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Product Information

Nutrient Mixture F-12 Ham

Ham's Nutrient Mixtures were originally developed to support clonal growth of several clones of Chinese hamster ovary (CHO) cells, as well as clones of HeLa and mouse L-cells. Both mixtures were formulated for use with or without serum supplementation, depending on the cell type being cultured.

Ham's F-10 has been shown to support the growth of human diploid cells, white blood cells for chromosomal analysis, and primary explants of rat, rabbit, and chicken tissues.

Ham's F-12 has been used for the growth of primary rat hepatocytes and rat prostate epithelial cells. A clonal toxicity assay using CHO cells has also been reported with Ham's F-12 as the medium of choice. Ham's F-12 is also available with 25 mM HEPES buffer, which provides more effective buffering in the optimal pH range of 7.2–7.4.

	N6658	N3790	51651C
	[1×]	[1×]	[1×]
COMPONENT	g/L	g/L	g/L
Inorganic Salts			
$CaCl_2 \cdot 2H_2O$	0.0441	0.0441	—
$CaCl_2$	—	—	0.03322
$CuSO_4 \cdot 5H_2O$	0.0000025	0.0000025	0.0000025
$FeSO_4 \cdot 7H_2O$	0.000834	0.000834	0.000834
$MgCl_2$	0.0576	0.0576	0.05722
KCl	0.224	0.224	0.224
NaCl	7.599	7.599	7.599
$NaHCO_3$	1.176	1.176	1.176
Na_2HPO_4	0.14204	0.14204	0.14204
$ZnSO_4 \cdot 7H_2O$	0.000863	0.000863	0.000863
Amino acids			
L-Alanine	0.009	0.009	0.009
L-Alanyl-L-Glutamine	—	0.217	—
L-Arginine · HCl	0.211	0.211	0.211
L-Asparagine · H_2O	0.01501	0.01501	0.01501
L-Aspartic Acid	0.0133	0.0133	0.0133
L-Cysteine · HCl · H_2O	0.035	0.035	0.035
L-Glutamic Acid	0.0147	0.0147	0.0147
L-Glutamine	0.146	—	0.146
Glycine	0.00751	0.00751	0.00751
L-Histidine · HCl · H_2O	0.02096	0.02096	0.02096
L-Isoleucine	0.00394	0.00394	0.00394
L-Leucine	0.0131	0.0131	0.0131
L-Lysine · HCl	0.0365	0.0365	0.0365
L-Methionine	0.00448	0.00448	0.00448
L-Phenylalanine	0.00496	0.00496	0.00496
L-Proline	0.0345	0.0345	0.0345
L-Serine	0.0105	0.0105	0.0105
L-Threonine	0.0119	0.0119	0.0119
L-Tryptophan	0.00204	0.00204	0.0024
L-Tyrosine · 2Na · $2H_2O$	0.00778	0.00778	0.00778
L-Valine	0.0117	0.0117	0.0117

Vitamins and others			
D-Biotin	0.0000073	0.0000073	0.0000073
Choline Chloride	0.01396	0.01396	0.01396
Folic Acid	0.00132	0.00132	0.0013
myo-Inositol	0.018	0.018	0.018
Niacinamide	0.000037	0.000037	0.0000367
D-Pantothenic Acid · ½Ca	0.00048	0.00048	0.000238
Pyridoxine · HCl	0.000062	0.000062	0.000062
Riboflavin	0.000038	0.000038	0.000038
Thiamine · HCl	0.00034	0.00034	0.000034
Vitamin B_{12}	0.00136	0.00136	0.00136
D-Glucose	1.802	1.802	1.802
Hypoxanthine	0.004733	0.004733	—
Hypoxanthine sodium salt	—	—	0.00477
Linoleic Acid	0.000084	0.000084	0.000084
Phenol Red · Na	0.0013	0.0013	0.0013
Putrescine · 2HCl	0.000161	0.000161	0.000161
Pyruvic Acid · Na	0.11	0.11	0.11
Thioctic Acid	0.00021	0.00021	0.00021
Thymidine	0.00073	0.00073	0.00073

JG,PD,JF,ALF,MAM 08/13-1