

Ham's F12 Medium, w: 1.0 mM stable Glutamine, w: 1.0 mM Sodium pyruvate, w: 1.176 g/L NaHCO₃ | 820600a

Ham's F-12 Medium, also known as Ham's F-12 Nutrient Mix, is a widely used basal medium designed specifically for cell culture. It has been extensively employed for serum-free, single-cell plating of Chinese Hamster Ovary (CHO) cells, lung cells, and mouse L cells. Additionally, Ham's F-12 is the medium of choice for a Clonal Toxicity Assay (CTA).

One of its notable advantages is the ability to support cell growth without the need for serum supplementation. This eliminates potential interference caused by serum components, ensuring consistent and reliable experimental results. By providing a serum-free culture environment, Ham's F-12 Medium offers researchers greater control over their investigations.

Another key feature of Ham's F-12 Medium is its suitability for single-cell plating. This makes it an excellent choice for a variety of cell lines, including CHO cells, lung cells, and mouse L cells. The medium's optimized nutrient composition facilitates efficient attachment and growth of individual cells, enabling the establishment of homogeneous cell cultures with improved reproducibility.

Moreover, Ham's F-12 Medium has gained recognition as the preferred medium for the Clonal Toxicity Assay (CTA). This assay plays a critical role in assessing the cytotoxic effects of substances on cells. By utilizing Ham's F-12 Medium in the CTA, researchers can accurately evaluate the impact of various compounds or treatments on individual cells, providing valuable insights into toxicological profiles.

Quality control

- pH = 7.2 +/- 0.02 at 20-25°C.
- Each lot has been tested for sterility and absence of mycoplasma and bacteria.

Maintenance

- Keep refrigerated at +2°C to +8°C in the dark. Freezing and warming up to +37° C minimize the quality of the product.
- Do not heat the medium to more than 37° C or use uncontrollable sources of heat (e.g., microwave appliances).
- If only a part of the medium is to be used, remove this amount from the bottle and warm it up at room temperature.
- Shelf life for any medium except for the basic medium is 8 weeks from the date of manufacture.

Composition

	Components	mg/L
Inorganic Salts	Calcium chloride x 2H ₂ O	44,00
	Copper(II) sulfate x 5H ₂ O	0,00
	Iron (II) sulfate x 7H ₂ O	0,83
	Magnesium chloride x 6H ₂ O	122,00
	Potassium chloride	223,65
	Sodium chloride	7599,00
	di-Sodium hydrogen phosphate anhydrous	142,04
	Zinc sulfate x 7H ₂ O	0,86

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Other Components	D(+)-Glucose anhydrous	1801,60
	Hypoxanthine	4,08
	Linoleic acid	0,08
	DL- α -Lipoic acid	0,21
	Phenol red	1,20
	Putrescine x 2HCl	0,16
	Sodium pyruvate	110,00
	Thymidine	0,73
	NaHCO ₃	1176,00
	Amino Acids	L-Alanine
L-Arginine x HCl		210,70
L-Asparagine x H ₂ O		15,01
L-Aspartic acid		13,31
L-Cysteine x HCl x H ₂ O		35,12
L-Alanyl-L-Glutamine		217,30
L-Glutamic acid		14,71
Glycine		7,51
L-Histidine x HCl x H ₂ O		20,96
L-Isoleucine		3,94
L-Leucine	13,12	
L-Lysine x HCl	36,54	

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	L-Methionine	4,48
	L-Phenylalanine	4,96
	L-Proline	34,53
	L-Serine	10,51
	L-Threonine	11,91
	L-Tryptophan	2,04
	L-Tyrosine	5,44
	L-Valine	11,71
Vitamins	D(+)-Biotin	0,01
	D-Calcium pantothenate	0,24
	Choline chloride	13,96
	Folic acid	1,32
	myo-Inositol	18,02
	Nicotinamide	0,04
	Pyridoxine x HCl	0,06
	Riboflavin	0,04
	Thiamine x HCl	0,34
	Vitamin B12	1,36