

CELUX® DMEM high glucose medium

Cat. no. MCCA001

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1. Product Information

Product name	CELUX® DMEM high glucose medium
Cat. No.	MCCA001
Size	500 ml
Storage and shipping	Store at 2 - 8°C away from light, effective for 1 year.

2. Product description

Dulbecco's Modified Eagle Medium (DMEM) is a widely used basal medium for the culture of many mammals cell types, including primary fibroblasts, neurons, neuroglia, HUVEC and smooth muscle cells, as well as HeLa, 293, Cos-7 and smooth muscle cells. DMEM is based on MEM medium and has a 2-fold increase in amino acids and a 4-fold increase in vitamins compared to MEM medium, as well as an increase in non-essential amino acids, trace iron ions and sodium pyruvate.

DMEM medium was originally designed as a low-glucose type with a glucose content of 1000 mg/L, and later developed into a high-glucose type with a glucose content of 4500 mg/L, which has been widely used in the culture of various cells. The high glucose type of DMEM is commonly used for fast-growing cells with low adhesion, myeloma cells of hybridoma, clonal cells, transformed cells of DNA transfection, host cells of primary viruses, single cells, and so on. DMEM High Sugar is commonly used for fast-growing cells with low adhesion, myeloma cells for hybridomas, clonal cells, DNA-transfected transformed cells, primary viral host cells, single-cell cultures, and vaccine production, e.g., expression of EPO in CHO cells and production of hepatitis B vaccine.

L-glutamine is an essential nutrient in the liquid environment of cell culture, but it is unstable in aqueous solution and prone to degradation. Sodium pyruvate can be used as an alternative carbon source in cell culture, and cells can also metabolize sodium pyruvate in case of glucose deficiency.

This product contains: D-Glucose (4500 mg/L), Phenol Red, L-Glutamine, Sodium Pyruvate.

Does not contain: HEPES, Dual Antibodies.

3. Components

Components	Molecular Weight	Concentration(mg/L)	mM
Amino Acids			
Glycine	75.0	30.0	0.4
L-Arginine hydrochloride	211.0	84.0	0.39810428
L-Cystine 2HCl	313.0	63.0	0.20127796
L-Glutamine	146.0	584.0	4.0
L- Histidine hydrochloride-H ₂ O	210.0	42.0	0.2
L-Isoleucine	131.0	105.0	0.8015267
L- Leucine	131.0	105.0	0.8015267
L-Lysine hydrochloride	183.0	146.0	0.7978142
L-Methionine	149.0	30.0	0.20134228
L-Phenylalanine	165.0	66.0	0.4
L-Serine	105.0	42.0	0.4
L-Threonine	119.0	95.0	0.79831934
L-Tryptophan	204.0	16.0	0.078431375
L-Tyrosine disodium salt dihydrate	261.0	104.0	0.39846742
L-Valine	117.0	94.0	0.8034188
Vitamins			
Choline chloride	140.0	4.0	0.028571429
D-Calcium pantothenate	477.0	4.0	0.008385744
Folic Acid	441.0	4.0	0.009070295
Niacinamide	122.0	4.0	0.032786883
Pyridoxine hydrochloride	206.0	4.0	0.019417476
Riboflavin	376.0	0.4	0.0010638298
Thiamine hydrochloride	337.0	4.0	0.011869436
i-Inositol	180.0	7.2	0.04
Inorganic Salts			
Calcium Chloride (CaCl ₂) (anhyd.)	111.0	200.0	1.8018018
Ferric Nitrate (Fe(NO ₃) ₃ ·9H ₂ O)	404.0	0.1	2.4752476E-4
Magnesium Sulfate (MgSO ₄) (anhyd.)	120.0	97.67	0.8139166
Potassium Chloride (KCl)	75.0	400.0	5.3333335
Sodium Chloride (NaCl)	58.0	6400.0	110.344826
Sodium Phosphate monobasic (NaH ₂ PO ₄ ·H ₂ O)	138.0	125.0	0.9057971
Sodium Bicarbonate (NaHCO ₃)	84.0	3700.0	44.0
Other Components			
D-Glucose (Dextrose)	180.0	4500.0	25.0
Phenol Red	376.4	15.0	0.039851222
Sodium Pyruvate	110.0	110.0	1.0

4. Note

4.1 For your safety and health, please wear lab coat and disposable gloves to operate.

4.2 This product is for scientific research purposes only.