



CM2509 MEMα (without phenol red)

Catalog# : CM2509 | Size: 500mL/10*500mL

Description

MEMα is a versatile basal medium optimized for the growth of mammalian suspension and adherent cell lines, as well as for DHFR-negative cell selection. This α-modified formulation builds on classic MEM by incorporating critical metabolic enhancers while omitting phenol red to reduce assay background. MEMα supports a broad range of cell types, including keratinocytes, astrocytes, CHO-DG44, and melanoma lines.

Modification

With (+)	Without (-)
Ribonucleosides	Phenol red
Deoxyribonucleosides	HEPES
L-Glutamine	
Sodium pyruvate	

Product Highlights

- **Broad Cell Compatibility**

Supports both anchorage-dependent and suspension cultures, including primary cells and transfected DHFR-negative lines (e.g., CHO-DG44).

- **Assay-Ready, Low-Background**

Free of phenol red to minimize interference in spectrophotometric, fluorescence, and luminescence assays.

- **Enhanced Metabolic Support**

Enriched with key cofactors (pyruvate, lipoic acid, vitamins) and stabilized L-glutamine to promote robust cell growth and viability.

- **DHFR Selection Capability**

Optional omission of nucleosides allows direct use as selective medium for DHFR-deficient cell lines.

- **Quality Manufacturing**

Produced under GMP conditions, with USP-grade water for injection to ensure ultra-low endotoxin and RNase/DNase-free performance.

Recommended Use

- **Supplementation**

Protein- and growth factor-free. We recommend adding 10% Fetal Bovine Serum (FBS) or defined serum replacements according to your application needs.

- **Culture Conditions**

Incubate in 5–10% CO₂ at 37 °C to maintain optimal pH with the sodium bicarbonate buffering system.

• Applications

- Routine propagation of mammalian cell lines
- Transfection, gene amplification, and selection studies
- Primary cell maintenance and stem cell expansion
- Drug screening, toxicology assays, and bioproduction

Storage & Handling

- Storage Temperature : 2 – 8 °C, protected from light
- Shelf Life : 12 months unopened; use within 4 weeks after opening
- Shipping : Cold chain (2 – 8 °C) recommended

Quality Assurance

- Endotoxin : < 0.03 EU/mL
- Sterility : USP <71> compliant
- Traceability : Lot-specific Certificate of Analysis (pH, osmolality, sterility) provided

Formulation

G4554 α-MEM Formula

Components	Concentration		Components	Concentration	
	mg/L	mM		mg/L	mM
Amino acids			Inorganic salts		
Glycine	50.0	0.6667	Calcium Chloride (CaCl ₂)(anhyd.)	200	1.801802
L-Alanine	25.0	0.2809	Magnesium Sulfate (MgSO ₄)(anhyd.)	97.67	0.813917
L-Arginine hydrochloride	105.0	0.4976	Potassium Chloride (KCl)	400	5.333
L-Asparagine-H ₂ O	50.0	0.3333	Sodium Bicarbonate (NaHCO ₃)	2200	26.2
L-Aspartic Acid	30.0	0.2256	Sodium Chloride (NaCl)	6800	117.2
L-Cystine 2HCl	31.0	0.0990	Sodium Phosphate monobasic (NaH ₂ PO ₄) (anhyd.)	121.7	1.014
L-Cysteine hydrochloride-H ₂ O	100.0	0.5682	Other components		
L-Glutamic Acid	75.0	0.5102	D-Glucose (Dextrose)	1000	5.6
L-Alanyl-L-Glutamine	434.4	2.0	Lipoic Acid	0.20	0.0009709
L-Histidine hydrochloride-H ₂ O	42	0.20	Sodium pyruvate	110	1.0
L-Isoleucine	52.4	0.40	Adenosine	10.00	0.375
L-Leucine	52.0	0.3969	Cytidine	10.00	0.0412



Components	Concentration		Components	Concentration	
	mg/L	mM		mg/L	mM
Amino acids			Inorganic salts		
L-Lysine hydrochloride	73.0	0.3989	Guanosine	10.00	0.0353
L-Methionine	15.0	0.1007	Uridine	10.00	0.0410
L-Phenylalanine	32.0	0.1939	2'Deoxyadenosine	10.72	0.0398
L-Proline	40.0	0.3478	2'Deoxyctidine HCl	9.46	0.0417
L-Serine	25.0	0.2381	2'Deoxyguanosine	10.68	0.0375
L-Threonine	48.0	0.4034	Thymidine	10.00	0.0413
L-Tryptophan	10.0	0.0490			
L-Tyrosine Disodium Salt	52.0	0.2311			
L-Valine	46.0	0.3932			
Vitamins					
Ascorbic Acid	50.0	0.2841			
Biotin	0.10	0.000410			
Choline chloride	1.0	0.007143			
D-Calcium pantothenate	1.0	0.002096			
Folic Acid	1.0	0.002268			
Niacinamide	1.0	0.008197			
Pyridoxine hydrochloride	1.0	0.004902			
Riboflavin	0.10	0.000266			
Thiamine hydrochloride	1.0	0.002967			
Vitamin B12	1.36	0.001004			
i-Inositol	2.0	0.011111			

Contact Information

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