.547
L-Tryptophan	73-22-3	C <sub>11</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>	9.020E-03	9.020	4.417E-02	44.166
L-Valine	72-18-4	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH(CH <sub>3</sub> ) <sub>2</sub>	5.266E-02	52.660	0.450	449.701
D-Biotin (Vitamin H)	58-85-5	C <sub>10</sub> H <sub>16</sub> N <sub>2</sub> O <sub>3</sub> S	3.636E-06	3.636E-03	1.488E-05	0.015
D-Calcium Pantothenate (Vitamin B5)	137-08-6	C <sub>18</sub> H <sub>32</sub> CaN <sub>2</sub> O <sub>10</sub>	2.120E-03	2.120	4.449E-03	4.449
Choline Chloride	67-48-1	HOCH <sub>2</sub> CH <sub>2</sub> N(CH <sub>3</sub> ) <sub>3</sub> Cl	8.980E-03	8.980	6.431E-02	64.313
Cyanocobalamin (Vitamin B12)	68-19-9	C <sub>63</sub> H <sub>88</sub> CoN <sub>14</sub> O <sub>14</sub> P	6.800E-04	0.680	5.017E-04	0.502
Folic Acid	59-30-3	C <sub>19</sub> H <sub>19</sub> N <sub>7</sub> O <sub>6</sub>	2.662E-03	2.662	6.030E-03	6.030
I-Inositol	87-89-8	C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	1.251E-02	12.510	6.942E-02	69.423
DL-α-lipoic acid (thioctic acid)	1077-28-7	C <sub>8</sub> H <sub>14</sub> O <sub>2</sub> S <sub>2</sub>	1.027E-04	0.103	4.979E-04	0.498
Niacinamide (Nicotinamide)	98-92-0	C <sub>6</sub> H <sub>6</sub> N <sub>2</sub> O	2.020E-03	2.020	1.654E-02	16.542
Pyridoxine Monohydrochloride	58-56-0	C <sub>8</sub> H <sub>11</sub> NO <sub>3</sub>	2.030E-03	2.030	9.874E-03	9.874
Riboflavin (Vitamin B2)	83-88-5	C <sub>17</sub> H <sub>20</sub> N <sub>4</sub> O <sub>6</sub>	2.200E-04	0.220	5.845E-04	0.585
Thiamine Monohydrochloride (Vitamin B1)	67-03-8	C <sub>12</sub> H <sub>18</sub> N <sub>4</sub> OSCl <sub>2</sub>	2.170E-03	2.170	6.433E-03	6.433
Thymidine	50-89-5	C <sub>10</sub> H <sub>14</sub> N <sub>2</sub> O <sub>5</sub>	3.600E-04	0.360	1.486E-03	1.486
HEPES Buffer	7365-45-9	C <sub>8</sub> H <sub>18</sub> N <sub>2</sub> O <sub>4</sub> S	3.575	3.575E+03	14.999	1.500E+04
Phenol Red	34487-61-1	C <sub>19</sub> H <sub>14</sub> O <sub>5</sub> S	8.000E-03	8.000	2.125E-02	21.254
Pyruvic Acid Sodium Salt	113-24-6	CH <sub>3</sub> COCO <sub>2</sub> Na	0.110	110.000	1.000	999.636
Putrescine Dihydrochloride	333-93-7	NH <sub>2</sub> (CH <sub>2</sub> ) <sub>4</sub> NH <sub>2</sub> • 2HCl	8.091E-05	8.091E-02	5.023E-04	0.502
L-Tyrosine Disodium Salt, Dihydrate	122666-78-9	C <sub>9</sub> H <sub>9</sub> NO <sub>3</sub> Na <sub>2</sub> • 2H <sub>2</sub> O	5.581E-02	55.810	0.214	213.676

L-Cystine Dihydrochloride	30925-07-6	C6H12N2O4S2·2HCl	3.129E-02	31.290	9.990E-02	99.904
Sodium Phosphate Monobasic, Anhydrous	7558-80-7	NaH2PO4	5.435E-02	54.350	0.453	452.917
Linoleic Acid Methyl Ester	112-63-0	C19H34O2	4.364E-05	4.364E-02	1.482E-04	0.148
Hypoxanthine Disodium Salt	N/A	C5H2N4ONa2	2.700E-03	2.700	1.499E-02	14.991
Magnesium Chloride, Anhydrous	7786-30-3	MgCl2	2.857E-02	28.570	0.300	300.074