

DATA SHEET

Rev.ver: 01

1. Identification

Product name	Dulbecco's Modified Eagle Medium / Nutrient Mixture F-12 Ham (DMEM / F12, 1:1 Mixture) w/Sodium bicarbonate and Trace elements w/o L-Glutamine and HEPES buffer
Catalog.no	CCML031

2. Description

Dulbecco's Modified Eagle Medium / Nutrient Mixture F-12 Ham (DMEM/F-12) is a 1:1 mixture of Dulbecco's Modified Eagle Medium (DMEM) and Ham's F-12 Nutrient Mixture. This combined formulation provides the high nutrient concentration of DMEM along with the wide variety of components present in F-12, including trace elements, lipids, and additional vitamins. The synergistic combination supports the growth of a broad spectrum of mammalian cells such as fibroblasts, epithelial cells, glial cells, and primary cultures.

DMEM/F-12 is ideal for serum-supplemented, serum-reduced, or serum-free applications when appropriately supplemented with hormones, growth factors, or defined additives. It is available in multiple variants (with or without L-glutamine, HEPES, or phenol red) to suit different cell culture requirements.

3. Product Specifications

Appearance	Clear Red color solution
Storage and shelf life	Store at +2°C to +8°C protected from light.
Shipping conditions	+2°C to +8°C

DATA SHEET

4. Formulation

Components	Concentration mg/L
Amino Acids:	
Glycine	18.750
L-Alanine	4.450
L-Arginine hydrochloride	147.500
L-Asparagine monohydrate	7.500
L-Aspartic acid	6.650
L-Cysteine hydrochloride monohydrate	17.560
L-Cystine dihydrochloride	31.290
L-Glutamic acid	7.350
L-Histidine hydrochloride monohydrate	31.480
L-Isoleucine	54.470
L-Leucine	59.050
L-Lysine hydrochloride	91.250
L-Methionine	17.240
L-Phenylalanine	35.480
L-Proline	17.250
L-Serine	26.250
L-Threonine	53.450
L-Tryptophan	9.020
L-Tyrosine disodium salt	48.100
L-Valine	52.850
Inorganic Salts	
Ammonium metavanadate	0.00058
Ammonium molybdate tetrahydrate	0.00618
Calcium chloride dihydrate	154.500
Copper sulphate pentahydrate	0.0013
Disodium hydrogen phosphate	71.020
Ferric nitrate nonahydrate	0.050
Ferrous sulphate heptahydrate	0.417
Magnesium chloride hexahydrate	61.200
Magnesium sulphate	48.840

Components	Concentration mg/L
anhydrous	
Manganese sulphate	0.000151
Nickel chloride	0.00012
Potassium chloride	311.800
Sodium bicarbonate	1200.000
Sodium chloride	6996.000
Sodium dihydrogen phosphate	54.300
Sodium metasilicate nonhydrate	0.0142
Sodium selenite	0.00519
Stannous chloride dihydrate	0.00011
Zinc sulphate heptahydrate	0.432
Vitamins	
Choline chloride	8.980
D-Biotin	0.0035
D-Ca-Pantothenate	2.240
Folic acid	2.660
Niacinamide	2.020
Pyridoxal hydrochloride	2.000
Pyridoxine hydrochloride	0.031
Riboflavin	0.219
Thiamine hydrochloride	2.170
Vitamin B12	0.680
myo-Inositol	12.600
Others	
D-Glucose	3151.000
DL-Thioctic acid	0.105
Hypoxanthine sodium salt	2.400
Linoleic acid	0.042
Putrescine hydrochloride	0.081
Phenol red sodium salt	8.630
Sodium pyruvate	110.000
Thymidine	0.365

5. Precautions and Disclaimer

This product is for research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.