

	Document ID:	TDS-MCP-003-50L	Version:	001
	Date of Issue:	10-JAN-2023	Approved by:	Dr. Iman Kamranfar
	Review Date:	10-JAN-2025	Signature:	
	Title:	TECHNICAL DATASHEET		

Dulbecco's Modified Eagle's Medium (DMEM)

Filtration/ Treatment	Without Glucose, L-Glutamine and Sodium Pyruvate
Product Code	MCP-003-50L
Shelf Life	4 years from DOM
Storage Temperature	+2 to +8°C
Shipping Temperature	ambient

QC Specifications

Physical and Chemical Analysis	Method	Specifications	Units
Appearance	Visual	Off-white to orange powder	n/a
Solubility	Internally validated	8.296 in ≤ 30 minutes	g/L
Moisture Content	Loss-on-drying	≤ 2.0 %	n/a
Particle Size (100 mesh)	Internally validated	≥ 90%	n/a
pH without NaHCO ₃	Electronic pH Meter	5.6 - 7.2	n/a
pH with NaHCO ₃	Electronic pH Meter	Record	n/a
Osmolality without NaHCO ₃	Osmometer	245 - 285	mOsm/kg
Osmolality with NaHCO ₃	Osmometer	Record	mOsm/kg
Endotoxin	LAL Kinetic	≤ 1.0	EU/ml
Mycoplasma	qPCR	Not detected	n/a
Cell culture			
Cell growth promotion*	Passage test	3 passages	n/a
Viability*	Trypan Blue Exclusion	≥75%	n/a

*Tested in completed formulation

Formulation

Amino Acids	CAS number	Concentration (mg/L)
Glycine	56-40-6	30.00
L-Arginine, Hydrochloride	1119-34-2	84.00
L-Cystine, Dihydrochloride	30925-07-6	63.00
L-Histidine, Hydrochloride, Monohydrate	5934-29-2	42.00
L-Isoleucine	73-32-5	105.00
L-Leucine	61-90-5	105.00
L-Lysine, Hydrochloride	657-27-2	146.00
L-Methionine	63-68-3	30.00
L-Phenylalanine	63-91-2	66.00
L-Serine	56-45-1	42.00
L-Threonine	72-19-5	95.00
L-Tryptophan	73-22-3	16.00
L-Tyrosine, Disodium, Dihydrate	122666-87-9	104.00
L-Valine	72-18-4	94.00
Vitamins		
Choline Chloride	67-48-1	4.00
D-Calcium Pantothenate	137-08-6	4.00
Folic Acid	59-30-3	4.00
Myo-Inositol	87-89-8	7.20
Niacinamide	98-92-0	4.00
Pyridoxine, Hydrochloride	58-56-0	4.00
Riboflavin	83-88-5	0.40
Thiamine, Hydrochloride	67-03-8	4.00
Other Components		
Phenol Red, Sodium Salt	34487-61-1	15.00
Inorganic Salts		
Calcium Chloride, Anhydrous	10043-52-4	200.00

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Ferric Nitrate, Nonahydrate	7782-61-8	0.10	
Magnesium Sulfate, Anhydrous	7487-88-9	97.67	
Potassium Chloride	7447-40-7	400.00	
Sodium Chloride	7647-14-5	6400.00	
Sodium Phosphate, Monobasic, Monohydrate	10049-21-5	125.00	

Note: Sodium Bicarbonate is not included in the powdered media (Add: 3700.00 mg/L).

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