
	Document ID:	TDS-MCP-023-50L	Version:	007
	Date of Issue:	10-JAN-2025	Approved by:	Dr. Iman Kamranfar
	Review Date:	10-JAN-2027	Signature:	
	Title:	<b>TECHNICAL DATASHEET</b>		

### Dulbecco's Modified Eagle's/ Ham's F12 Medium



<b>Filtration/ Treatment</b>	With L-Glutamine and 15 mM HEPES
<b>Product Code</b>	MCP-023-50L
<b>Shelf Life</b>	4 years 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	Off-white to orange powder	n/a
Solubility	Internally validated	15.56 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 <sub>3</sub>	Electronic pH Meter	5.6 - 6.0	n/a
pH with NaHCO <sub>3</sub>	Electronic pH Meter	Record	n/a
Osmolality without NaHCO <sub>3</sub>	Osmometer	260 - 320	mOsm/kg
Osmolality with NaHCO <sub>3</sub>	Osmometer	Record	mOsm/kg
Endotoxin	LAL Kinetic	≤ 1.0	EU/ml
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	18.75
L-Alanine	56-41-7	4.45
L-Arginine, Hydrochloride	1119-34-2	147.50
L-Asparagine, Monohydrate	5794-13-8	7.50
L-Aspartic Acid	56-84-8	6.65
L-Cysteine, Hydrochloride, Monohydrate	7048-04-6	17.56
L-Cystine, Dihydrochloride	30925-07-6	31.29
L-Glutamic Acid	56-86-0	7.35
L-Glutamine	56-85-9	365.00
L-Histidine, Hydrochloride, Monohydrate	5934-29-2	31.48
L-Isoleucine	73-32-5	54.47
L-Leucine	61-90-5	59.05
L-Lysine, Hydrochloride	657-27-2	91.25
L-Methionine	63-68-3	17.24
L-Phenylalanine	63-91-2	35.48
L-Proline	147-85-3	17.25
L-Serine	56-45-1	26.25
L-Threonine	72-19-5	53.45
L-Tryptophan	73-22-3	9.02
L-Tyrosine, Disodium, Dihydrate	122666-87-9	55.79
L-Valine	72-18-4	52.85
<b>Vitamins</b>		
Biotin	58-85-5	0.004
Choline Chloride	67-48-1	8.98
D-Calcium Pantothenate	137-08-6	2.24
Folic Acid	59-30-3	2.65
Myo-Inositol	87-89-8	12.60
Niacinamide	98-92-0	2.02
Pyridoxine, Hydrochloride	58-56-0	2.03

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Riboflavin	83-88-5	0.22
Thiamine, Hydrochloride	67-03-8	2.17
Vitamin B12	68-19-9	0.68
<b>Other Components</b>		
D-Glucose, Anhydrous	50-99-7	3151.00
HEPES	7365-45-9	3574.50
Hypoxanthine, Sodium	45738-97-4	2.39
Linoleic Acid	60-33-3	0.04
Lipoic Acid (DL-Thiolic Acid)	1077-28-7	0.11
Phenol Red, Sodium Salt	34487-61-1	8.10
Putrescine, Dihydrochloride	333-93-7	0.08
Pyruvic Acid, Sodium Salt	113-24-6	55.00
Thymidine	50-89-5	0.37
<b>Inorganic Salts</b>		
Calcium Chloride, Anhydrous	10043-52-4	116.60
Cupric Sulfate, Pentahydrate	7758-99-8	0.001
Ferric Nitrate, Nonahydrate	7782-61-8	0.05
Ferrous Sulfate, Heptahydrate	7782-63-0	0.42
Magnesium Chloride, Anhydrous	7786-30-3	28.61
Magnesium Sulfate, Anhydrous	7487-88-9	48.93
Potassium Chloride	7447-40-7	311.80
Sodium Chloride	7647-14-5	6995.50
Sodium Phosphate Dibasic, Anhydrous	7558-79-4	70.96
Sodium Phosphate, Monobasic, Monohydrate	10049-21-5	62.50
Zinc Sulfate, Heptahydrate	7446-20-0	0.43

Note: Sodium Bicarbonate is not included in the powdered media (1200.00 mg/L).

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