Алматы (7273)495-231 Ангарск (3955)60-70-56 Архангельск (8182)63-90-72 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Благовещенск (4162)22-76-07 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Владикавказ (8672)28-90-48 Владимир (4922)49-43-18 Вологорад (844)278-03-48 Вологорад (844)278-03-48 Волоград (872)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89 Иваново (4932)77-34-06 Ижевск (3412)26-03-58 Иркутск (395)279-98-46 Казань (843)206-01-48 Калининград (4012)72-03-81 Калуга (4842)92-23-67 Кемерово (3842)65-04-62 Киров (8332)68-02-04 Коломна (4966)23-41-49 Кострома (4942)77-07-48 Краснодар (861)203-40-90 Красноярск (391)204-63-61 Курск (4712)77-13-04 Курган (3522)50-90-47 Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокузмецк (3843)20-46-81 Ноябрьск (3496)41-32-12 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Петрозаводск (8142)55-98-37 Псков (8112)59-10-37 Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97

Тверь (4822)63-31-35 Тольятти (8482)63-91-07 Томск (3822)98-41-53 Тула (4872)33-79-87 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Улан-Удэ (3012)59-97-51 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Чебоксары (8352)28-53-07 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Чита (3022)38-34-83 Якутск (4112)23-90-97 Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(7172)727-132

Киргизия +996(312)96-26-47

#### www.sigmaaldrich.nt-rt.ru | | scx@nt-rt.ru

# Технические характеристики на среды для культивирования клеток и буферы, среды для выращивания растений

компании Sigma-Aldrich

**Виды товаров:** средние среды для насекомых, полные среды, растворы аминокислот, среды Шнайдера для насекомых, базальные среды Мурасиге и Скуга, растворы микронутриентов на основе базальной соли, базальные соли, модифицированные смеси базальных солей, средства для размножения побегов, витаминные растворы Мурасиге и Скуга, питательные смеси, минимальные необходимые среды, модифицированные среды Дульбекко Искову, сбалансированные соли Эрла, среды для замораживания клеток, среды для криоконсервации без ДМСО, витамины Шенка и Хильдебрандта, гидрат трисульфатной соли неомицина, базальные солевые смеси уайта, глицин, банановые порошки, агар, дисульфатные соли, растворы кинетин, рифампицин, пептон И3 тканей животных, анцимидол, изоникотиновая кислота, зеатин, гиббереллиновая кислота, биотин, борная кислота, хлорид кальция и др.

# **Plant Culture Media**



Growing plant tissue in the laboratory may include seed, meristem, callus, and bud culture, and requires specialized plant culture media. Murashige and Skoog (also called MS media, MSO, or MSO) and **Gamborg's B5** medium are two of the most essential media formulations used for culturing plants. These media contain all the micro- and macronutrients, vitamins, organic supplements, and plant growth regulators that are necessary for the growth and multiplication of plant cells, tissues, and organs *in vitro*. For applications that require more custom formulations, we offer a comprehensive selection of basal salt mixtures, vitamin solutions, and supplements.

## MURASHIGE AND SKOOG (MS MEDIA)

Much of plant tissue culture for research and biotechnology still relies on media described more than 50 years ago by Murashige and Skoog. Their eponymous Murashige and Skoog media, or MS media, is the most widely-used plant culture medium and is available as basal salt mixtures or media containing organics.

Regardless of format, MS media is comprised of micro- and macronutrients, plus nutrients like sugar, vitamins, and growth regulators. Different MS media components can be custom-combined to create the right media formulation for each plant cell or tissue type.

#### **GAMBORG'S B5 MEDIUM**

Gamborg's B5 medium is an optimized culture medium for *in vitro* plant cell, tissue, and organ culture. It contains a mixture of inorganic salts, vitamins, and carbohydrates. We offer Gamborg's B5 medium with minimal organics, Gamborg's vitamin mix, and Gamborg's B5 basal salt mix.

#### PHYTAMAX™ ORCHID CULTURE MEDIUM

Phytamax<sup>™</sup> Orchid Multiplication Medium and Phytamax<sup>™</sup> Orchid Maintenance Medium are used for culturing, propagating and replating the orchid stem. Phytamax<sup>™</sup> orchid culture media are available with or without activated charcoal, and with both charcoal and banana powder.

D4540

П

**Dimethyl sulfoxide** 

≥99.5% (GC), suitable for plant cell culture

G7021
D-(+)-Glucose
powder, BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, ≥99.5%
A1296
Agar
microbiology tested, suitable for plant cell culture, suitable for cell culture, powder
K1377
Kanamycin sulfate from Streptomyces kanamyceticus
powder, BioReagent, suitable for cell culture, suitable for plant cell culture
P5655
Potassium phosphate monobasic
powder, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, ≥99.0%
M5524
Murashige and Skoog Basal Salt Mixture (MS)
powder, suitable for plant cell culture
B4639
Biotin
powder, BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, ≥99%
M5519

Murashige and Skoog Basal Medium
powder, suitable for plant cell culture
P8169
Phytagel™
BioReagent, suitable for plant cell culture, powder
A4403
L-Ascorbic acid
powder, suitable for cell culture, γ-irradiated
B6768
Boric acid
BioReagent, for molecular biology, suitable for cell culture, suitable for plant cell culture, ≥99.5%
G9422
β-Glycerophosphate disodium salt hydrate
BioUltra, suitable for cell culture, suitable for plant cell culture, ≥99% (titration)
A4544
L-Ascorbic acid
suitable for cell culture, suitable for plant cell culture, ≥98%
\$5886
Sodium chloride
BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, ≥99%

Calcium chloride
anhydrous, BioReagent, suitable for insect cell culture, suitable for plant cell culture, ≥96.0%
C7902
Calcium chloride dihydrate
BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, ≥99.0%
S4014
Spectinomycin dihydrochloride pentahydrate
powder, BioReagent, suitable for cell culture
11332465001
TWEEN® 20
non-ionic, aqueous solution, 10% (w/v)
K0254
Kanamycin solution from Streptomyces kanamyceticus
50 - 60 mg/mL in 0.9% NaCl, BioReagent, liquid, 0.1 µm filtered, suitable for cell culture
V6629
Vitamin B <sub>12</sub>
BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, ≥98%
A4034
(+)-Sodium L-ascorbate

powder, BioReagent, suitable for cell culture

C5670

P6280
Pyridoxine hydrochloride
BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture
B3408
6-Benzylaminopurine
suitable for plant cell culture
C7527
Choline chloride
BioReagent, suitable for cell culture, suitable for insect cell culture, ≥98%
G7645
Gibberellic acid
BioReagent, suitable for plant cell culture, ≥90% gibberellin A <sub>3</sub> basis (of total gibberellins.)
T1270
Thiamine hydrochloride
BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture
F8758
Folic acid
BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, ≥97%
biokedgerii, sendere for con contro, sendere for inspect con contro, sendere for plant con contro, =777,0
M2773
Magnesium sulfate heptahydrate

BioReagent, for molecular biology, suitable for plant cell culture, ≥99.0%

\$5011
Sodium phosphate monobasic
BioPerformance Certified, suitable for cell culture, suitable for insect cell culture, suitable for plant cel culture, ≥99.0% (titration)
A7921
Agar
suitable for plant cell culture, powder
C3416
Carbenicillin disodium salt
BioReagent, suitable for plant cell culture
H2395
Hoagland's No. 2 Basal Salt Mixture
powder, suitable for plant cell culture
C1919
Chloramphenicol
BioReagent, suitable for plant cell culture
M0404
Murashige and Skoog Basal Medium
powder, suitable for plant cell culture, with Gamborg's vitamins
12886

3-Indoleacetic acid

suitable for plant cell culture, crystalline
15386
Indole-3-butyric acid
BioReagent, suitable for plant cell culture
A9045
Agarose, low gelling temperature
BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture
C3061
Cyanobacteria BG-11 Freshwater Solution
50 ×, liquid, suitable for plant cell culture
33120-M
N,N-Dimethylformamide
puriss. p.a., ACS reagent, reag. Ph. Eur., ≥99.8% (GC)
G5893
Gamborg's B-5 Basal Medium with Minimal Organics
fine powder, suitable for plant cell culture
Ethylenediaminetetraacetic acid ferric sodium salt
suitable for plant cell culture, BioReagent, crystalline
sonable for plant con control, blokeagern, crystalline

C3915

Colchicine
BioReagent, suitable for plant cell culture, ≥95% (HPLC)
G0154
Guillard's (F/2) Marine Water Enrichment Solution
50 ×, liquid, suitable for plant cell culture
M1651 Sodium molyhelato dihydrato
Sodium molybdate dihydrate  ≥99.5%, suitable for plant cell culture
277.5%, solidble for planticell condie
C9157
Activated charcoal
suitable for cell culture, suitable for plant cell culture
P6186
Thidiazuron
BioReagent, suitable for plant cell culture
M9274
Murashige and Skoog Basal Medium
suitable for plant cell culture, with sucrose and agar
117508
Isonicotinic acid
99%

71690
Sodium hydroxide
puriss. p.a., ACS reagent, K ≤0.02%, ≥98.0% (T), pellets
A3795
Ammonium nitrate
suitable for plant cell culture
N0761
Nicotinic acid
BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, ≥98%
M7899
Manganese(II) sulfate monohydrate
BioReagent, suitable for plant cell culture, suitable for cell culture
C8731
Calcium pantothenate
meets USP testing specifications, monograph mol wt. 476.53 (C18H32CaN2O10)
P4716
Pectinase from Aspergillus niger
BioReagent, suitable for plant cell culture, aqueous glycerol solution, ≥5 units/mg protein (Lowry)
Z0164

BioReagent, suitable for plant cell culture, powder

P5155
D-Pantothenic acid hemicalcium salt
BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture
K3378
Kinetin
suitable for plant cell culture, BioReagent, amorphous powder
F8263
Iron(II) sulfate heptahydrate
suitable for plant cell culture, ≥99%
J2500
(±)-Jasmonic acid
suitable for plant cell culture, BioReagent, liquid
C7039
Cefotaxime sodium salt
suitable for plant cell culture, BioReagent, powder or crystals
\$5391
Sucrose
≥99.5% (GC), Grade II, suitable for plant cell culture
, ,,
E6635
Ethylenediaminetetraacetic acid disodium salt dihydrate

Sigma Grade, suitable for plant cell culture, 98.5-101.5%

C3036
Copper(II) sulfate pentahydrate
suitable for plant cell culture, ≥98%
B3274
6-Benzylaminopurine solution
1 mg/mL, suitable for plant cell culture
15148
Indole-3-acetic acid sodium salt
suitable for plant cell culture, BioReagent, ≥98%
M1902
D-Mannitol
suitable for plant cell culture
C2404
Citric acid
anhydrous, suitable for cell culture, suitable for plant cell culture
K0129
Kanamycin solution from Streptomyces kanamyceticus
10 mg/mL in 0.9% NaCl, 0.1 µm filtered, BioReagent, suitable for cell culture
_
D8037
Driselase™ Basidiomycetes sp.

BioReagent, suitable for plant cell culture
G1019
Gamborg's Vitamin Solution
1000 ×, liquid, suitable for plant cell culture
R7382
Rifampicin
suitable for plant cell culture, BioReagent, ≥95% (HPLC), powder or crystals
C1794
Cellulase from Trichoderma sp.
BioReagent, suitable for plant cell culture, 3-10 units/mg solid
P5905
Peptone from animal tissue
from meat, BioReagent, suitable for cell culture, suitable for plant cell culture
P8291
Potassium nitrate
BioReagent, suitable for cell culture, suitable for plant cell culture
S7401
Salicylic acid
suitable for plant cell culture
M3900

Murashige and Skoog Vitamin Solution
1000 ×, liquid, suitable for plant cell culture
V1130
Vancomycin hydrochloride from Streptomyces orientalis
BioReagent, suitable for plant cell culture
\$3889
D-Sorbitol
≥98% (GC), BioReagent, suitable for cell culture, suitable for plant cell culture
\$5390
Sucrose
≥99% (GC), Grade I, suitable for plant cell culture
A9431
Ancymidol
suitable for plant cell culture, BioReagent
G9903
Guillard's (F/2) Marine Water Enrichment Solution
50 ×, liquid, suitable for plant cell culture
Z0876
trans-Zeatin
BioReagent, suitable for plant cell culture, ≥97%

C2786	
Calcium nitrate tetrahydrate	
suitable for cell culture, suitable for plant cell culture	
B5282	
Bold Modified Basal Freshwater Nutrient Solution	
50 ×, liquid, suitable for plant cell culture	
K0753	
Kinetin	
suitable for plant cell culture, crystalline	
M6899	
Murashige and Skoog Basal Salts with minimal organics	
powder, suitable for plant cell culture	
_	
M6774	
McCown's Woody Plant Basal Salt Mixture	
powder, suitable for plant cell culture	
A6686	
Agar  Restarials piecel priore biology to to de a vitable for plant cell culture, are	
Bacteriological, microbiology tested, suitable for plant cell culture, gro	ırıuldi
M0529	

Murashige and Skoog Basal Salt Micronutrient Solution

10 ×, liquid, suitable for plant cell culture

D7660
6-(γ,γ-Dimethylallylamino)purine
BioReagent, suitable for plant cell culture, 1 mg/mL
\$6191
Sodium chloride
BioPerformance Certified, ≥99% (titration), suitable for insect cell culture, suitable for plant cell culture
C2911
Cobalt(II) chloride hexahydrate
suitable for plant cell culture
P6668
Phytamax™ Orchid Maintenance Medium
powder, suitable for plant cell culture
D6162
DKW/Juglans Basal Salt Mixture
powder, suitable for plant cell culture
H9773
Hygromycin B from Streptomyces hygroscopicus
suitable for plant cell culture, BioReagent, ≥60% (HPLC), lyophilized powder
Zino sulfato hantabudada
Zinc sulfate heptahydrate
suitable for plant cell culture

G5768
Gamborg's B-5 Basal Salt Mixture
fine powder, suitable for plant cell culture
D5417
Dicamba
suitable for plant cell culture, BioReagent
P5575
Picloram
suitable for plant cell culture, BioReagent
M7150
Murashige and Skoog Vitamin Powder
1000 ×, powder, suitable for plant cell culture
M2518
Menadione sodium bisulfite
BioReagent, suitable for cell culture, ≥95% (TLC)
F0638
Iron(III) sulfate hydrate
suitable for plant cell culture, BioReagent
_
K3253
Kinetin solution

1 mg/mL, BioReagent, suitable for plant cell culture
D7674
6-(γ,γ-Dimethylallylamino)purine
BioReagent, suitable for plant cell culture, ≥98.5%
\$6765
Schenk and Hildebrandt Basal Salt Mixture
fine powder, suitable for plant cell culture
K3129
Kao and Michayluk Vitamin Solution
100 ×, liquid, suitable for plant cell culture
A8678
Agar
suitable for plant cell culture
F5013
5-Fluoroorotic acid hydrate
≥98%
_
M0654
Murashige and Skoog Basal Salt Macronutrient Solution
10 ×, liquid, suitable for plant cell culture
П
MA2000
M2909

Murashige and Skoog Modified Basal Salt Mixture
powder, suitable for plant cell culture
C5915
Coconut water
suitable for plant cell culture
C4049
Chlorocholine chloride
BioReagent, suitable for plant cell culture
D6679
(2,4-Dichlorophenoxy)acetic acid sodium salt monohydrate
suitable for plant cell culture, BioReagent
17512
Indole-3-butyric acid potassium salt
suitable for plant cell culture, BioReagent
A3301
Agargel™
suitable for plant cell culture, powder
D5912
6-(γ,γ-Dimethylallylamino)purine
suitable for plant cell culture, BioReagent, ≥90%

N-Z-Amine® A suitable for plant cell culture
suitable for plant cell culture
Z3541
trans-Zeatin-riboside
BioReagent, suitable for plant cell culture, ~95%
A9799
Agar
High gel strength, suitable for plant cell culture
C3161
Calcium phosphate tribasic
suitable for plant cell culture, BioReagent, powder
C141/
C1416
Chu (N₄) Basal Salt Mixture
Chu (N <sub>6</sub> ) Basal Salt Mixture  powder, suitable for plant cell culture
Chu (N <sub>6</sub> ) Basal Salt Mixture  powder, suitable for plant cell culture
Chu (N <sub>6</sub> ) Basal Salt Mixture  powder, suitable for plant cell culture  P8166
Chu (N <sub>6</sub> ) Basal Salt Mixture  powder, suitable for plant cell culture  P8166  Potassium iodide
Chu (N <sub>6</sub> ) Basal Salt Mixture  powder, suitable for plant cell culture  P8166
Chu (N <sub>6</sub> ) Basal Salt Mixture  powder, suitable for plant cell culture  P8166  Potassium iodide  suitable for plant cell culture
Chu (N <sub>4</sub> ) Basal Salt Mixture powder, suitable for plant cell culture  P8166  Potassium iodide suitable for plant cell culture
Chu (N <sub>6</sub> ) Basal Salt Mixture powder, suitable for plant cell culture  P8166 Potassium iodide suitable for plant cell culture  G7276
Chu (N <sub>4</sub> ) Basal Salt Mixture powder, suitable for plant cell culture  P8166  Potassium iodide suitable for plant cell culture

Adenine hemisulfate salt
suitable for plant cell culture, BioReagent, ≥99%
B4032
Banana powder
suitable for plant cell culture
A3920
Ammonium sulfate
suitable for plant cell culture, ≥99.0%
K4003
Knudson C Modified Orchid Medium
powder, suitable for plant cell culture
P5960
L-Pyroglutamic acid
BioXtra
A4550
Agar
Type A, suitable for plant cell culture
\$5022
Sodium nitrate

≥99.0%, suitable for plant cell culture

A5665
Adenine
BioReagent, suitable for plant cell culture, ≥99%
P5936
Pectolyase from Aspergillus japonicus
suitable for plant cell culture, lyophilized powder
A4675
Agar
Type E, suitable for plant cell culture
G1025
Gibberellic acid potassium salt
BioReagent, suitable for plant cell culture, ~95%, ≥50% total GA <sub>3</sub> basis
P6793
Phytamax™ Orchid Multiplication Medium
powder, suitable for plant cell culture
C0413
4-Chlorophenoxyacetic acid
BioReagent, suitable for plant cell culture, crystalline
RDD037
Potassium phosphate monobasic

suitable for cell culture, Redi-Dri™, ≥99.0%, free-flowing, suitable for insect cell culture, suitable for plant cell

culture

G1279
G 418 disulfate salt
suitable for plant cell culture, BioReagent
NA7024
M7024  Murashige and Skoog Shoot Multiplication Medium A
powder, suitable for plant cell culture
P1056
Phytamax™ Orchid Medium with Charcoal and Banana Powder
powder, suitable for plant cell culture
\$5640
Sodium sulfate
≥99.0%, suitable for plant cell culture
P0931
Phytamax™ Orchid Maintenance Medium without Charcoal
powder, suitable for plant cell culture
A6685 (S)-trans-2-Amino-4-(2-aminoethoxy)-3-butenoic acid hydrochloride
suitable for plant cell culture, BioReagent, powder
•

P8541
Potassium sulfate
suitable for plant cell culture
П
N3019
2-Naphthoxyacetic acid
suitable for plant cell culture, BioReagent, crystalline
soliable for plant cell conord, blokeagern, crystalline
T5535
Thiabendazole
BioReagent, suitable for plant cell culture, powder
A4800
Agar
Type M, suitable for plant cell culture
_
P9556
N-(Phosphonomethyl)glycine
BioReagent, suitable for plant cell culture
A3048
Ammonium phosphate monobasic
suitable for plant cell culture
П

# Paromomycin sulfate salt suitable for plant cell culture, BioReagent O6254 (R)-(-)-2-Oxothiazolidine-4-carboxylic acid ≥97% (TLC), ≥98% (titration) S3766 Schenk and Hildebrandt Vitamin 100 ×, liquid, suitable for plant cell culture N3144 Neomycin trisulfate salt hydrate suitable for plant cell culture W0876 White's Basal Salt Mixture powder, suitable for plant cell culture Z2753 trans-Zeatin hydrochloride suitable for plant cell culture, ≥97% V900144

**Glycine** 

Vetec™, reagent grade, 98%

# Classical Media & Buffers



Cell culture media variations have been refined to fit the need for more physiologically-relevant environments for diverse mammalian cell cultures. These media and salts, along with their components, have been qualified for a wide range of cell culture applications, and are manufactured in our state-of-the art facilities. Choose media fit for your application based on you parameters, including glucose concentration, L-glutamine or stable glutamine supplementation, phenol red pH indicator inclusion, and powdered or liquid formats.

DMEM (Dulbecco's Modified Eagle Medium)

RPMI 1640 Medium

DMEM/F12 Medium

**MEM (Minimum Essential Medium)** 

Ham's F-10 and F12 Medium

Medium 199 (M199)

**Basal Salts for Cell Culture** 

Other Classic Cell Culture Media

many types of cultured cells, including fresh human lymphocytes in the 72 hour phytohemagglutinin (PHA) stimulation assay.

# **DMEM/F12 MEDIA FORMULATIONS**

In recent years, researchers have reported the culture of a variety of cell lines in serum-free medium that contained a supplement of nutrients, growth factors and hormones in the place of serum. Mather and Sato (BBRC, 1985) reported the successful cultivation of Leydig and Sertoli cells in serum-free medium that contained insulin, transferrin, epidermal growth factor, leutinizing hormone or follicle stimulating hormone, somatomedin and growth hormone. Although the hormones and their concentrations are specific for the type of cell

under study, the medium found to be optimal for these studies was a 1:1 mixture of Dulbecco's Modified Eagle's Medium (DMEM) and Ham's F-12 Nutrient Mixture, also known as **DMEM/F12**. HEPES buffer can be included in the formulation at a final concentration of 15 mM to compensate for the loss of buffering capacity incurred by eliminating serum.

### MEM (MINIMUM ESSENTIAL MEDIUM)

Developed by Harry Eagle working at the NIH, **Minimum Essential Medium (MEM)** contains essential amino acids universal to multispecies needs, and is one of the most widely used of all synthetic cell culture media. Early attempts to cultivate normal mammalian fibroblasts and certain HeLa cells subclones revealed that they had specific nutritional requirements that could not be met by Eagle's Basal Medium (BME). Subsequent studies using these and other cells in culture indicated that additions to BME could be made to aid growth of a wider variety of fastidious cells. MEM, which incorporates these modifications, includes higher concentrations of amino acids so that the medium more closely approximates the protein composition of mammalian cells.

MEM has been used for cultivation of a wide variety of cells grown in monolayers. Optional supplementation of non-essential amino acids to the formulations that incorporate either Hanks' or Earle's salts has broadened the usefulness of this medium. The formulation has been further modified by optional elimination of calcium to permit the growth of cells in suspension.

#### HAM'S F-10 AND F-12 MEDIA FORMULATIONS

Ham's nutrient mixtures were originally developed to support the growth of several clones of Chinese hamster ovary (CHO) cells, as well as clones of HeLa and mouse L-cells, but are also suited for hepatocyte culture, viral fusion, and toxicity assays. These mixtures were formulated for use with or without serum supplementation, depending on the cell type cultured.

- **Ham's F-10** has been shown to support the growth of human diploid cells, white blood cells, and primary explants of rat, rabbit and chicken tissues.
- Ham's F-12 has been used for the growth of primary rat hepatocytes and rat prostate epithelial cells. A
  clonal toxicity assay using CHO cells has been reported using Ham's F-12, also available with 25 mM
  HEPES that provides more effective buffering in the optimum pH range of 7.2 7.4
- Coon's modification of Ham's F-12 was developed for culturing hybrid cells produced by viral fusion. This
  modification consists of 2x the standard concentration of amino acids and pyruvate, plus the inclusion
  of ascorbic acid and adjusted salt concentrations. The Coon's formula contains 0.863 mg/L zinc sulfate,
  which may render it unsuitable for culturing mouse L-cells.
- Kaighn's modification of Ham's F-12 (also called Ham's F-12K) has increased concentrations of select amino acids and pyruvate, as well as modified salts (Konigsberg's formula). This medium was designed to support the growth of differentiated rat and chicken cells, as well as primary human hepatocytes.

# MEDIUM 199 (M199)

Early tissue culture media were predominantly formulated from animal products and/or tissue extracts. In 1950, Morgan and his coworkers reported their efforts to produce a strictly defined nutritional source for cell cultures. Their experiments, conducted with various combinations of vitamins, amino acids, and other factors revealed that growth of explanted tissue could be measured in what has become known as **Medium 199** (M199), now widely

used in virology, vaccine production, primary tissue explant culture, and the in vitro cultivation of mouse pancreatic epithelial and rat lens tissues.

Researchers eventually found that long-term cultivation of cells required addition of a serum supplement to the culture fluid. When properly supplemented, Medium 199 has broad species applicability, particularly for cultivation of non-transformed cells.

#### **BASAL SALTS FOR CELL CULTURE**

**D-PBS**, **Hanks'**, **Earle's**, **Tyrode's** — you'll find the correct formulation for your culture application in the most complete collection of balanced salts available anywhere.

#### OTHER CLASSIC CELL CULTURE MEDIA

Find specialized formulations including Ames' and **Iscove's** modifications, plus Click's, **L-15**, **McCoy's**, **NCTC**, and more.

A3551
Alsever's Solution
liquid, sterile-filtered, suitable for cell culture
A1420
Ames' Medium
With L-glutamine, without sodium bicarbonate, powder, suitable for cell culture
B9638
Basal Medium Eagle
With Earle's salts and L-glutamine, without sodium bicarbonate, powder, suitable for cell culture
B3528
BSK-H Medium
With sodium bicarbonate, suitable for Borrelia buradorferi (Qualified)

B8291
BSK-H Medium, Complete
sterile-filtered, with 6% rabbit serum, suitable for Borrelia burgdorferi
C6164
Cell Freezing Medium-DMSO 1×
sterile-filtered, suitable for cell culture
C6295
Cell Freezing Medium-DMSO Serum free 1x
sterile-filtered, suitable for cell culture
C6039
Cell Freezing Medium-Glycerol 1×
sterile-filtered, suitable for cell culture
C2639
Cell Freezing Medium-Serum-free 1×
sterile-filtered, suitable for cell culture
51800C
Claycomb Medium
without L-glutamine, liquid, sterile-filtered, suitable for cell culture
C5572
Click's Medium

With sodium bicarbonate, without mercaptoethanol and L-glutamine, liquid, sterile-filtered, suitable for

cell culture

	C9249
	CryoSOfree™ DMSO-free Cryopreservation Medium
C3	3124
	CryoStor® cell cryopreservation media
	CS2
	C2999
	CryoStor® cell cryopreservation media
	CS5
	C2874
	CryoStor® cell cryopreservation media
	C\$10
	SLM-241
	DMEM Complete Medium, with 2mM L-Glut, Sodium Pyruvate, and 10% FBS
	DMEM Complete Medium contains DMEM high glucose medium with 2mM L-glut, sodium pyruvate, and 10% U.S. origin FBS. DMEM Complete Medium is a convenient sterile solution for the culture of primary mammalian cells including mouse and chicken cells, and a variety of normal and transformed cells.
	SLM-202
	Dulbecco's Modified Eagle's Media 2X, With 4,500 mg/L Glucose and L-Glutamine, without NaHCO3 or Sodium Pyruvate
	D5030

**Dulbecco's Modified Eagle's Medium** 

Without glucose, L-glutamine, phenol red, sodium pyruvate and sodium bicarbonate, powder, suitable for cell culture
D1145
Dulbecco's Modified Eagle's Medium - high glucose
With 4500 mg/L glucose and sodium bicarbonate, without L-glutamine, sodium pyruvate, and phenol red, liquid, sterile-filtered, suitable for cell culture
D0422
Dulbecco's Modified Eagle's Medium - high glucose
With 4500 mg/L glucose and sodium bicarbonate, without L-methionine, L-cystine and L-glutamine, liquid, sterile-filtered, suitable for cell culture
D6429
Dulbecco's Modified Eagle's Medium - high glucose
With 4500 mg/L glucose, L-glutamine, sodium pyruvate, and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
D7777
Dulbecco's Modified Eagle's Medium - high glucose
With 4500 mg/L glucose, L-glutamine, and sodium pyruvate, without sodium bicarbonate, powder, suitable for cell culture
D6546
Dulbecco's Modified Eagle's Medium - high glucose
With 4500 mg/L glucose, sodium pyruvate, and sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
D5648
Dulbecco's Modified Eagle's Medium - high glucose

With 4500 mg/L glucose and L-glutamine, without sodium bicarbonate, powder, suitable for cell culture
D5671
Dulbecco's Modified Eagle's Medium - high glucose
With 4500 mg/L glucose and sodium bicarbonate, without L-glutamine and sodium pyruvate, liquid, sterile-filtered, suitable for cell culture, suitable for hybridoma
D5796
Dulbecco's Modified Eagle's Medium - high glucose
With 4500 mg/L glucose, L-glutamine, and sodium bicarbonate, without sodium pyruvate, liquid, sterile-filtered, suitable for cell culture
D1152
Dulbecco's Modified Eagle's Medium - high glucose
HEPES Modification, With 4500 mg/L glucose, L-glutamine, and 25 mM HEPES, without sodium bicarbonate and pyruvate, powder, suitable for cell culture
D4947
Dulbecco's Modified Eagle's Medium - low glucose
With 1000 mg/L glucose, L-glutamine and sodium bicarbonate, without phenol red, liquid, sterile-filtered, suitable for cell culture
D6046
Dulbecco's Modified Eagle's Medium - low glucose
With 1000 mg/L glucose, L-glutamine, and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
D2429
Dulbecco's Modified Eagle's Medium - low glucose
10 ×, With 1000 mg/L glucose (1x), without L-glutamine, sodium bicarbonate, and folic acid, liquid, sterile-

filtered, suitable for cell culture

D5921
Dulbecco's Modified Eagle's Medium - low glucose
With 1000 mg/L glucose, and sodium bicarbonate, without L-glutamine and phenol red, liquid, sterile-filtered, suitable for cell culture
D2902
Dulbecco's Modified Eagle's Medium - low glucose
With 1000 mg/L glucose and L-glutamine, without sodium bicarbonate and phenol red, powder, suitable for cell culture
D5523
Dulbecco's Modified Eagle's Medium - low glucose
With 1000 mg/L glucose and L-glutamine, without sodium bicarbonate, powder, suitable for cell culture
D5546
Dulbecco's Modified Eagle's Medium - low glucose
With 1000 mg/L glucose, and sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
D8437
Dulbecco's Modified Eagle's Medium/Nutrient Mixture F-12 Ham
With L-glutamine, 15 mM HEPES, and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
Dulbacco's Madified Eggle's Madium (Nutrient Mixture E 12 Ham
Dulbecco's Modified Eagle's Medium/Nutrient Mixture F-12 Ham  With Labetamine and trace elements without LIERES and sodium biographerate powder witable for call
With L-glutamine and trace elements, without HEPES and sodium bicarbonate, powder, suitable for cell culture

D6421
Dulbecco's Modified Eagle's Medium/Nutrient Mixture F-12 Ham
With 15 mM HEPES and sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
D6434
Dulbecco's Modified Eagle's Medium/Nutrient Mixture F-12 Ham
With 15 mM HEPES and sodium bicarbonate, without L-glutamine and phenol red, liquid, sterile-filtered, suitable for cell culture
D8900
Dulbecco's Modified Eagle's Medium/Nutrient Mixture F-12 Ham
With L-glutamine and 15 mM HEPES, without sodium bicarbonate, powder, suitable for cell culture
D8062
Dulbecco's Modified Eagle's Medium/Nutrient Mixture F-12 Ham
With L-glutamine and sodium bicarbonate, without HEPES, liquid, sterile-filtered, suitable for cell culture
D8062
Dulbecco's Modified Eagle's Medium/Nutrient Mixture F-12 Ham
With L-glutamine and sodium bicarbonate, without HEPES, liquid, sterile-filtered, suitable for cell culture
D8662

# D1408

**Dulbecco's Phosphate Buffered Saline** 

**Dulbecco's Phosphate Buffered Saline** 

With MgCl<sub>2</sub> and CaCl<sub>2</sub>, liquid, sterile-filtered, suitable for cell culture

10×, Modified, without calcium chloride and magnesium chloride, liquid, sterile-filtered, suitable for cell culture

D1283
Dulbecco's Phosphate Buffered Saline
With calcium chloride and magnesium chloride, 10×, liquid, sterile-filtered, suitable for cell culture
D8537
Dulbecco's Phosphate Buffered Saline
Modified, without calcium chloride and magnesium chloride, liquid, sterile-filtered, suitable for cell culture
D4031
Dulbecco's Phosphate Buffered Saline
Modified, with 36 mg sodium pyruvate, 50 mg streptomycin sulfate, 100 mg kanamycin monosulfate, 1000 mg glucose/L and CaCl <sub>2</sub> , liquid, 0.1 µm filtered, suitable for cell culture
E7510
Earle's Balanced Salt Solution 10x
Without sodium bicarbonate, 10 ×, liquid, sterile-filtered, suitable for cell culture
E2888
Earle's Balanced Salts
With sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
E3024
Earle's Balanced Salts
With sodium bicarbonate, without phenol red, liquid, sterile-filtered, suitable for cell culture
E6267

**Earle's Balanced Salts** 

With sodium bicarbond for cell culture	ate, without calcium chloride and magnesium sulfate, liquid, sterile-filtered, suitable
TMS-003	
EmbryoMax® 1M HEPES	Buffer Solution, Liquid, 1M
•	PES Buffer Solution, Liquid, 1M is available in a 100 mL format and may be used for nic stem cell culture applications.
SLM-220-M	
EmbryoMax® DMEM - H	ligh Glucose, Low Bicarbonate w/o Sodium Pyruvate
•	-High Glucose, Low Bicarbonate w/o Sodium Pyruvate is available in a 400 mL ed for routine mouse embryonic stem cell culture applications.
SLM-120	
EmbryoMax® DMEM (1) m Pyruvate	(), liquid, With 4,500mg/L Glucose, 2.25g/L Sodium Bicarb and L-Glut, without Sodiu
•	w ith 4,500mg/L Glucose, 2.25g/L Sodium Bicarb & L-Glut, without Sodium Pyruvate format and may be used for routine mouse embryonic stem cell culture.
SLM-220	
EmbryoMax® DMEM (1) m Pyruvate	(), liquid, With 4,500mg/L Glucose, 2.25g/L Sodium Bicarb, without L-Glut and Sodiu
•	with 4,500mg/L Glucose, 2.25g/L Sodium Bicarb, without L-Glut & Sodium Pyruvate format and may be used for routine mouse embryonic stem cell culture.
DF-042	
EmbryoMax® DMEM/F1	2, with L-Glutamine, without HEPES
•	/F12, with L-Glutamine, without HEPES is available in a 500 mL format and may be embryonic stem cell culture applications.
TMS-012	

Endotoxin-Free Dulbecco's PBS (1X) (w/o Ca++ & Mg++)
Cell Culture
G5893
Gamborg's B-5 Basal Medium with Minimal Organics
fine powder, suitable for plant cell culture
G9779
Gey's Balanced Salt Solution
liquid, sterile-filtered, suitable for cell culture
G6148
Glasgow Minimum Essential Medium
With L-glutamine, without tryptose phosphate broth and sodium bicarbonate, powder, suitable for cell culture
G5154
Glasgow Minimum Essential Medium
With sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
G8142
Grace's Insect Medium
With L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for insect cell culture
G9771
Grace's Insect Medium
With L-glutamine, without sodium bicarbonate, powder, suitable for insect cell culture

GSEM Supplement
50 ×, liquid, sterile-filtered, suitable for cell culture
H6648
Hanks' Balanced Salt solution
Modified, with sodium bicarbonate, without phenol red, calcium chloride and magnesium sulfate, liquid, sterile-filtered, suitable for cell culture
H8264
Hanks' Balanced Salt solution
Modified, with sodium bicarbonate, without phenol red, liquid, sterile-filtered, suitable for cell culture
H9394
Hanks' Balanced Salt solution
Modified, with sodium bicarbonate, without calcium chloride and magnesium sulfate, liquid, sterile-filtered, suitable for cell culture
H9269
Hanks' Balanced Salt solution
With sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
H4641
Hanks' Balanced Salt Solution 10x
Without calcium chloride, magnesium sulfate and sodium bicarbonate, $10 \times$ , liquid, sterile-filtered, suitable for cell culture
H4416
HypoThermosol® FRS Preservation Solution

G9785

17760
IPL-41 Insect Medium
With L-glutamine and sodium bicarbonate., liquid, sterile-filtered, suitable for insect cell culture
17633
Iscove's Modified Dulbecco's Medium
With L-glutamine and 25 mM HEPES, without sodium bicarbonate, powder, suitable for cell culture
13390
Iscove's Modified Dulbecco's Medium
liquid, sterile-filtered, With sodium bicarbonate, without L-glutamine, suitable for cell culture, suitable for hybridoma
L1518
L-15 Medium (Leibovitz)
With L-glutamine, liquid, sterile-filtered, suitable for cell culture
L5520
L-15 Medium (Leibovitz)
Without L-glutamine, liquid, sterile-filtered, suitable for cell culture
L4386
L-15 Medium (Leibovitz)
With L-glutamine, powder, suitable for cell culture
M7292

M16 Medium

With sodium bicarbonate and lactic acid, without penicillin and streptomycin, liquid, sterile-filtered
M7167
M2 medium
With HEPES, without penicillin and streptomycin, liquid, sterile-filtered, suitable for mouse embryo cell culture
M9309
McCoy's 5A Medium
Modified, with L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M8403
McCoy's 5A Medium
Modified, with sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
M6395
MCDB 105 Medium
With trace elements, L-glutamine and 25mM HEPES, powder, suitable for cell culture
M8537
MCDB 131 Medium
With trace elements and L-glutamine, without sodium bicarbonate, powder, suitable for cell culture
M7403
MCDB 153 Medium
With trace elements, L-glutamine and 28mM HEPES, without sodium bicarbonate, powder, suitable for cel culture
M6770

With trace elements, L-glutamine and 30 mM HEPES, powder, suitable for cell culture
M7653
Medium 199
With Hanks' salts and sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
M0650
Medium 199
10 ×, With Earle's salts, without L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M0393
Medium 199
With Hanks' salts and L-glutamine, without sodium bicarbonate, powder, suitable for cell culture
M2520
Medium 199
HEPES Modification, with Earle's salts, L-glutamine and 25 mM HEPES, without sodium bicarbonate, powder, suitable for cell culture
M9163
Medium 199
10 ×, With Hanks' salts, without L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M2154
Medium 199

MCDB 201 Medium

With Earle's salts and sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
M4530
Medium 199
With Earle's salts, L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M7528
Medium 199
HEPES Modification, with Earle's salts, 25 mM HEPES and sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
M3769
Medium 199
Modified, with Earle's salts, without L-glutamine, sodium bicarbonate, and phenol red, powder, suitable for cell culture
M5017
Medium 199
With Earle's salts and L-glutamine, without sodium bicarbonate, powder, suitable for cell culture
FG0615
Medium 199 Earle's with stable Glutamine
With Earle's salts, stable glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
SLM-246
MEM / F12 Complete Medium, with NEAA, 2mM L-Glut and 10% FBS

MEM / F12 Complete Medium contains a 1:1 mixture of MEM medium and Ham's F12 medium with NEAA, 2mM L-glutamine and 10% U.S. origin FBS. MEM / F12 Complete Medium is a convenient sterile solution for the culture of primary mammalian cells as well as a variety of normal and transformed cells

SLM-244
MEM Complete Medium, with NEAA, 1 mM sodium pyruvate, 2mM L-Glut, and 10% FBS
MEM Complete Medium w/ Sodium Pyruvate contains non-essential amino acids, 1mM sodium pyruvate, 2mM L-glut, and 10% U.S. origin FBS. MEM Complete Medium w/Sodium Pyruvate is a convenient sterile solution for culture of primary mammalian cells, as well as, variety of normal and transformed cells.
SLM-245
MEM Complete Medium, with NEAA, 2mM L-Glut and 10% FBS
MEM Complete Medium w/o Sodium Pyruvate contains non-essential amino acids, 2mM L-glutamine and 10% U.S. origin FBS. MEM Complete Medium without Sodium Pyruvate is a convenient sterile solution for the culture of primary mammalian cells as well as a variety of normal and transformed cells.
M0894
Minimum Essential Medium Eagle
Alpha Modification, with L-glutamine and sodium pyruvate, without ribonucleosides, deoxyribonucleosides and sodium bicarbonate, powder, suitable for cell culture
M0200
Minimum Essential Medium Eagle
Alpha Modification, With sodium bicarbonate and L-glutamine, without ribonucleosides and deoxyribonucleosides, liquid, sterile-filtered, suitable for cell culture
M0325
Minimum Essential Medium Eagle
With Earle's salts, non-essential amino acids, L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M0450
Minimum Essential Medium Eagle
Alpha Modification, With ribonucleosides, L-glutamine, deoxyribonucleosides and sodium bicarbonate,

liquid, sterile-filtered, suitable for cell culture

M0643
Minimum Essential Medium Eagle
With Earle's salts, L-glutamine, and non-essential amino acids, without sodium bicarbonate, powder, suitable for cell culture
M2414
Minimum Essential Medium Eagle
Modified, with Earle's salts and reduced NaHCO3. without L-glutamine, liquid, sterile-filtered, suitable for cell culture
M4526
Minimum Essential Medium Eagle
Alpha Modification, with sodium bicarbonate, without L-glutamine, ribonucleosides and deoxyribonucleosides, liquid, sterile-filtered, suitable for cell culture
M0275
Minimum Essential Medium Eagle
10 ×, With Earle's salts, without L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M4655
Minimum Essential Medium Eagle
With Earle's salts, L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M3024
Minimum Essential Medium Eagle
with Earle's salts and non-essential amino acids, without L-glutamine, phenol red and sodium bicarbonate,

Modified, powder, suitable for cell culture

M4780
Minimum Essential Medium Eagle
With Hanks' salts, L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M5650
Minimum Essential Medium Eagle
With Earle's salts, non-essential amino acids and sodium bicarbonate, without L-glutamine, liquid, sterile filtered, suitable for cell culture
M1018
Minimum Essential Medium Eagle
With Hanks' salts, L-glutamine and non-essential amino acids, without sodium bicarbonate, powder, suitable for cell culture
M8167
Minimum Essential Medium Eagle
Spinner Modification, with Earle's salts and sodium bicarbonate, without calcium chloride and L-glutamine, liquid, sterile-filtered, suitable for cell culture
M0644
Minimum Essential Medium Eagle
Alpha Modification, with L-glutamine, ribonucleosides and deoxyribonucleosides, without sodium bicarbonate, powder, suitable for cell culture
M8042
Minimum Essential Medium Eagle
Alpha Modification, with ribonucleosides, deoxyribonucleosides and sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture

1410770
Minimum Essential Medium Eagle
With Hanks' salts and sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
M0518
Minimum Essential Medium Eagle
Joklik Modification, with L-glutamine, without calcium chloride and sodium bicarbonate, suitable for cell culture
M0268
Minimum Essential Medium Eagle
With Earle's salts and L-glutamine, without sodium bicarbonate, powder, suitable for cell culture
M2279
Minimum Essential Medium Eagle
With Earle's salts and sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
M9288
Minimum Essential Medium Eagle
10 ×, With Hanks' salts, without L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M4642
Minimum Essential Medium Eagle
With Hanks' salts and L-glutamine, without sodium bicarbonate, powder, suitable for cell culture

Minimum Essential Medium Eagle

M7278

sterile-tiltered, suitable for cell culture
M0404
Murashige and Skoog Basal Medium
powder, suitable for plant cell culture, with Gamborg's vitamins
M9274
Murashige and Skoog Basal Medium
suitable for plant cell culture, with sucrose and agar
M0654
Murashige and Skoog Basal Salt Macronutrient Solution
10 ×, liquid, suitable for plant cell culture
M0529
Murashige and Skoog Basal Salt Micronutrient Solution
10 ×, liquid, suitable for plant cell culture
M5524
Murashige and Skoog Basal Salt Mixture (MS)
powder, suitable for plant cell culture
M6899
Murashige and Skoog Basal Salts with minimal organics
powder, suitable for plant cell culture
M2909
IVIZ7U7

Murashige and Skoog Modified Basal Salt Mixture

HEPES Modification, with Earle's salts, 25 mM HEPES and sodium bicarbonate, without L-glutamine, liquid,

powder, suitable for plant cell culture
M7024
Murashige and Skoog Shoot Multiplication Medium A
powder, suitable for plant cell culture
M7150
Murashige and Skoog Vitamin Powder
1000 ×, powder, suitable for plant cell culture
M3900
Murashige and Skoog Vitamin Solution
1000 ×, liquid, suitable for plant cell culture
P9556
N-(Phosphonomethyl)glycine
BioReagent, suitable for plant cell culture
N3262
NCTC 135 Medium
With L-glutamine, without sodium bicarbonate, powder, suitable for cell culture
N6635
Nutrient Mixture F-10 Ham
With L-glutamine, without sodium bicarbonate, powder, suitable for cell culture

N2147

Nutrient Mixture F-10 Ham
With 20 mM HEPES, without sodium bicarbonate and L-glutamine, liquid, sterile-filtered, suitable for cell culture
N6908
Nutrient Mixture F-10 Ham
With L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
N6013
Nutrient Mixture F-10 Ham
With sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
N3520
Nutrient Mixture F-12 Ham
Kaighn's Modification, with L-glutamine, without sodium bicarbonate, powder, suitable for cell culture
N8641
Nutrient Mixture F-12 Ham
HEPES Modification, with 25 mM HEPES and sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
N6658
Nutrient Mixture F-12 Ham
With L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
N6760
Nutrient Mixture F-12 Ham

With L-glutamine, without sodium bicarbonate, powder, suitable for cell culture

N6658
Nutrient Mixture F-12 Ham
With L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
SLM-242
RPMI / F12 Complete Medium, with 2 mM L-Glut and 10% FBS
R7131
RPMI 1640 Amino Acids Solution (50×)
Without L-glutamine, sterile-filtered, BioReagent, suitable for cell culture
SLM-240
RPMI 1640 Complete Medium, with 2mM L-Glut and 10% FBS
RPMI 1640 Complete Medium is supplemented with 2mM L-Glutamine and 10% U.S. origin FBS. It is a convenient sterile solution for the culture of a wide variety of cells that grow in suspension or as anchorage dependent, and can be used in fusion protocols and in the growth of hybrid cells.
R7509
RPMI-1640 Medium
Modified, with sodium bicarbonate, without L-glutamine and phenol red, liquid, sterile-filtered, suitable for cell culture
R1780
RPMI-1640 Medium
With L-glutamine and sodium bicarbonate. Without arginine, leucine, lysine, and phenol red, liquid, sterile-filtered, suitable for cell culture, designed for isotope labeling for cell culture applications
R6504
RPMI-1640 Medium
With L-glutamine, without sodium bicarbonate, powder, suitable for cell culture

R0883
RPMI-1640 Medium
With sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
R8755
RPMI-1640 Medium
Modified, with L-glutamine, without phenol red and sodium bicarbonate, powder, suitable for cell culture
R8758
RPMI-1640 Medium
With L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
R7513
RPMI-1640 Medium
Modified, with sodium bicarbonate, without methionine, cystine and L-glutamine, liquid, sterile-filtered, suitable for cell culture
R7638
RPMI-1640 Medium
Dutch Modification, with sodium bicarbonate and 20mM HEPES, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
R7388
RPMI-1640 Medium
Modified, with 20 mM HEPES and L-glutamine, without sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
R1383

With L-glutamine, without glucose and sodium bicarbonate, powder, suitable for cell culture
R5158
RPMI-1640 Medium
HEPES Modification, With 25 mM HEPES and L-glutamine, liquid, sterile-filtered, suitable for cell culture
\$9895
Schneider's Insect Medium
With L-glutamine, without calcium chloride and sodium bicarbonate, powder, suitable for insect cell culture
S0146
Schneider's Insect Medium
With L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for insect cell culture
\$8398
Shields and Sang M3 Insect Medium
With L-glutamine, without potassium bicarbonate, powder, suitable for insect cell culture
\$3652
Shields and Sang M3 Insect Medium
With L-glutamine and potassium bicarbonate., liquid, sterile-filtered, suitable for insect cell culture
D0822
StableCell™ DMEM - high glucose
With 4500 mg/L glucose, stable glutamine, sodium pyruvate and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
D0819

RPMI-1640 Medium

With 4500 mg/L glucose, stable glutamine, and sodium bicarbonate, without sodium pyruvate., liquid, sterile-filtered, suitable for cell culture
D0697
StableCell™ DMEM/F12
With stable glutamine, 15mM HEPES and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
N3790
StableCell™ Ham's F-12
With stable glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
12911
StableCell™ IMDM
With stable glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M0446
StableCell™ MEM
With Earle's salts, stable glutamine, and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
M6199
StableCell™ MEM, Alpha Modification
With stable glutamine and sodium bicarbonate, without ribonucleosides and deoxyribonucleosides, liquid, sterile-filtered, suitable for cell culture
M6074
StableCell™ MEM, Alpha Modification

With stable glutamine and sodium bicarbonate, with ribonucleosides and deoxyribonucleosides, liquid,

 $\textbf{StableCell}^{\text{\tiny{IM}}} \ \textbf{DMEM - high glucose}$ 

sterile-filtered, suitable for cell culture

R2405
StableCell™ RPMI-1640
With stable glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
T3160
TC-100 Insect Medium
With L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for insect cell culture
T3285
TNM-FH insect medium
With L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for insect cell culture
T1032
TNM-FH insect medium
With L-glutamine, without sodium bicarbonate, powder, suitable for insect cell culture
T2397
Tyrode's Salts
With sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture
W4128
Williams' Medium E
With sodium bicarbonate, without L-glutamine, liquid, sterile-filtered, suitable for cell culture
W4125
Williams' Medium E

With L-glutamine, without sodium bicarbonate, powder, suitable for cell culture

Алматы (7273)495-231 Ангарск (3955)60-70-56 Архангельск (8182)63-90-72 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Благовещенск (4162)22-76-07 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Владикавказ (8672)28-90-48 Владимир (4922)49-43-18 Вологорад (844)278-03-48 Вологорад (8472)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89 Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокуэнецк (3843)20-46-81 Ноябрьск (3496)41-32-12 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Петрозаводск (8142)55-98-37 Псков (8112)59-10-37 Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97

Тверь (4822)63-31-35 Тольятти (8482)63-91-07 Томск (3822)98-41-53 Тула (4872)33-79-87 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Улан-Удэ (3012)59-97-51 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Чебоксары (8352)28-53-07 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Чита (3022)38-34-83 Якутск (4112)23-90-97 Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(7172)727-132

Киргизия +996(312)96-26-47

## www.sigmaaldrich.nt-rt.ru | | scx@nt-rt.ru