



Product Information

Dulbecco's Modified Eagle's Medium (DME)

Many modifications of Eagle's Medium have been developed since the original formulation appeared in the literature. Among the most widely used of these modifications is Dulbecco's Modified Eagle's Medium (DME). DME is a modification of Basal Medium Eagle (BME) that contains a four-fold higher concentration of amino acids and vitamins, as well as additional supplementary components. The original DME formula contains 1000 mg/L of glucose and was first reported for culturing embryonic mouse cells. A further alteration with 4500 mg/L glucose has proved to be optimal in cultivating certain cell types.

REFERENCES

1. Dulbecco, R. and Freeman, G. (1959). Plaque Production by the Polyoma Virus. *Virology*. 8, 396-397.
2. Smith, J.D., Freeman, G., Vogt, M. and Dulbecco, R. (1960). The Nucleic Acid of Polyoma Virus. 12, 185-196.
3. Morton, H.J., (1970). A Survey of Commercially Available Tissue Culture Media. *In Vitro*. 6, 89.
4. Rutzky, L.P. and Pumper, R.W., (1974). Supplement to a Survey of Commercially Available Tissue Culture Media (1970). *In Vitro*. 9, 468.

Formulations begin on next page.

	D 0422		D 2429	D 2554					
	[1X]	D 1152	[10X]	[10X]	D 2902	D 3656	D 5030	D 5280	D 5523
COMPONENT	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L
INORGANIC SALTS									
CaCl ₂ •2H ₂ O	0.265	0.265	2.65	2.65	0.265	0.265	0.265	0.265	0.265
Fe(NO ₃) ₃ •9H ₂ O	0.0001	0.0001	0.001	0.001	0.0001	0.0001	0.0001	0.0001	0.0001
MgSO ₄	0.09767	0.09767	0.9767	0.9767	0.09767	0.09767	0.09767	0.09767	0.09767
KCl	0.4	0.4	4.0	4.0	0.4	0.4	0.4	0.4	0.4
NaHCO ₃	3.7	—	—	—	—	—	—	—	—
NaCl	6.4	4.4	64.0	64.0	6.4	6.4	6.4	6.4	6.4
NaH ₂ PO ₄	0.109	0.109	1.09	1.09	0.109	—	0.109	0.109	0.109
Succinic Acid	—	—	—	—	—	—	—	0.075	—
Sodium Succinate	—	—	—	—	—	—	—	0.1	—
AMINO ACIDS									
L-Arginine•HCl	0.084	0.084	0.84	0.84	0.084	0.084	0.084	0.084	0.084
L-Cystine•2HCl	—	0.0626	0.626	0.626	0.0626	0.0626	0.0626	0.0626	0.0626
L-Glutamine	—	0.584	—	—	0.584	0.584	—	—	0.584
Glycine	0.03	0.030	0.30	0.30	0.030	0.030	0.030	0.030	0.030
L-Histidine•HCl•H ₂ O	0.042	0.042	0.42	0.42	0.042	0.042	0.042	0.042	0.042
L-Isoleucine	0.105	0.105	1.05	1.05	0.105	0.105	0.105	0.105	0.105
L-Leucine	0.105	0.105	1.05	1.05	0.105	0.105	0.105	0.105	0.105
L-Lysine•HCl	0.146	0.146	1.46	1.46	0.146	0.146	0.146	0.146	0.146
L-Methionine	—	0.030	0.30	0.30	0.030	0.030	0.030	0.030	0.030
L-Phenylalanine	0.066	0.066	0.66	0.66	0.066	0.066	0.066	0.066	0.066
L-Serine	0.042	0.042	0.42	0.42	0.042	0.042	0.042	0.042	0.042
L-Threonine	0.095	0.095	0.95	0.95	0.095	0.095	0.095	0.095	0.095
L-Tryptophan	0.016	0.016	0.16	0.16	0.016	0.016	0.016	0.016	0.016
L-Tyrosine (free base)	—	—	—	—	—	—	—	0.072	—
L-Tyrosine•2Na•2H ₂ O	0.10379	0.10379	1.0379	1.0379	0.10379	0.10379	0.10379	—	0.10379
L-Valine	0.094	0.094	0.94	0.94	0.094	0.094	0.094	0.094	0.094
VITAMINS									
Choline Bitartrate	—	—	—	—	—	—	—	0.0072	—
Choline Chloride	0.004	0.004	0.04	0.04	0.004	0.004	0.004	—	0.004
Folic Acid	0.004	0.004	—	—	0.004	0.004	0.004	0.004	0.004
myo-Inositol	0.0072	0.0072	0.072	0.072	0.0072	0.0072	0.0072	0.0072	0.0072
Niacinamide	0.004	0.004	0.04	0.04	0.004	0.004	0.004	0.004	0.004
D-Pantothenic Acid•½Ca	0.004	0.004	0.04	0.04	0.004	0.004	0.004	0.004	0.004
Pyridoxal•HCl	—	0.004	—	—	0.004	0.004	0.004	0.004	0.004
Pyridoxine•HCl	0.004	—	0.04	0.04	—	—	—	—	—
Riboflavin	0.0004	0.0004	0.004	0.004	0.0004	0.0004	0.0004	0.0004	0.0004
Thiamine•HCl	0.004	0.004	0.04	0.04	0.004	0.004	0.004	0.004	0.004
OTHER									
D-Glucose	4.5	4.5	10.0	45.0	1.0	4.5	—	1.0	1.0
HEPES	—	5.958	—	—	—	—	—	—	—
Phenol Red•Na	0.0159	0.0159	0.159	0.159	—	0.0159	—	0.0093	0.0159
Pyruvic Acid•Na	0.11	—	1.1	1.1	0.11	—	—	0.11	0.11
ADD									
Glucose	—	—	—	—	—	—	1.0	—	—
L-Glutamine	0.584	—	0.584 (1X)	0.584 (1X)	—	—	0.584	0.584	—
L-Cystine•2HCl	—	—	—	—	—	—	—	—	—
L-Leucine	—	—	—	—	—	—	—	—	—
L-Lysine•HCl	—	—	—	—	—	—	—	—	—
L-Methionine	—	—	—	—	—	—	—	—	—
NaHCO ₃	—	3.7	3.7 (1X)	3.7 (1X)	3.7	3.7	3.7	3.7	3.7
NaH ₂ PO ₄	—	—	—	—	—	0.109	—	—	—
Phenol Red•Na	—	—	—	—	—	—	—	—	—
Pyruvic Acid•Na	—	—	—	—	—	—	—	—	—
Grams of powder required to prepare 1 L	N/A	17.4	N/A	N/A	10.0	13.3	8.3	9.6	10.0

[illegible]

