

Product Information

Dulbecco's Modified Eagle's Medium (DME)/Ham's Nutrient Mixture F-12

D0547, D0697, D2906, D6421, D6434, D8900, D8062, D8437, D9785

The use of serum-free media has expanded as researchers investigate the conditions for successful culture of a variety of cell lines. Instead of serum, the media are supplemented with a defined combination of nutrients, growth factors, and hormones. Variation of the supplements and their concentrations are specific for the type of cell under study.

The media often used for these defined studies contain a 1:1 mixture of Dulbecco's Modified Eagle's Medium (DME) and Ham's F-12 Nutrient Mixture. HEPES buffer may be included in the formulations at a final concentration of 15 mM to compensate for the loss of buffering capacity incurred by eliminating serum.

COMPONENT	D0547 [powder] g/L	D0697 [1x] g/L	D2906 [powder] g/L	D6421 [1x] g/L	D6434 [1x] g/L	D8900 [powder] g/L	D8062 [1x] g/L	D8437 [1x] g/L	D9785 [powder] g/L
Inorganic Salts									
(NH ₄) ₆ Mo ₇ O ₂₄ • 4H ₂ O	0.00000618	—	—	—	—	—	—	—	—
NH ₄ BO ₃	0.00000058	—	—	—	—	—	—	—	—
CaCl ₂	0.1166	—	0.1166	—	—	0.1166	—	—	—
CaCl ₂ • 2H ₂ O	—	0.1545	—	0.1545	0.1545	—	0.1545	0.1545	—
CuSO ₄ • 5H ₂ O	0.0000013	0.0000013	0.0000013	0.0000013	0.0000013	0.0000013	0.0000013	0.0000013	0.0000013
Fe(NO ₃) ₃ • 9H ₂ O	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
FeSO ₄ • 7H ₂ O	0.000417	0.000417	0.000417	0.000417	0.000417	0.000417	0.000417	0.000417	0.000417
MgCl ₂ • 6H ₂ O	0.0612	0.0612	0.0612	0.0612	0.0612	0.0612	0.0612	0.0612	—
MgSO ₄	0.04884	0.04884	0.04884	0.04884	0.04884	0.04884	0.04884	0.04884	—
MnSO ₄	0.000000151	—	—	—	—	—	—	—	—
NiCl ₂	0.00000012	—	—	—	—	—	—	—	—
KCl	0.3118	0.3118	0.3118	0.3118	0.3118	0.3118	0.3118	0.3118	0.3118
NaHCO ₃	—	1.2	—	1.2	1.2	—	1.2	1.2	—
NaCl	6.996	6.996	6.996	6.996	6.996	6.996	6.996	6.996	6.996
NaSiO ₃ • 9H ₂ O	0.0000142	—	—	—	—	—	—	—	—
Na ₂ SeO ₃	0.00000519	—	—	—	—	—	—	—	—
Na ₂ HPO ₄	0.07102	0.07102	0.07102	0.07102	0.07102	0.07102	0.07102	0.07102	0.07102
NaH ₂ PO ₄	0.0543	0.0543	0.0543	0.0543	0.0543	0.0543	0.0543	0.0543	0.0543

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SnCl ₂ • 7H ₂ O	0.00000011	—	—	—	—	—	—	—	—
ZnSO ₄ • 7H ₂ O	0.000432	0.000432	0.000432	0.000432	0.000432	0.000432	0.000432	0.000432	0.000432
Amino Acids									
L-Alanine	0.00445	0.0045	0.00445	0.0045	0.00445	0.00445	0.00445	0.0045	0.00445
L-Alanyl-L-Glutamine	—	0.54253	—	—	—	—	—	—	—
L-Arginine • HCl	0.1475	0.1475	0.1475	0.1475	0.1475	0.1475	0.1475	0.1475	0.1475
L-Asparagine • H ₂ O	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075
L-Aspartic Acid	0.00665	0.00665	0.00665	0.00665	0.00665	0.00665	0.00665	0.00665	0.00665
L-Cystine • 2HCl	0.03129	0.03129	0.03129	0.03129	0.03129	0.03129	0.03129	0.03129	0.03129
L-Cysteine • HCl • H ₂ O	0.01756	0.01756	0.01756	0.01756	0.01756	0.01756	0.01756	0.01756	0.01756
L-Glutamic Acid	0.00735	0.00735	0.00735	0.00735	0.00735	0.00735	0.00735	0.00735	0.00735
L-Glutamine	0.365	—	0.365	—	—	0.365	0.365	0.365	—
Glycine	0.01875	0.01875	0.01875	0.01875	0.01875	0.01875	0.01875	0.01875	0.01875
L-Histidine • HCl • H ₂ O	0.03148	0.03148	0.03148	0.03148	0.03148	0.03148	0.03148	0.03148	0.03148
L-Isoleucine	0.05447	0.05447	0.05447	0.05447	0.05447	0.05447	0.05447	0.05447	0.05447
L-Leucine	0.05905	0.05905	0.05905	0.05905	0.05905	0.05905	0.05905	0.05905	—
L-Lysine • HCl	0.09125	0.09125	0.09125	0.09125	0.09125	0.09125	0.09125	0.09125	—
L-Methionine	0.01724	0.01724	0.01724	0.01724	0.01724	0.01724	0.01724	0.01724	—
L-Phenylalanine	0.03548	0.03548	0.03548	0.03548	0.03548	0.03548	0.03548	0.03548	0.03548
L-Proline	0.01725	0.01725	0.01725	0.01725	0.01725	0.01725	0.01725	0.01725	0.01725
L-Serine	0.02625	0.02625	0.02625	0.02625	0.02625	0.02625	0.02625	0.02625	0.02625
L-Threonine	0.05345	0.05345	0.05345	0.05345	0.05345	0.05345	0.05345	0.05345	0.05345
L-Tryptophan	0.00902	0.00902	0.00902	0.00902	0.00902	0.00902	0.00902	0.00902	0.00902
L-Tyrosine • 2Na • 2H ₂ O	0.05579	0.05579	0.05579	0.05579	0.05579	0.05579	0.05579	0.05579	0.05579
L-Valine	0.05285	0.05285	0.05285	0.05285	0.05285	0.05285	0.05285	0.05285	0.05285

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Vitamins									
D-Biotin	0.0000035	0.0000035	0.0000035	0.0000035	0.0000035	0.0000035	0.0000035	0.0000035	0.0000035
Choline Chloride	0.00898	0.00898	0.00898	0.00898	0.00898	0.00898	0.00898	0.00898	0.00898
Folic Acid	0.00266	0.00266	0.00266	0.00265	0.00266	0.00266	0.00266	0.00266	0.00266
myo-Inositol	0.0126	0.0126	0.0126	0.0126	0.0126	0.0126	0.0126	0.0126	0.0126
Niacinamide	0.00202	0.00202	0.00202	0.00202	0.00202	0.00202	0.00202	0.00202	0.00202
D-Pantothenic Acid • ½Ca	0.00224	0.00224	0.00224	0.00224	0.00224	0.00224	0.00224	0.00224	0.00224
Pyridoxal • HCl	0.002	—	0.002	—	—	0.002	0.002	—	0.002
Pyridoxine • HCl	0.000031	0.002031	0.000031	0.002031	0.002031	0.000031	0.002031	0.002031	0.000031
Riboflavin	0.000219	0.000219	0.000219	0.000219	0.000219	0.000219	0.000219	0.000219	0.000219
Thiamine • HCl	0.00217	0.00217	0.00217	0.00217	0.00217	0.00217	0.00217	0.00217	0.00217
Vitamin B ₁₂	0.00068	0.00068	0.00068	0.00068	0.00068	0.00068	0.00068	0.00068	0.00068
Other									
D-Glucose	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
HEPES	—	3.5745	3.5745	3.5745	3.5745	3.5745	—	3.5745	3.5745
Hypoxanthine	0.0021	0.00244	0.0021	0.00244	0.00244	0.0021	0.00244	0.00244	0.0021
Linoleic Acid	0.000042	0.000042	0.000042	0.000042	0.000042	0.000042	0.000042	0.000042	0.000042
Phenol Red • Na	0.00863	0.00863	—	0.00863	—	0.00863	0.00863	0.00863	—
Putrescine • 2HCl	0.000081	0.000081	0.000081	0.000081	0.000081	0.000081	0.000081	0.000081	0.000081
Pyruvic Acid • Na	0.11	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055
DL-Thioctic Acid	0.000105	0.000105	0.000105	0.000105	0.000105	0.000105	0.000105	0.000105	0.000105
Thymidine	0.000365	0.000365	0.000365	0.000365	0.000365	0.000365	0.000365	0.000365	0.000365
ADD									
NaHCO ₃	1.2	—	1.2	—	—	1.2	—	—	1.2
CaCl ₂ • 2H ₂ O	—	—	—	—	—	—	—	—	0.1545
L-Glutamine	—	—	—	0.365	0.365	—	—	—	0.365
L-Leucine	—	—	—	—	—	—	—	—	0.05905
L-Lysine • HCl	—	—	—	—	—	—	—	—	0.09125
MgCl ₂ • 6H ₂ O	—	—	—	—	—	—	—	—	0.0612
MgSO ₄	—	—	—	—	—	—	—	—	0.04884
L-Methionine	—	—	—	—	—	—	—	—	0.0172

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