DMEM, High, HEPES

(Dulbecco's Modified Eagle's Medium, High D-Glucose)

Cat. No. CPD003

With 4.5 g/L D-Glucose
With L-Glutamine
With 25 mM HEPES
With Sodium Bicarbonate

1. Product Description

DMEM is a modification of Basal Medium Eagle (BME), containing a fourfold higher concentration of amino acids and vitamins. Originally developed for embryonic mouse cells with 1.0 g/L D-Glucose, formulations with 4.5 g/L D-Glucose are widely used for culturing a broad range of cell lines including HeLa, 293, Cos-7, and PC-1, as well as primary fibroblasts, neurons, glial cells, HUVECs, and smooth muscle cells. This product contains 25 mM HEPES to provide more effective pH buffering capacity.

2. Composition

Concentration: mg/L

Amino Acids	mg/L
L-Arginine·HCl	84
L-Cystine·2HCl	63
L-Glutamine	584
Glycine	30
L-Histidine·HCl·H_2O	42
L-Isoleucine	105
L-Leucine	105
L-Lysine·HCl	146
L-Methionine	30
L-Phenylalanine	66
L-Serine	42
L-Threonine	95
L-Tryptophan	16
L-Tyrosine·2Na	104
L-Valine	94

Vitamins	mg/L
D-Ca Pantothenate	4
Choline Chloride	4
Folic Acid	4
i-Inositol	7.2
Niacinamide	4
Pyridoxine·HCl	4
Riboflavin	0.4
Thiamine·HCl	4

Inorganic Salts	mg/L
$CaCl_2$	200
$Fe(NO_3)_3·9H_2O$	0.1
KCl	400
$MgSO_4$	97.67
NaCl	4400
$NaHCO_3$	3700
$NaH_2PO_4·H_2O$	125

Others

Others	mg/L
D-Glucose	4500
Phenol Red	15
HEPES	5958
Sodium Pyruvate	—

3. Product Quality Specifications

Appearance	pH	Osmolality	Endotoxin	Sterility
Red clear liquid	pH 7.3 ± 0.3	311 ± 16 mOsm/kg H_2O	< 1 EU/mL	Sterile

4. Storage Conditions and Precautions

Protect from direct light and store refrigerated (2–8°C). Product degradation may appear as precipitates, floating particles, turbidity, or color change; discard if any are observed. Storing against the inner walls of a refrigerator where temperatures may approach 0°C can cause degradation.

5. Usage Instructions and Precautions

This product is a sterile solution. Open the cap only in a sterile environment (e.g., a clean bench) using aseptic technique. It is recommended to use the entire contents after opening; otherwise, aliquot into a suitable sterile container and store refrigerated (2–8°C).