

### ★ Storage

Store at 2 -8°C.

### ✈ Contents

- Product Manual
- DMEM/Ham's F-12, 1:1 Mixture

ALL PRODUCTS SOLD BY GenDEPOT ARE INTENDED FOR RESEARCH USE ONLY UNLESS OTHERWISE INDICATED. THIS PRODUCT IS NOT INTENDED FOR DIAGNOSTIC OR DRUG PURPOSE

### ★ Shipping Condition

Ship at ambient

### ★ Introduction

Since Harry Eagle's first reports, studies have been underway to determine the media requirements for individual cell types. The medium found to be most satisfactory for these studies as a 1:1 mixture of Dulbecco's Modified Eagle's Medium (DMEM) and Ham's F-12 Nutrient Mixture. To help compensate for the buffering capacity lost with the removal of serum, HEPES has been added in some modifications at a final concentration of 15 mM.

### ★ Formulation

Amino Acids	mg/L
Glycine (C <sub>2</sub> H <sub>5</sub> NO <sub>2</sub> )	18.75
L-Alanine(C <sub>3</sub> H <sub>7</sub> NO <sub>2</sub> )	4.45
L-Arginine, Hydrochloride(C <sub>6</sub> H <sub>14</sub> N <sub>4</sub> O <sub>2</sub> .HCl)	147.50
L-Asparagine, Monohydrate(C <sub>4</sub> H <sub>8</sub> N <sub>2</sub> O <sub>3</sub> .HCl)	7.50
L-Aspartic Acid(C <sub>4</sub> H <sub>7</sub> NO <sub>4</sub> )	6.65
L-Cysteine, Hydrochloride, Monohydrate(C <sub>3</sub> H <sub>7</sub> NO <sub>2</sub> .HCl.H <sub>2</sub> O)	17.56
L-Cystine, Dihydrochloride(C <sub>6</sub> H <sub>12</sub> N <sub>2</sub> O <sub>5</sub> S <sub>2</sub> .2HCl)	31.29
L-Glutamic Acid(C <sub>5</sub> H <sub>9</sub> NO <sub>4</sub> )	7.35
L-Glutamine(C <sub>5</sub> H <sub>10</sub> N <sub>2</sub> O <sub>3</sub> )	365.00
L-Histidine(C <sub>6</sub> H <sub>9</sub> N <sub>3</sub> O <sub>2</sub> .HCl.H <sub>2</sub> O)	31.48
L-Isoleucine(C <sub>6</sub> H <sub>13</sub> NO <sub>2</sub> )	54.47
L-Leucine(C <sub>6</sub> H <sub>13</sub> NO <sub>2</sub> )	59.05
L-Lysine, Hydrochloride(C <sub>6</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub> .HCl)	91.25
L-Methionine(C <sub>5</sub> H <sub>11</sub> NO <sub>2</sub> S)	17.24
L-Phenylalanine(C <sub>9</sub> H <sub>9</sub> NO <sub>2</sub> )	35.48
L-Proline(C <sub>5</sub> H <sub>9</sub> NO <sub>2</sub> )	17.25

L-Serine(C <sub>3</sub> H <sub>7</sub> NO <sub>3</sub> )	26.25
Amino Acids	mg/L
L-Threonine(C <sub>4</sub> H <sub>9</sub> NO <sub>3</sub> )	53.45
L-Tryptophan(C <sub>11</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub> )	9.02
L-Tyrosine, Disodium,Dihydrate(C <sub>9</sub> H <sub>9</sub> NO <sub>3</sub> Na <sub>2</sub> .2H <sub>2</sub> O)	55.79
L-Valine(C <sub>6</sub> H <sub>11</sub> NO <sub>2</sub> )	52.85

Inorganic Salts	mg/L
Calcium Chloride, Anhydrous (CaCl <sub>2</sub> )	116.60
Cupric Sulfate, Pentahydrate(CuSO <sub>4</sub> .5H <sub>2</sub> O)	0.0013
Ferric Nitrate, Nonahydrate(Fe(NO <sub>3</sub> ) <sub>3</sub> .9H <sub>2</sub> O)	0.05
Ferrous Sulfate, Heptahydrate(FeSO <sub>4</sub> .7H <sub>2</sub> O)	0.417
Magnesium Chloride, Anhydrous(MgCl <sub>2</sub> )	28.61
Magnesium Sulfate, Anhydrous(MgSO <sub>4</sub> )	48.93
Potassium Chloride(KCl)	311.80
Sodium Bicarbonate(NaHCO <sub>3</sub> )	1200.00
Sodium Chloride(NaCl)	6995.50
Sodium Phosphate, Dibasic, Anhydrous(Na <sub>2</sub> HPO <sub>4</sub> )	70.96
Sodium Phosphate, Monobasic(NaH <sub>2</sub> PO <sub>4</sub> .H <sub>2</sub> O)	62.50
Zinc Sulfate, Heptahydrate(ZnSO <sub>4</sub> .7H <sub>2</sub> O)	0.432

Vitamins	mg/L
Biotin(C <sub>10</sub> H <sub>16</sub> N <sub>2</sub> O <sub>3</sub> S)	0.0035
Choline Chloride(C <sub>5</sub> H <sub>14</sub> ClNO)	8.98
D-Calcium Pantothenate(C <sub>18</sub> H <sub>32</sub> CaN <sub>2</sub> O <sub>10</sub> )	2.24
Folic Acid(C <sub>19</sub> H <sub>19</sub> N <sub>7</sub> O <sub>6</sub> )	2.65
Myo-Inositol(C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> )	12.60
Niacinamide(C <sub>6</sub> H <sub>6</sub> N <sub>2</sub> O)	2.02
Pyridoxine, Hydrochloride(C <sub>8</sub> H <sub>11</sub> NO <sub>3</sub> .HCl)	2.031
Riboflavin(C <sub>17</sub> H <sub>20</sub> N <sub>4</sub> O <sub>6</sub> )	0.219
Thiamine, Hydrochloride(C <sub>12</sub> H <sub>17</sub> ClN <sub>4</sub> OS.HCl)	2.17
Vitamin B12(C <sub>63</sub> H <sub>88</sub> CoN <sub>14</sub> O <sub>14</sub> P)	0.68

 **Formulation**

Other Components	mg/L
D-Glucose( $C_6H_{12}O_6$ )	3151.00
HEPES( $C_8H_{18}N_2O_5S$ )	3574.50
Xyloxanthine, Sodium( $C_5H_3N_4O.Na$ )	2.39
Linoleic Acid( $C_{18}H_{32}O_2$ )	0.042
Lipoic Acid(DL-Thiolic Acid)( $C_8H_{14}O_2S_2$ )	0.105
Phenol Red, Sodium Salt( $C_{19}H_{13}NaO_5S$ )	8.10
Putrescine, Dihydrochloride( $C_4H_{12}N_2.2HCl$ )	0.081
Sodium Pyruvate( $C_3H_5NaO_3$ )	55.00
Thymidine( $C_{10}H_{14}N_2O_5$ )	0.365