Product sheet

Ham's F12K Medium, w: 2.0 mM L-Glutamine, w: 2.0 mM Sodium pyruvate, w: 2.5 g/L NaHCO3 | 820608a

Introducing Ham's F-12K (Kaighn's) Medium, a specialized modification of Ham's F-12 medium designed to meet the unique requirements of biological research. This advanced medium offers distinct advantages, enhancing the cultivation of primary human hepatocytes, as well as rat and chicken liver cells, particularly in reduced serum conditions.

Ham's F-12K (Kaighn's) Medium is carefully formulated to optimize cell culture conditions. It features an enriched composition, providing elevated levels of essential components such as amino acids and sodium pyruvate, as well as additional elements including putrescine, thymidine, hypoxanthine, and zinc. These additions enable researchers to supplement the medium with minimal serum or defined components for specific cell types, facilitating precise experimental conditions.

Notably, Ham's F-12K (Kaighn's) Medium does not contain proteins or growth factors. Consequently, supplementation with growth factors and Fetal Bovine Serum (FBS) is often necessary, allowing researchers to tailor the medium to the requirements of their specific cell lines. For optimal performance, the concentration of FBS must be carefully optimized for each cell line, ensuring optimal growth and functionality.

To maintain physiological pH, Ham's F-12K (Kaighn's) Medium employs a sodium bicarbonate buffer system (2.5 g/L), necessitating a controlled 5-10% CO2 environment during cultivation. This ensures the medium's pH remains within the ideal range for cell growth and viability.

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 as well as 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 but the basic medium is 8 weeks from the date of manufacture.

Composition

	Components	mg/L
Inorganic Salts	Calcium chloride x 2H2O	135,24
	Copper(II) sulfate x 5H2O	0,00
	Iron (II) sulfate x 7H2O	0,83
	Magnesium chloride x 6H2O	105,72
	Magnesium sulfate x 7H2O	394,49
	Potassium chloride	283,29
	Potassium dihydrogen phosphate	58,52

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	Sodium chloride	7597,20
	di-Sodium hydrogen phosphate anhydrous	115,02
	Zinc sulfate x 7H2O	0,14
Other Components	D(+)-Glucose anhydrous	1260,00
	Hypoxanthine	4,08
	DL-α-Lipoic acid	0,21
	Phenol red	3,00
	Putrescine x 2HCl	0,32
	Sodium pyruvate	220,00
	NaHCO3	2500,00
	Thymidine	0,73
Amino Acids	L-Alanine	17,82
	L-Arginine x HCl	421,40
	L-Asparagine x H2O	30,02
	L-Aspartic acid	26,62
	L-Cysteine x HCl x H2O	70,24
	L-Glutamine	292,20
	L-Glutamic acid	29,42

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	Glycine	15,01
	L-Histidine x HCl x H2O	41,92
	L-Isoleucine	7,87
	L-Leucine	26,24
	L-Lysine x HCl	73,04
	L-Methionine	8,95
	L-Phenylalanine	9,91
	L-Proline	69,06
	L-Serine	21,02
	L-Threonine	23,82
	L-Tryptophan	4,08
	L-Tyrosine	10,87
	L-Valine	23,42
Vitamins	D(+)-Biotin	0,07
	D-Calcium pantothenate	0,48
	Choline chloride	13,96
	Folic acid	1,32
	myo-Inositol	18,02
	Nicotinamide	0,04

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	Pyridoxine x HCl	0,06
	Riboflavin	0,04
	Thiamine x HCl	0,34
	Vitamin B12	1,36