NUTRIENT MIXTURE F-10 [HAM]

With L-Glutamine and Without Sodium Bicarbonate
Product Number **N6635**

Product Description

Ham's Nutrient Mixture F-10 is one of a number of media developed specifically to support the clonal growth of a variety of cells. Historically, F-10 was formulated to support the growth of several clones of Chinese hamster ovary [CHO] cells and a clone of HeLa cells with specific nutritional requirements.

Components	g/L
L-Alanine	0.009
L-Arginine•HCl	0.211
L-Asparagine•H_2O	0.01501
L-Aspartic Acid	0.0133
L-Cysteine•HCl•H_2O	0.035
L-Glutamic Acid	0.0147
L-Glutamine	0.146
Glycine	0.00751
L-Histidine•HCl•H_2O	0.021
L-Isoleucine	0.0026
L-Leucine	0.0131
L-Lysine•HCl	0.0293
L-Methionine	0.00448
L-Phenylalanine	0.00496
L-Proline	0.0115
L-Serine	0.0105
L-Threonine	0.00357
L-Tryptophan	0.0006
L-Tyrosine 2Na•2H_2O	0.00261
L-Valine	0.0035
Calcium Chloride (anhydrous)	0.0333
Cupric Sulfate•5H_2O	0.0000025
Ferrous Sulfate•7H_2O	0.000834
Magnesium Sulfate (anhydrous)	0.07464
Potassium Chloride	0.285
Potassium Phosphate Monobasic (anhydrous)	0.083
Sodium Chloride	7.4
Sodium Phosphate Dibasic (anhydrous)	0.1537
Zinc Sulfate•7H_2O	0.0000288
d-Biotin	0.000024
Choline Chloride	0.000698
Folic Acid	0.00132
myo-Inositol	0.000541
Niacinamide	0.000615
D-Pantothenic Acid (hemicalcium)	0.000715
Pyridoxine•HCl	0.000206
Riboflavin	0.000376
Thiamine•HCl	0.001
Vitamin B-12	0.00136
D-Glucose	1.1
Hypoxanthine	0.00408
Phenol Red•Na	0.0013
Pyruvic Acid•Na	0.11
Thioctic Acid	0.00021
Thymidine	0.00073

Precautions and Disclaimer

REAGENT
For R&D use only. Not for drug, household or other uses.

Preparation Instructions

Powdered media are hygroscopic and should be protected from moisture. The entire contents of each package should be used immediately after opening. Preparing a concentrated solution of medium is not recommended as precipitates may form. Supplements can be added prior to filtration or introduced aseptically to sterile medium.

1. Measure out 90% of final required volume of water. Water temperature should be 15-20 ˚C.
2. While gently stirring the water, add the powdered medium. Stir until dissolved. Do NOT heat.
3. Rinse original package with a small amount of water to remove all traces of powder. Add to solution in step 2.
4. To the solution in step 3, add 1.2 g sodium bicarbonate or 16.0 ml of sodium bicarbonate solution [7.5%w/v] for each liter of final volume of medium being prepared. Stir until dissolved.
5. While stirring, adjust the pH of the medium to 0.1-0.3 pH units below the desired pH since it may rise during filtration. The use of 1N HCl or 1N NaOH is recommended.
6. Add additional water to bring the solution to final volume.
7. Sterilize immediately by filtration using a membrane with a porosity of 0.22 microns.
8. Aseptically dispense medium into sterile container.

Storage and Stability

Store the dry powdered medium at 2-8 ˚C under dry conditions and liquid medium at 2-8 ˚C in the dark. Deterioration of the powdered medium may be recognized by any or all of the following: [1] color change, [2] granulation/clumping, [3] insolubility. Deterioration of the liquid medium may be recognized by any or all of the following: [1] pH change, [2] precipitate or particulates, [3] cloudy appearance [4] color change. The nature of supplements added may affect storage conditions and shelf life of the medium. Product label bears expiration date.

Procedure

MATERIALS REQUIRED BUT NOT PROVIDED
Water for tissue culture use [W3500]
Sodium Bicarbonate [S5761] or
Sodium Bicarbonate Solution, 7.5% [S8761]
1N Hydrochloric Acid [H9892]
1N Sodium Hydroxide [S2770]
Medium additives as required

References

1. Ham, R.G., (1963). An Improved Nutrient Solution for Diploid Chinese Hamster and Human Cell Lines. Exp. Cell Res. 29, 515-526.

Revised: May 2007

Sigma-Aldrich Inc.
3050 Spruce St. St. Louis, MO 63103 USA 314-771-5765
Technical Service: 800-325-5832 or call collect 314-771-5765
Or e-mail at techserv@sial.com
To order: 800-325-3010 or call collect 314-771-5750
www.sigma-aldrich.com