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TECHNICAL INFORMATION

Catalog Number: 1233449, 1233454

Dulbecco's Modified Eagle's Medium (DMEM) (1X Solution) with 20 mM HEPES, without L-Glutamine or Sodium Bicarbonate

Description: Also known as DME, Dulbecco's Modified Eagle's Medium is the most widely used modification of Eagle's Basal Medium (BME). DMEM contains four times greater concentration of amino acids, vitamins and supplementary components. The original formulation calls for 1000 mg/L of glucose, which was first employed to support the polyoma virus in primary and secondary embryonic mouse cultures. For optimal culturing of other cell types, a modification of 4500 mg/L glucose is available from MP. Storage Temperature 2-8°C.

Formulation:

Component	mg/lt	Mol. Wt.	Mol. (mM)
Amino Acids			
L-Arginine HCl	84.00	210.7	0.40
L-Cystine	48.00	240.3	0.20
Glycine	30.00	75.07	0.40
L-Histidine HCl H ₂ O	42.00	209.6	0.20
L-Isoleucine	104.80	131.2	0.80
L-Leucine	104.80	131.2	0.80
L-Lysine HCl	146.20	182.6	0.80
L-Methionine	30.00	149.2	0.20
L-Phenylalanine	66.00	165.2	0.40
L-Serine	42.00	105.1	0.40
L-Threonine	95.20	119.1	0.80
L-Tryptophan	16.00	204.2	0.08
L-Tyrosine	72.00	181.2	0.40
L-Valine	93.60	117.1	0.80
Vitamins			
Choline Chloride	4.00	139.6	0.03
D-Calcium Pantothenate	4.00	238.3	0.02
Folic Acid	4.00	441.4	0.01
myo-Inositol	7.00	180.2	0.04

Nicotinamide	4.00	122.13	0.03
Pyridoxal HCl	4.00	203.6	0.02
Riboflavin	0.40	376.4	0.00
Thiamine HCl	4.00	337.3	0.01
Inorganic Salts			
Calcium Chloride [CaCl ₂ 2H ₂ O] Dihydrate	264.90	147	1.80
Ferric Nitrate [Fe(NO ₃) ₃ 9H ₂ O] Nonahydrate	0.10	404	0.0002
Magnesium Sulfate [MgSO ₄]	97.70	120.4	0.81
Potassium Chloride [KCl]	400.00	74.55	5.37
Sodium Chloride [NaCl]	6400.00	58.44	109.51
Sodium Phosphate Monobasic [NaH ₂ PO ₄ H ₂ O] Monohydrate	125.00	137.99	0.905
Other			
Dextrose	4500.00	180.2	24.97
HEPES	4766.00	238.3	20.00
Phenol Red Sodium Salt	15.00	376.4	0.04
Sodium Pyruvate	110.00	110	1.00
Add			
NaHCO ₃ Powder (g/L)		3.70	
NaHCO ₃ 7.5% Solution (mL/L)		49.44	
L-glutamine Powder (mg/L)		584.00	
L-glutamine 200 mM Solution		20.00	

Availability:

1X Liquid:

Dulbecco's Modification of Eagle's Medium (DMEM):

Catalog Number	Description	Size
1233249	1X DMEM with 4500 mg/l glucose, without L-glutamine	100 ml
1233254		500 ml
1233226		1 liter
1233354	1X DMEM with 4500 mg/l dextrose, L-glutamine	500 ml
1234354	1X DMEM with 1000 mg/l dextrose, L-glutamine	500 ml
1233654	1X DMEM with 4500 mg/l dextrose, L-glutamine, without sodium pyruvate	500 ml
1233854	1X DMEM with 4500 mg/l dextrose, without sodium pyruvate, L-glutamine	500 ml
1233449	1X DMEM with 20 mM HEPES, without L-glutamine, sodium bicarbonate	100 ml
1233454		500 ml
1642249	1X DMEM with 4500 mg/l dextrose, without L-glutamine, methionine	100 ml
1642254		500 ml
1642449	1X DMEM with 4500 mg/l dextrose, without L-glutamine, cystine, methionine, cysteine	100 ml
1642454		500 ml
1642054	1X DMEM without L-glutamine, cystine, methionine, cysteine, calcium	500 ml
1642149	1X DMEM with 4500 mg/l dextrose, without L-glutamine, L-leucine	100 ml 500 ml

1642349	1X DMEM with 4500 mg/l dextrose, without L-glutamine, phosphate	100 ml
1642354		500 ml
1642954	1X DMEM with 4500 mg/l dextrose, without L-glutamine, myo-inositol	500 ml
1642754	1X DMEM without L-glutamine, phenol red	500 ml

Dulbecco's Modification of Eagle's Medium/Ham's F-12 Medium:

Catalog Number	Description	Size
1246754	1X DMEM/Ham's F-12 (1:1) without L-glutamine	500 ml

10X Liquid:

Dulbecco's Modification of Eagle's Medium (DMEM):

Catalog Number	Description	Size
1433054	10X DMEM without sodium bicarbonate, L-glutamine	500 ml

Powders:

Dulbecco's Modification of Eagle's Medium (DMEM):

Catalog Number	Description	Size
1033120	DMEM with L-glutamine, 4500 mg/l dextrose, without sodium bicarbonate	10 x 1 liter
1033122		1 x 10 liter
1033124		1 x 50 liter
1033220	DMEM with L-glutamine, 4500 mg/l dextrose, without sodium bicarbonate, sodium pyruvate	10 x 1 liter
1033222		1 x 10 liter
		1 x 50 liter
1033522	DMEM with 20 mM HEPES, L-glutamine, without sodium bicarbonate	1 x 10 liter

Dulbecco's Modification of Eagle's Medium/Ham's F-12 Medium:

Catalog Number	Description	Size
1046820	DMEM/Ham's F-12 (1:1) without L-glutaminem sodium bicarbonate	10 x 1 liter
1046822		1 x 10 liter
1046920	DMEM/Ham's F-12 (1:1) without L-glutaminem sodium bicarbonate, phenol red	10 x 1 liter
1046922		1 x 10 liter

References:

- Dulbecco, R. and Freeman, G., *Virology*, v. 8, 396 (1959).
- Smith, J.D., et. al., *Virology*, v. 12, 185 (1960).
- Morton, H.J., *In Vitro*, v. 6, 89 (1970).