#### DMEM/F-12 with 15 mM HEPES



Dulbecco's Modified Eagle's Medium/Nutrient Ham's Mixture F-12 (DMEM/F-12) with 15 mM HEPES buffer

Catalog #36254 500 mL

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## **Product Description**

Dulbecco's Modified Eagle's Medium/Nutrient Ham's Mixture F-12 (DMEM/F-12) with 15 mM HEPES is recommended for a wide variety of cell culture applications. Selection of suitable nutrient medium is dependent on cell type, culture conditions, and degree of chemical definition required for the cell culture application. This product has been pre-screened for use with other reagents of the ES-Cult™ product line for maintenance culture of embryonic stem (ES) cells in the undifferentiated state.

See Formulation on page 2 for a full list of components.

### **Properties**

Storage: Store at 2 - 8°C.

Shelf Life: Stable for 12 months from date of manufacture (MFG) on label.

#### Directions for Use

This product contains the labile amino acid L-glutamine, which has a half-life of approximately 1 month when stored at 2 - 8°C. For certain cell culture applications, medium stored for greater than 2 months following the date of manufacture should be supplemented with additional L-glutamine. Add 5 mL of 200 mM L-Glutamine (Catalog #07100) to 500 mL of DMEM/F-12 with 15 mM HEPES to achieve a final concentration of 2 mM.

NOTE: This product does not contain antibiotics. If desired, add antibiotics and use within 1 week.

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# Formulation

INORGANIC SALTS	mg/L
CaCl <sub>2</sub> (anhydrous)	116.61
CuSO <sub>4</sub> • 5H <sub>2</sub> O	0.0013
Fe(NO <sub>3</sub> )3 • 9H <sub>2</sub> O	0.05
FeSO <sub>4</sub> • 7H <sub>2</sub> O	0.417
KCI	311.8
MgCl <sub>2</sub> (anhydrous)	28.61
MgSO <sub>4</sub> (anhydrous)	48.84
NaCl	6999.5
Na₂HPO₄ (anhydrous)	71.02
NaH <sub>2</sub> PO <sub>4</sub> • H <sub>2</sub> O	62.5
ZnSO <sub>4</sub> • 7H <sub>2</sub> O	0.43
AMINO ACIDS	mg/L
L-Alanine	4.45
L-Arginine • HCl	147.5
L-Asparagine • H <sub>2</sub> O	7.501
L-Aspartic Acid	6.65
L-Cysteine • HCI • H <sub>2</sub> O	17.56
L-Cystine • 2HCl	31.29
L-Glutamic Acid	7.35
L-Glutamine	365
Glycine	18.75
L-Histidine • HCI • H <sub>2</sub> O	31.48
L-Isoleucine	54.47
L-Leucine	59.05
L-Lysine • HCI	91.26
L-Methionine	17.24
L-Phenylalanine	35.48
L-Proline	17.25
L-Serine	26.25
L-Threonine	53.45
L-Tryptophan	9.02
L-Tyrosine 2Na • 2H <sub>2</sub> O	55.79
L-Valine	52.85
VITAMINS	mg/L
D-Biotin	0.0036
D-Ca Pantothenate	2.24
Choline Chloride	8.98
Folic Acid	2.65
Myo-Inositol	12.6
Niacinamide	2.02
Pyridoxine • HCI	2.03
Riboflavin	0.22
Thiamine • HCl	2.17
Vitamin B-12	0.68
OTHER	mg/L
D-Glucose	3151
HEPES	3575
Hypoxanthine • 2Na	2.7
Linoleic Acid	0.04
DL-alpha Lipoic Acid	0.105
Phenol Red •Na	8.6
Putrescine • 2HCl	0.08
Sodium Bicarbonate	1200
Sodium Pyruvate	55
Thymidine	0.37
,	3.57