

## MEM eagle medium

### Product use

MEM eagle (EMEM) was developed in 1959 for cultivation of HeLa and L cells. Amino acid concentrations conform closely to the protein composition of human cells. Higher concentrations of nutrients permit longer periods between feedings. EMEM has vitamin concentrations 2-5X greater than BME and higher amino acid concentrations than BME. EMEM is suitable for culturing a broad spectrum of mammalian cells.

10µg/ml gentamicin, 50 units/ml penicillin, 50 µg/ml streptomycin, 2.5 µg/ml fungizone and 2% heat-inactivated fetal bovine serum

### EMEM powder

15-611 With Earle's BSS, with L-glutamine

### MEM eagle

- 06-174 with Earle's BSS, with nonessential amino acids and L-glutamine, without calcium
- 12-125 with Earle's BSS, without L-glutamine
- 12-127 with Hank's BSS, without L-glutamine
- 12-136 with 25 mM HEPES buffer without L-glutamine, with Earle's BSS
- 12-137 with Hank's BSS, with 25 mM HEPES buffer, without L-glutamine
- 12-611 with Earle's BSS, with L-glutamine
- 12-662 with Earle's BSS, with nonessential amino acids and sodium pyruvate, without L-glutamine
- 12-668 2X with Earle's BSS, without L-glutamine or phenol red (virus plaquing medium)
- 12-684 10X With Earle's BSS, without sodium bicarbonate (NaHCO<sub>3</sub>) or L-glutamine
- 12-736 Cell culture maintenance medium with Earle's BSS, with nonessential amino acids, L-glutamine, HEPES buffer,

### Quick reference chart

	L-glutamine	HEPES	Phenol red	Sodium pyruvate
06-174	+	-	+	-
12-125	-	-	+	-
12-127	-	-	+	-
12-136	-	+	+	-
12-137	-	+	+	-
12-611	+	-	+	-
12-662	-	-	+	+
12-668	-	-	-	-
12-684	-	-	+	-
12-736	+	+	+	-
15-611	+	-	+	-

## Specifications

	Sterility	pH	Buffering capacity*	Cell growth generation (% of control)	Endotoxin (EU/ml)
06-174	Neg.	FIO	--	--	
12-125	Neg.	6.7-7.3	4.4-22.4	≥75%	FIO
12-127	Neg.	6.92-7.40	16.0-33.0	≥75%	FIO
12-136	Neg.	7.01-7.27	12.3-25.9	≥75%	FIO
12-137	Neg.	7.02-7.42	9.8-25.0	≥75%	FIO
12-611	Neg.	6.9-7.3	5.4-16.0	≥75%	FIO
12-662	Neg.	7.0-7.3	6.3-16.0	≥75%	FIO
12-668	Neg.	6.7-7.5	FIO	≥75%	FIO
12-684	Neg.	5.2-6.0 (at 1X)	--	≥75%	FIO
12-736	Neg.	7.0-7.4	10.0-35.0	*	FIO

\*Refeed toxicity test: non-toxic

	Moisture	PH (w/o bicarb)	Osmolality (mOsm)	Cell growth generation (% of control)	Endotoxin (EU/ml)
15-125	< 1%	5.4-6.3	225-255	≥75%	≤ 1.0
15-611	≤ 1%	5.4-6.3	225-255	≥75%	≤ 1.0

## Product use statement

**THESE PRODUCTS ARE FOR RESEARCH USE ONLY.** Not approved for human or veterinary use, for application to humans or animals, or for use in clinical or *in vitro* procedures.

## Ordering information

Catalog number	Description	Size
06-174G	EMEM with Earle's BSS, with nonessential amino acids and L-glutamine, without calcium	450 ml
12-125F	EMEM with Earle's BSS, without L-glutamine	500 ml
12-125Q	EMEM with Earle's BSS, without L-glutamine	1 L
12-127F	with Hank's BSS, without L-glutamine	500 ml
12-136F	EMEM with 25 mM HEPES buffer without L-glutamine, with Earle's BSS	500 ml
12-136Q	EMEM with 25 mM HEPES buffer without L-glutamine, with Earle's BSS	1 L
12-137F	EMEM with Hank's BSS, with 25 mM HEPES buffer, without L-glutamine	500 ml
12-611F	EMEM with Earle's BSS, with L-glutamine	500 ml
12-611Q	EMEM with Earle's BSS, with L-glutamine	1 L
12-662F	EMEM with Earle's BSS, with nonessential amino acids and sodium pyruvate, without L-glutamine	500 ml
12-662Q	EMEM with Earle's BSS, with nonessential amino acids and sodium pyruvate, without L-glutamine	1 L
12-668E	EMEM 2X with Earle's BSS, without L-glutamine or phenol red (virus plaquing medium)	100 ml
12-684F	EMEM 10X With Earle's BSS, without sodium bicarbonate (NaHCO <sub>3</sub> ) or L-glutamine	500 ml
12-736E	EMEM cell culture maintenance media	100 ml
12-736F	EMEM cell culture maintenance media	500 mL
15-611D	EMEM with Earle's BSS, with L-glutamine	1 x 10l

MEM Eagle with Earle's BSS  
w/o L-Glutamine

12-125



Description	CAS #	Chemical Formula	Concentration		Molarity	
			g/L	mg/L	mM	uM
Calcium Chloride Anhydrous	10043-52-4	CaCl <sub>2</sub>	0.200	200.000	1.802	1.802E+03
Dextrose	50-99-7	C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	1.000	1.000E+03	5.551	5.551E+03
Magnesium Sulfate Anhydrous	7487-88-9	MgSO <sub>4</sub>	9.767E-02	97.670	0.811	811.415
Potassium Chloride	7447-40-7	KCl	0.400	400.000	5.366	5.366E+03
Sodium Bicarbonate	144-55-8	NaHCO <sub>3</sub>	2.200	2.200E+03	26.187	2.619E+04
Sodium Chloride	7647-14-5	NaCl	6.800	6.800E+03	116.359	1.164E+05
L-Arginine Monohydrochloride	1119-34-2	C <sub>6</sub> H <sub>14</sub> N <sub>4</sub> O <sub>2</sub> • HCl	0.127	126.980	0.603	602.772
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	4.200E-02	42.000	0.200	200.382
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>	5.200E-02	52.000	0.396	396.432
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>	5.200E-02	52.000	0.396	396.432
L-Lysine Monohydrochloride	657-27-2	C <sub>6</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub> • HCl	7.246E-02	72.460	0.397	396.715
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>	1.500E-02	15.000	0.101	100.536
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>	3.200E-02	32.000	0.194	193.716
L-Threonine	72-19-5	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH(OH)CH <sub>3</sub>	4.800E-02	48.000	0.403	402.955
L-Tryptophan	73-22-3	C <sub>11</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>	1.000E-02	10.000	4.896E-02	48.964
L-Valine	72-18-4	HO <sub>2</sub> CCH(NH <sub>2</sub> )CH(CH <sub>3</sub> ) <sub>2</sub>	4.600E-02	46.000	0.393	392.827
D-Calcium Pantothenate (Vitamin B5)	137-08-6	C <sub>18</sub> H <sub>32</sub> CaN <sub>2</sub> O <sub>10</sub>	1.000E-03	1.000	2.099E-03	2.099
Choline Chloride	67-48-1	HOCH <sub>2</sub> CH <sub>2</sub> N(CH <sub>3</sub> ) <sub>3</sub> Cl	1.000E-03	1.000	7.162E-03	7.162
Folic Acid	59-30-3	C <sub>19</sub> H <sub>19</sub> N <sub>7</sub> O <sub>6</sub>	1.000E-03	1.000	2.266E-03	2.266
Inositol	87-89-8	C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	2.000E-03	2.000	1.110E-02	11.099
Niacinamide (Nicotinamide)	98-92-0	C <sub>6</sub> H <sub>6</sub> N <sub>2</sub> O	1.000E-03	1.000	8.189E-03	8.189
Pyridoxine Monohydrochloride	58-56-0	C <sub>8</sub> H <sub>11</sub> NO <sub>3</sub>	1.000E-03	1.000	4.864E-03	4.864
Riboflavin (Vitamin B2)	83-88-5	C <sub>17</sub> H <sub>20</sub> N <sub>4</sub> O <sub>6</sub>	1.000E-04	0.100	2.657E-04	0.266
Thiamine Monohydrochloride (Vitamin B1)	67-03-8	C <sub>12</sub> H <sub>18</sub> N <sub>4</sub> O <sub>4</sub> S	1.000E-03	1.000	2.965E-03	2.965
Phenol Red	34487-61-1	C <sub>19</sub> H <sub>14</sub> O <sub>5</sub> S	1.000E-02	10.000	2.657E-02	26.567
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	5.190E-02	51.900	0.199	198.706
L-Cystine Dihydrochloride	30925-07-6	C <sub>6</sub> H <sub>12</sub> N <sub>2</sub> O <sub>4</sub> S <sub>2</sub> •2HCl	3.129E-02	31.290	9.990E-02	99.904
Sodium Phosphate Monobasic, Anhydrous	7558-80-7	NaH <sub>2</sub> PO <sub>4</sub>	0.122	121.740	1.015	1.015E+03