ProductInformation

F-12 Coon's Modification

Nutrient Mixture F-12 was originally formulated by R.G. Ham as a serum-free medium that would support the clonal growth of transformed cells in culture. Because of its complex composition which includes many trace elements, Ham's F-12 has been shown to be very versatile. It is most commonly used with a serum supplement and will support the growth of a variety of normal and transformed cells in culture. Coon's Modification of Ham's F-12 was developed for culturing hybrid cells that were produced by viral fusion. The modification consists of doubling the amino acids and pyruvate, and including ascorbic acid. The salt concentrations have been altered as well. This formula contains 0.863 mg zinc sulfate per liter, which may render it unsuitable for culturing mouse L-cells.

REFERENCE

1. Coon, H.G. and Weiss, M.C. (1969). A Quantitative Comparison of Formation of Spontaneous and Virus-Produced Viable Hybrids. PNAS, 62, 852-859.

COMPONENT	F 6636 g/L
INORGANIC SALTS	
$CaCl_2 \cdot 2H_2O$	0.165
$CuSO_4 \cdot 5H_2O$	0.0000025
$FeSO_4 \cdot 7H_2O$	0.000834
$MgCl \cdot 6H_2O$	0.09963
$MgSO_4$ (anhyd)	0.02528
KCl	0.305
KH_2PO_4	0.06124
NaCl	7.517
Na_2HPO_4 (anhyd)	0.1324
$ZnSO_4 \cdot 7H_2O$	0.000863
AMINO ACIDS	
L-Alanine	0.018
L-Arginine•HCl	0.422
L-Asparagine•H_2O	0.03
L-Aspartic Acid	0.026
L-Cysteine•HCl•H_2O	0.07026
L-Glutamic Acid	0.03
L-Glutamine	0.292
Glycine	0.016
L-Histidine•HCl•H_2O	0.042
L-Isoleucine	0.0078
L-Leucine	0.0262
L-Lysine•HCl	0.073
L-Methionine	0.009
L-Phenylalanine	0.01
L-Proline	0.07
L-Serine	0.021
L-Threonine	0.0238
L-Tryptophan	0.004
L-Tyrosine•2Na•$2H_2O$	0.01586
L-Valine	0.0234

COMPONENT	F 6636 g/L
VITAMINS	
L-Ascorbic Acid	0.15
D-Biotin	0.0000073
Choline Chloride	0.01396
Folic Acid	0.00132
myo-Inositol	0.01802
Niacinamide	0.00004
L-Pantothenic Acid•½Ca	0.000238
Pyridoxine•HCl	0.00006
Riboflavin	0.00004
Thiamine•HCl	0.000337
Vitamin B-12	0.00136
OTHER	
D-Glucose	1.802
Hypoxanthine	0.00404
Linoleic Acid	0.00009
Phenol Red•Na	0.00125
Putrescine•2HCl	0.000161
Pyruvic Acid•Na	0.22
Thioctic Acid	0.000206
Thymidine	0.0007
ADD	
$NaHCO_3$	2.676
Grams of powder required to prepare 1 L	11.6