

DATA SHEET

Rev.ver: 01

1. Identification

Product name	Dulbecco's Modified Eagle Medium (DMEM), High glucose w/ 4.5gms Glucose per liter, L-alanyl-L-glutamine and Sodium pyruvate and Sodium bicarbonate
Catalog.no	CCML137

2. Description

Dulbecco's Modified Eagle Medium (DMEM) medium is formulated with a stabilized dipeptide form of L-glutamine, L-alanyl-L-glutamine, providing a superior alternative to conventional glutamine-containing media. The dipeptide configuration prevents intramolecular cyclization of L-glutamine, thereby minimizing the formation of toxic ammonia. In this structure, L-alanine protects the α -amino group of L-glutamine, enhancing its stability in solution.

Once taken up by cells, intracellular aminopeptidases enzymatically cleave the dipeptide, resulting in the controlled release of both L-glutamine and L-alanine for cellular metabolism. This sustained release eliminates the need for frequent L-glutamine supplementation and significantly extends the shelf life of liquid media when stored at 4 °C.

3. Product Specifications

Appearance	Clear Red Color Solution.
Storage and shelf life	Store at +2°C to +8°C protected from light.
Shipping conditions	Ambient

4. Formulation

Components	Concentration mg/L
Amino Acids:	
L-Arginine HCl	84.0
L-Cystine 2HCl	62.570
Glycine	30.00
L-alanyl-L-glutamine	868.0
L-Histidine HCl H ₂ O	42.00
L-Isoleucine	105.000
L-Leucine	105.000
L-Lysine HCl	146.000
L-Methionine	30.00
L-Phenylalanine	66.00
L-Serine	42.00
L-Threonine	95.00
L-Tryptophan	16.00
L-Tyrosine 2Na 2H ₂ O	103.790
L-Valine	94.000
Vitamins:	
Choline chloride	4.000
D-Calcium Pantothenate	4.000

Components	Concentration mg/L
Folic Acid	4.000
Nicotinamide	4.000
Pyridoxal HCl	4.000
Thiamine HCl	4.000
i-Inositol	7.200
Riboflavin	0.400
Inorganic Salts	
CaCl ₂ 2H ₂ O	265.000
Ferric nitrate nonahydrate	0.100
MgSO ₄	97.720
KCl	400.000
Sodium chloride	6400.000
Sodium Bicarbonate	3700.00
Sodium dihydrogen phosphate anhydrous	109.000
Other Components:	
D-Glucose	4500.00
Sodium Pyruvate	110.000
Phenol red sodium salt	15.900

5. Precautions and Disclaimer

This product is for research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.