

	Document ID:	TDS-MCL-054-500ML	Version:	005
	Date of Issue:	10-JAN-2023	Approved by:	Dr. Iman Kamranfar
	Review Date:	10-JAN-2025	Signature:	
	Title:	<b>TECHNICAL DATASHEET</b>		

### Minimum Essential Medium (MEM) Alpha Modification

<b>Filtration/ Treatment</b>	Without L-Glutamine, without Nucleosides
<b>Product Code</b>	MCL-054-500ML
<b>Shelf Life</b>	24 months from DOM
<b>Storage Temperature</b>	+2 to +8°C
<b>Shipping Temperature</b>	ambient

### QC Specifications

Physical and Chemical Analysis	Method	Specifications	Units
Appearance	Visual	Clear, red solution	n/a
pH at RT	Electronic pH Meter	6.9 - 7.5	n/a
Osmolality	Osmometer	260 - 340	mOsm/kg
Endotoxin	LAL Kinetic	≤ 1.0	EU/ml
<b>Sterility</b>			
Aerobic Bacteria	Internally Validated	Not detected	n/a
Anaerobic Bacteria	Internally Validated	Not detected	n/a
Fungi (Yeast & Mold)	Internally Validated	Not detected	n/a
Mycoplasma	qPCR	Not detected	n/a
<b>Cell culture</b>			
Cell growth promotion	Passage test	3 passages	n/a
Viability	Trypan Blue Exclusion	≥75%	n/a

### Formulation

Amino Acids	CAS number	Concentration (mg/L)
Glycine	56-40-6	50.00
L-Alanine	56-41-7	25.00
L-Arginine, Hydrochloride	1119-34-2	126.40
L-Asparagine, Monohydrate	5794-13-8	50.00
L-Aspartic Acid	56-84-8	30.00
L-Cysteine, Hydrochloride, Monohydrate	7048-04-6	100.00
L-Cystine, Dihydrochloride	30925-07-6	31.20
L-Histidine, Hydrochloride, Monohydrate	5934-29-2	41.90
L-Isoleucine	73-32-5	52.50
L-Leucine	61-90-5	52.50
L-Lysine, Hydrochloride	657-27-2	73.00
L-Methionine	63-68-3	15.00
L-Phenylalanine	63-91-2	32.50
L-Proline	51-35-4	40.00
L-Serine	56-45-1	25.00
L-Threonine	72-19-5	48.00
L-Tryptophan	73-22-3	10.00
L-Tyrosine, Disodium, Dihydrate	122666-87-9	52.00
L-Valine	72-18-4	46.00
<b>Vitamins</b>		
Biotin	58-85-5	0.10
Choline Chloride	67-48-1	1.00
D-Calcium Pantothenate	137-08-6	1.00
Folic Acid	59-30-3	1.00
L-Ascorbic Acid	50-81-7	50.00
Myo-Inositol	87-89-8	2.00
Niacinamide	98-92-0	1.00
Pyridoxal, Hydrochloride	65-22-5	1.00
Riboflavin	83-88-5	0.10
Thiamine, Hydrochloride	67-03-8	1.00

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Vitamin B12	68-19-9	1.40
<b>Other Components</b>		
D-Glucose, Anhydrous	50-99-7	1000.00
Lipoic Acid (DL-Thiolic Acid)	1077-28-7	0.20
Phenol Red, Sodium Salt	34487-61-1	10.00
Pyruvic Acid, Sodium Salt	113-24-6	110.00
<b>Inorganic Salts</b>		
Calcium Chloride, Anhydrous	10043-52-4	200.00
Magnesium Sulfate, Anhydrous	7487-88-9	97.70
Potassium Chloride	7447-40-7	400.00
Sodium Bicarbonate	144-55-8	2200.00
Sodium Chloride	7647-14-5	6800.00
Sodium Phosphate, Monobasic, Monohydrate	10049-21-5	140.00

**Product Use:** This product is intended for laboratory use only.