DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 2.5 mM L-Glutamine, w: 15 mM HEPES, w: 0.5 mM Sodium pyruvate, w: 1.2 g/L NaHCO3

820400a

DMEM:Ham's F12 is a widely recognized and extensively utilized basal medium in cell culture for biological research. It serves as a fundamental source of nutrients for the growth of various mammalian cell lines, particularly when supplemented with Fetal Bovine Serum (FBS).

This unique formulation combines Dulbecco's Modified Eagle Medium (DMEM) and Ham's F-12 (Ham's Nutrient Mixture F-12) in a precise 1:1 ratio. The addition of L-glutamine further enhances its composition.

DMEM, derived from Eagle's Minimal Essential Medium (EMEM), offers an increased concentration of amino acids and vitamins compared to its predecessor. In contrast, Ham's F-12 is based on Ham's F-10 medium, providing a complementary set of essential components.

To support optimal cell growth, it is common practice to supplement DMEM:Ham's F12 with FBS at a typical concentration of 5-10%. This addition is necessary as the medium lacks growth hormones, lipids, and proteins crucial for cellular development.

DMEM:Ham's F12 incorporates a pH buffer system and is often supplemented with phenol red, a pH indicator. Cultured cells in DMEM:Ham's F12, or any medium utilizing the bicarbonate buffer system, require a controlled CO2 environment of 5-10% to maintain appropriate pH levels.

Quality Control

Sterile-filtered

Storage and Shelf Life

Store at +2°C to +8°C, protected from light.

Once opened, store at 4°C and use within 6–8 weeks.

Shipping Conditions

Ambient temperature

Maintenance

Keep refrigerated at +2°C to +8°C in the dark. Avoid freezing and frequent warming to +37°C, as it reduces product quality.

Do not heat the medium beyond 37°C or use uncontrolled heat sources such as microwave appliances.

If only part of the medium is to be used, remove the required amount and warm it to room temperature before use.

Composition

Category

Components

Concentration (mg/L)

Amino Acids

Glycine

18.75

L-Alanine

4.45

L-Arginine HCl

147.50

L-Asparagine H_2O

7.50

L-Aspartic Acid

6.65

L-Cysteine HCl H_2O

17.56

L-Cystine 2 HCl

31.29

L-Glutamic Acid

7.35

L-Glutamine

365.00

L-Histidine HCl H_2O

31.48

L-Isoleucine

54.47

L-Leucine

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Local court Mannheim - HRB 714394
CEO / Geschäftsführer: Jonathan Steubing

Banking information
Sparkasse Heidelberg
IBAN: DE35 6725 0020 0009 2076 86
BIC: SOLADES1HDB

59.05
L-Lysine HCl
91.25
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 2 Na 2 H_2O
55.79
L-Valine
52.85
Vitamins
D-Biotin
0.0035
Choline Chloride
8.98
D-Calcium Pantothenate
2.24
Folic Acid
2.66
myo-Inositol
12.60
Nicotinamide
2.02
Pyridoxine HCl
0.031
Pyridoxal HCl
2.00
Riboflavin
0.219
Thiamine HCl
2.17
Vitamin B_{12}
0.68
Inorganic Salts
$CaCl_2$ 2 H_2O
154.50
$CuSO_4$ 5 H_2O
0.0013
$Fe(NO_3)_3$ 9 H_2O
0.05
$FeSO_4$ 7 H_2O
0.417
KCl
311.80
$MgCl_2$ 6 H_2O
61.20
$MgSO_4$ 7 H_2O
100.00
NaCl
6996.00
$NaHCO_3$

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1200.00
Na_2HPO_4
71.02
NaH_2PO_4 2 H_2O
70.87
$ZnSO_4$ 7 H_2O
0.432
Other Components
D-Glucose
3151.00
Hypoxanthine
2.40
HEPES
3574.50
Linoleic Acid
0.042
Lipoic Acid
0.105
Phenol Red Sodium Salt
8.63
Putrescine 2 HCl
0.081
Sodium Pyruvate
55.00
Thymidine
0.365

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