

Product Information

The original Eagle's Medium was developed in the 1950s and was formulated for the cultivation of chicken cells. However, the Dulbecco's modification is an enhanced supplementary formulation that boosts select amino acid and vitamin content by up to fourfold when compared to the original Eagle's medium. DMEM is not a complete medium on its own, as it is lacking necessary nutrients like proteins, lipids, or growth factors. Therefore, it must be supplemented with other components, such as Fetal bovine serum (FBS), Amino acids, and other nutrients to provide a complete and balanced growth environment for cells in culture. Our selection includes a range of Glucose concentrations, as well as formulations with and without L-Glutamine.

RBDMEM01 is supplemented with 4.5gm/L Glucose, L-Glutamine, Sodium bicarbonate and Phenol red. The media is formulated without Sodium pyruvate and HEPES.

Storage temperature	2-8°C, protect from light
Shelf life	12 months

Applications

In cell culture, DMEM is used as a medium to support the growth of different types of cells, including primary cells, stem cells, and transformed cells. The modified version of DMEM can also be used for various research applications such as drug discovery, tissue engineering, and the study of cell signaling pathways. also supports the growth of many different mammalian cells. Cells successfully cultured in DMEM include primary fibroblasts, neurons, glial cells, HUVECs, and smooth muscle cells, as well as cell lines such as HeLa, 293, Cos-7, and PC-12.

Quality Control

Appearance	Orangish red, clear liquid
pH	7.0 -7.6
Osmolality	320–360 mOsm/kg
Sterility ¹	Sterile
Endotoxin ²	< 1.0 EU/ml
Cell culture test ³	Meets the requirements
Mycoplasma contamination ⁴	Negative

Note:

¹Sterility Testing (Bacterial and Fungal) carried out in accordance with < USP 71 >

²Bacterial endotoxin testing carried out in accordance with < USP 85 >

³Indicative cell line was seeded in complete control medium and complete test medium in a 96-well plate in triplicates and incubated at 37°C in a 5% CO₂ environment. Growth rates and viability of the cells in test medium must be comparable to the cultures grown in control medium.

⁴Mycoplasma test carried out using a real time PCR-based kit.

Composition

Components	Concentration (mg/L)
Amino Acids	
Glycine	30
L-Arginine hydrochloride	84
L-Cystine dihydrochloride	63
L-Glutamine	584
L-Histidine hydrochloride-monohydrate	42
L-Isoleucine	105
L-Leucine	105
L-Lysine hydrochloride	146
L-Methionine	30
L-Phenylalanine	66
L-Serine	42
L-Threonine	95
L-Tryptophan	16
L-Tyrosine disodium salt dihydrate	104
L-Valine	94
Vitamins	
Choline chloride	4
D-Calcium pantothenate	4
Folic acid	4
i-Inositol	7.2
Niacinamide	4
Pyridoxine hydrochloride	4
Riboflavin	0.4
Thiamine hydrochloride	4

Components	Concentration (mg/L)
Inorganic Salts	
Calcium chloride (anhyd.)	200
Ferric nitrate nonahydrate	0.1
Magnesium sulfate (anhyd.)	97.67
Potassium chloride	400
Sodium bicarbonate	3700
Sodium chloride	6400
Sodium phosphate monobasic monohydrate	125
Other Components	
D-Glucose (Dextrose)	4500
Phenol red sodium salt	15