www.lonza.com
U.S. Scientific Support: 800-521-0390
scientific.support@lonza.com
EU/ROW Scientific Support: +49-221-99199-400
scientific.support.eu@lonza.com
Document # TS-06-174-3 08/11

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.

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 ($NaHCO_3$) or L-glutamine

12-736 Cell culture maintenance medium with Earle's BSS, with nonessential amino acids, L-glutamine, HEPES buffer, 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

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 ($NaHCO_3$) 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 w/ Earle's BSS & L-Glutamine

12-611

Lonza

			Concentration		Molarity	
Description	**CAS #**	**Chemical Formula**	**g/L**	**mg/L**	**mM**	**uM**
Calcium Chloride Anhydrous	10043-52-4	CaCl2	0.200	200.00	1.80	1.80E+03
Dextrose	50-99-7	C6H12O6	1.000	1.00E+03	5.55	5.55E+03
Magnesium Sulfate Anhydrous	7487-88-9	MgSO4	9.77E-02	97.67	0.811	811.41
Potassium Chloride	7447-40-7	KCl	0.400	400.00	5.37	5.37E+03
Sodium Bicarbonate	144-55-8	NaHCO3	2.20	2.20E+03	26.19	2.62E+04
Sodium Chloride	7647-14-5	NaCl	6.80	6.80E+03	116.36	1.16E+05
L-Arginine Monohydrochloride	1119-34-2	C6H14N4O2 • HCl	0.127	126.98	0.603	602.77
L-Glutamine	56-85-9	C5H10N2O3	0.292	292.00	2.00	2.00E+03
L-Histidine Monohydrochloride Monohydrate	5934-29-2	C6H9N3O2 • HCl • H2O	4.20E-02	42.00	0.200	200.38
L-Isoleucine	73-32-5	HO2CCH(NH2)CH(CH3)CH2CH3	5.20E-02	52.00	0.396	396.43
L-Leucine	61-90-5	HO2CCH(NH2)CH2CH(CH3)2	5.20E-02	52.00	0.396	396.43
L-Lysine Monohydrochloride	657-27-2	C6H14N2O2 • HCl	7.25E-02	72.46	0.397	396.72
L-Methionine	63-68-3	HO2CCH(NH2)CH2CH2SCH3	1.50E-02	15.00	0.101	100.54
L-Phenylalanine	63-91-2	HO2CCH(NH2)CH2C6H5	3.20E-02	32.00	0.194	193.72
L-Threonine	72-19-5	HO2CCH(NH2)CH(OH)CH3	4.80E-02	48.00	0.403	402.96
L-Tryptophan	73-22-3	C11H12N2O2	1.00E-02	10.00	4.90E-02	48.96
L-Valine	72-18-4	HO2CCH(NH2)CH(CH3)2	4.60E-02	46.00	0.393	392.83
D-Calcium Pantothenate (Vitamin B5)	137-08-6	C18H32CaN2O10	1.00E-03	1.00	2.10E-03	2.10
Choline Chloride	67-48-1	HOCH2CH2N(CH3)3Cl	1.00E-03	1.00	7.16E-03	7.16
Folic Acid	59-30-3	C19H19N7O6	1.00E-03	1.00	2.27E-03	2.27
I-Inositol	87-89-8	C6H12O6	2.00E-03	2.00	1.11E-02	11.10
Niacinamide (Nicotinamide)	98-92-0	C6H6N2O	1.00E-03	1.00	8.19E-03	8.19
Pyridoxine Monohydrochloride	58-56-0	C8H11NO3	1.00E-03	1.00	4.86E-03	4.86
Riboflavin (Vitamin B2)	83-88-5	C17H20N4O6	1.00E-04	0.100	2.66E-04	0.27
Thiamine Monohydrochloride (Vitamin B1)	67-03-8	C12H18N4OSCl2	1.00E-03	1.00	2.96E-03	2.96
Phenol Red	34487-61-1	C19H14O5S	1.00E-02	10.00	2.66E-02	26.57
L-Tyrosine Disodium Salt, Dihydrate	122666-78-9	C9H9NO3Na2 • 2H2O	5.19E-02	51.90	0.199	198.71
L-Cystine Dihydrochloride	30925-07-6	C6H12N2O4S2·2HCl	3.13E-02	31.29	9.99E-02	99.90
Sodium Phosphate Monobasic, Anhydrous	7558-80-7	NaH2PO4	0.122	121.74	1.01	1.01E+03