

Product Information

Dulbecco's Modified Eagle's Medium/ High Modified

with 4500 mg/L dextrose, with 110 mg/L sodium pyruvate, without L-glutamine, without phenol red
CATALOG NO. 51449C

Description

Dulbecco's Modified Eagle's Medium (DMEM) is a modification of Basal Medium Eagle (BME) that contains four-fold concentrations of the amino acids and vitamins. The original formulation contained 1000 mg/L of dextrose and was used to culture embryonic mouse cells. Since then, it has been modified in several ways to support primary cultures of mouse and chicken cells, as well as a variety of normal and transformed cells. Each of these media offers a different combination of L-glutamine and sodium pyruvate. Additionally, the dextrose level has been raised to 4500 mg/L, contributing to the name "DMEM/High."

Precautions

Use aseptic technique when handling or supplementing this medium. This product is for research or for further manufacturing use. THIS PRODUCT IS NOT INTENDED FOR HUMAN OR THERAPEUTIC USE.

Storage

Store medium at 2 to 8 C, protected from light. Do not freeze. Do not use after the expiration date.

Indications of Deterioration

Medium should be clear of particulates and flocculent material. Do not use if medium is cloudy or contains precipitate. Other evidence of deterioration may include color change, pH shift or degradation of physical or performance characteristics.

Formulation

Component (all components measured in mg/L)	
INORGANIC SALTS	
Calcium chloride anhydrous	200.000
Ferric nitrate nonahydrate	0.100
Magnesium sulfate anhydrous	97.670
Potassium chloride	400.000
Sodium bicarbonate	3700.000
Sodium chloride	6400.000
Sodium phosphate monobasic monohydrate	125.000
VITAMINS	
D-calcium pantothenate	4.000
Choline chloride	4.000
Folic acid	4.000
i-inositol	7.000
Niacinamide	4.000
Pyridoxine HCl	4.000
Riboflavin	0.400
Thiamine HCl	4.000
AMINO ACIDS	
L-arginine HCl	84.000
L-cystine 2HCl	62.570
Glycine	30.000
L-histidine HCl monohydrate	42.000
L-isoleucine	104.800
L-leucine	104.800
L-lysine HCl	146.200
L-methionine	30.000
L-phenylalanine	66.000
L-serine	42.000
L-threonine	95.200
L-tryptophan	16.000
L-tyrosine 2Na dihydrate	103.790
L-valine	93.600
OTHER	
Dextrose anhydrous	4500.00
Sodium pyruvate	110.000

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Preparation Instructions

This medium is formulated without L-glutamine. For applications requiring the use of L-glutamine, supplement with 4 mM L-glutamine by adding 20 mL/L of a 200 mM solution (Catalog No. 59202C) prior to use. SAFC Biosciences recommends L-glutamine supplementation of the working volume only. Other supplements, such as antibiotics, can be added to the sterilized solution using aseptic technique. Storage conditions and shelf life of the supplemented product may be affected by the nature of the supplements. Sterile serum should not be refiltered before or after being added to sterile medium because growth promoting capacity may be reduced upon refiltration.

Characteristics

Appearance

Clear light yellow solution

Endotoxin

≤ 1.0 EU/mL

Osmolality (as supplied)

315 - 355 mOsm/kg H₂O

pH (as supplied)

7.0 - 7.4

Sterility

No microbial growth detected

References

1. Eagle, H., *Science* (1959) 130:432.
2. Dulbecco, R. and Freeman, G., *Virology* (1979) 8:396.
3. Smith, J. D., Freeman, G., Vogt, M., and Dulbecco, R., *Virology* (1960) 12:185.
4. Morton, H. J., *In Vitro* (1970) 6:89.

Warranty, Limitation of Remedies

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