

### ★ Storage

Store at 2 -8°C.

### ★ Contents

- Product Manual
- MEM Alpha, With L-Glutamine, No Nucleotide

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

Minimum Essential Medium (MEM) was developed by Harry Eagle and has become one of the most widely used of all synthetic cell culture media. The original formulation, containing Earle's Balanced Salts, was designed for use in propagating mouse L cells and HeLa cells. Eagle found that these cells require 13 amino acids and seven vitamins to grow and reproduce in vitro. MEM with Earle's Balanced Salts is suitable for cell culture in CO<sub>2</sub> charged atmospheres, while MEM with Hank's Salts is suitable for cell culture in normal atmospheric conditions.

### ★ Formulation

Amino Acids	mg/L
Glycine (C <sub>2</sub> H <sub>5</sub> NO <sub>2</sub> )	50.00
L-Alanine(C <sub>3</sub> H <sub>7</sub> NO <sub>2</sub> )	25.00
L-Arginine, Hydrochloride(C <sub>6</sub> H <sub>14</sub> N <sub>4</sub> O <sub>2</sub> .HCl)	127.00
L-Asparagine, Monohydrate(C <sub>4</sub> H <sub>8</sub> N <sub>2</sub> O <sub>3</sub> .HCl)	50.00
L-Aspartic Acid(C <sub>4</sub> H <sub>7</sub> NO <sub>4</sub> )	30.00
L-Cysteine, Hydrochloride(C <sub>6</sub> H <sub>12</sub> N <sub>2</sub> O <sub>4</sub> S <sub>2</sub> .2HCl)	100.00
L-Cystine, Dihydrochloride(C <sub>6</sub> H <sub>12</sub> N <sub>2</sub> O <sub>4</sub> S <sub>2</sub> .2HCl)	31.00
L-Glutamic Acid(C <sub>5</sub> H <sub>9</sub> NO <sub>4</sub> )	75.00
L-Glutamine(C <sub>5</sub> H <sub>10</sub> N <sub>2</sub> O <sub>3</sub> )	292.00
L-Histidine(C <sub>6</sub> H <sub>9</sub> N <sub>3</sub> O <sub>2</sub> .HCl.H <sub>2</sub> O)	42.00
L-Isoleucine(C <sub>6</sub> H <sub>13</sub> NO <sub>2</sub> )	52.00
L-Leucine(C <sub>6</sub> H <sub>13</sub> NO <sub>2</sub> )	52.00
L-Lysine, Hydrochloride(C <sub>6</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub> .HCl)	73.00
L-Methionine(C <sub>5</sub> H <sub>11</sub> NO <sub>2</sub> S)	15.00
L-Phenylalanine(C <sub>9</sub> H <sub>9</sub> NO <sub>2</sub> )	32.00

Amino Acids	mg/L
L-Proline(C <sub>5</sub> H <sub>9</sub> NO <sub>2</sub> )	40.00
L-Serine(C <sub>3</sub> H <sub>7</sub> NO <sub>3</sub> )	25.00
L-Threonine(C <sub>4</sub> H <sub>9</sub> NO <sub>3</sub> )	48.00
L-Tryptophan(C <sub>11</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub> )	10.00
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)	52.00
L-Valine(C <sub>5</sub> H <sub>11</sub> NO <sub>2</sub> )	46.00

Inorganic Salts	mg/L
Calcium Chloride, Anhydrous (CaCl <sub>2</sub> )	200.00
Magnesium Sulfate, Anhydrous(MgSO <sub>4</sub> )	98.00
Potassium Chloride(KCl)	400.00
Potassium Phosphate, Monobasic, Anhydrous(KH <sub>2</sub> PO <sub>4</sub> )	
Sodium Bicarbonate(NaHCO <sub>3</sub> )	2200.00
Sodium Chloride(NaCl)	8000.00
Sodium Phosphate,Dibasic(NaH <sub>2</sub> PO <sub>4</sub> )	
Sodium Phosphate, Monobasic(NaH <sub>2</sub> PO <sub>4</sub> .H <sub>2</sub> O))	140.00

Vitamins	mg/L
Biotin(C <sub>10</sub> H <sub>16</sub> N <sub>2</sub> O <sub>3</sub> S)	0.10
Choline Chloride(C <sub>5</sub> H <sub>14</sub> ClNO)	1.00
D-Calcium Pantothenate(C <sub>18</sub> H <sub>32</sub> CaN <sub>2</sub> O <sub>10</sub> )	1.00
L-Ascorbic Acid(C <sub>6</sub> H <sub>8</sub> O <sub>6</sub> )	50.00
Folic Acid(C <sub>19</sub> H <sub>19</sub> N <sub>7</sub> O <sub>6</sub> )	1.00
Myo-Inositol(C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> )	2.00
Niacinamide(C <sub>6</sub> H <sub>6</sub> N <sub>2</sub> O)	1.00
Pyridoxal, Hydrochloride(C <sub>8</sub> H <sub>9</sub> NO <sub>3</sub> .HCl)	1.00
Riboflavin(C <sub>17</sub> H <sub>20</sub> N <sub>4</sub> O <sub>6</sub> )	0.10
Thiamine, Hydrochloride(C <sub>12</sub> H <sub>17</sub> ClN <sub>4</sub> OS.HCl)	1.00
Vitamin B12(C <sub>63</sub> H <sub>88</sub> CoN <sub>14</sub> O <sub>14</sub> P)	1.40

Other Components	mg/L
2'-Deoxyadenosine, Monohydrate(C <sub>10</sub> H <sub>13</sub> N <sub>5</sub> O <sub>3</sub> .H <sub>2</sub> O)	
2'-Deoxycytidine, Hydrochloride(C <sub>9</sub> H <sub>13</sub> N <sub>3</sub> O <sub>4</sub> .HCl)	
2'-Deoxyguanosine, Monohydrate(C <sub>10</sub> H <sub>13</sub> N <sub>5</sub> O <sub>4</sub> .H <sub>2</sub> O)	
Adenosine(C <sub>10</sub> H <sub>13</sub> N <sub>5</sub> O <sub>4</sub> )	
Cytidine, Free Base(C <sub>9</sub> H <sub>13</sub> N <sub>3</sub> O <sub>3</sub> )	
D-Glucose(C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> )	1000.00
Guanosine(C <sub>10</sub> H <sub>13</sub> N <sub>5</sub> O <sub>3</sub> )	
Lipoic Acid(DL-Thiolic Acid)(C <sub>8</sub> H <sub>14</sub> O <sub>2</sub> S <sub>2</sub> )	0.20
Phenol Red, Sodium Salt(C <sub>19</sub> H <sub>13</sub> NaO <sub>5</sub> S)	10.00
Sodium Pyruvate(C <sub>3</sub> H <sub>3</sub> NaO <sub>3</sub> )	110.00
Thymidine(C <sub>10</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub> )	
Uridine(C <sub>9</sub> H <sub>12</sub> N <sub>2</sub> O <sub>5</sub> )	