

## Product Information

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

During the past decade, researchers have reported the culture of a variety of cell lines in serum-free medium that contained, instead of serum, a supplement of nutrients, growth factors and hormones. For example, Mather and Sato reported the successful cultivation of Leydig cells and Sertoli cells in serum-free medium that contained insulin, transferrin, epidermal growth factor, leutinizing hormone or follicle stimulating hormone, somatomedin and growth hormone. Although the hormones and their concentrations are specific for the type of cell under study, the medium found to be most satisfactory for studies of this type was a 1:1 mixture of Dulbecco's Modified Eagle's Medium (DME) and Ham's F-12 Nutrient Mixture. HEPES buffer is included in the formulation at a final concentration of 15 mM to compensate for the loss of buffering capacity incurred by eliminating serum.

#### REFERENCE

- Barnes, D. and Sato, G. (1980). Methods for Growth of Cultured Cells in Serum-Free Medium. Analytical Biochemistry. 102, 255-270.

	D0547	D2906	D6421	D6434	D9559	D 8900	D8062	D8437	D 9785
	[powder]	[powder]	[1X]	[powder]	[powder]	[powder]	[1X]	[1X]	[powder]
COMPONENT	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L
<b>INORGANIC SALTS</b>									
(NH <sub>4</sub> ) <sub>2</sub> MO <sub>4</sub> •4H <sub>2</sub> O	0.00000618	—	—	—	—	—	—	—	—
NH <sub>4</sub> BO <sub>3</sub>	0.00000058	—	—	—	—	—	—	—	—
CaCl <sub>2</sub> •2H <sub>2</sub> O	0.1545	0.1545	0.1545	0.1545	0.1545	0.1545	0.1545	0.1545	—
CuSO <sub>4</sub> •5H <sub>2</sub> O	0.0000013	.0000013	.0000013	0.0000013	0.0000013	0.0000013	.0000013	0.0000013	0.0000013
Fe(NO <sub>3</sub> ) <sub>3</sub> •9H <sub>2</sub> O	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
FeSO <sub>4</sub> •7H <sub>2</sub> O	0.000417	0.000417	0.000417	0.000417	0.000417	0.000417	0.000417	0.000417	0.000417
MgCl•6H <sub>2</sub> O	0.0612	0.0612	0.0612	0.0612	0.0612	0.06120	0.06120	0.06120	—
MgSO <sub>4</sub>	0.04884	0.04884	0.04884	0.04884	0.04884	0.04884	0.04884	0.04884	—
MnSO <sub>4</sub>	0.000000151	—	—	—	—	—	—	—	—
NiCl <sub>2</sub>	0.00000012	—	—	—	—	—	—	—	—
KCl	0.3118	0.3118	0.3118	0.3118	0.3118	0.3118	0.3118	0.3118	0.3118
NaHCO <sub>3</sub>	—	—	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 <sub>3</sub> •9H <sub>2</sub> O	0.0000142	—	—	—	—	—	—	—	—
Na <sub>2</sub> SeO <sub>3</sub>	0.00000519	—	—	—	—	—	—	—	—
Na <sub>2</sub> HPO <sub>4</sub>	0.07102	0.07102	0.07102	0.07102	0.07102	0.07102	0.07102	0.07102	0.07102
NaH <sub>2</sub> PO <sub>4</sub>	0.0543	0.0543	0.0543	0.0543	0.0543	0.0543	0.0543	0.0543	0.0543
SnCl <sub>2</sub> •7H <sub>2</sub> O	0.00000011	—	—	—	—	—	—	—	—
ZnSO <sub>4</sub> •7H <sub>2</sub> O	0.000432	0.000432	0.000432	0.000432	0.000432	0.000432	0.000432	0.000432	0.000432
<b>AMINO ACIDS</b>									
L-Alanine	0.00445	0.00445	0.0045	0.00445	0.00445	0.00445	0.00445	0.0045	0.00445
L-Arginine•HCl	0.1475	0.1475	0.1475	0.1475	0.1475	0.1475	0.1475	0.1475	0.1475
L-Asparagine•H <sub>2</sub> 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-Cysteine•2HCl	0.03129	0.01756	0.01756	0.03129	0.03129	0.03129	0.01756	0.01756	0.01756
L-Cystine•HCl•H <sub>2</sub> O	0.01756	0.03129	0.03129	0.01756	0.01756	0.01756	0.03129	0.03129	0.03129
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 <sub>2</sub> 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	0.5447	0.05447	0.05447	0.05447	0.05447	0.5447	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 <sub>2</sub> 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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