

Technical Information

MicSera Dulbecco's Modified Eagle

Medium/Nutrient Mixture F-12 Ham (DMEM/ F12, 1:1 Mixture)

With L-Alanyl-L-Glutamine, HEPES buffer, Sodium bicarbonate and Trace elements
1X Liquid Cell Culture Medium requiring reduced serum supplementation

Product Code: RSL1006G

Application:- MicSera media are based on the classical formulations supplemented with insulin, transferrin and other advanced nutrients. The additional nutrients help in reducing the percentage of serum required to grow most of the common cell lines. The percentage of serum reduction may vary with type of cell line used. For nonfastidious cell lines serum can be reduced from 10% to as low as 1%. For fastidious cell lines serum usage can be reduced from 10% to 2.5%. MicSera medium can be used without prior adaptation and sub cultured using normal procedures. Reduced serum supplementation improves the reproducibility of experimental results by decreasing the variability caused due to undefined serum constituents. It also facilitates down regulation process in bioassays and in purification process of culture products.

RSL1006G is MicSera DMEM/Nutrient Mixture F-12 Ham with L-alanyl-l-glutamine, trace elements, sodium bicarbonate and 15mM HEPES buffer. HEPES, a zwitterionic buffer having a pKa of 7.3 at 37°C prevents the initial rise in pH that tends to occur at the initiation of a culture and increases the buffering capacity of the medium. Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific for different cell lines.

Composition**

| Ingredients | mg/Litre |
|---|----------|
| INORGANIC SALTS | |
| Ammonium metavanadate | 0.00058 |
| Ammonium molybdate tetrahydrate | 0.00618 |
| Calcium chloride dihydrate | 154.500 |
| Copper sulphate pentahydrate | 0.0013 |
| Disodium hydrogen phosphate | 71.020 |
| Ferric nitrate ninahydrate | 0.050 |
| Ferrous sulphate heptahydrate | 0.417 |
| Magnesium chloride hexahydrate | 61.200 |
| Magnesium sulphate anhydrous | 48.840 |
| Manganese sulphate | 0.000151 |
| Nickel chloride | 0.00012 |
| Potassium chloride | 311.800 |
| Sodium bicarbonate | 1200.000 |
| Sodium chloride | 6996.000 |
| Sodium dihydrogen phosphate monohydrate | 54.300 |
| Sodium metasilicate nonahydrate | 0.0142 |
| Sodium selenite | 0.00519 |
| Stannous chloride dihydrate | 0.00011 |
| Zinc sulphate heptahydrate | 0.432 |
| AMINO ACIDS | |
| Glycine | 18.750 |
| L-Alanine | 4.450 |
| L-Alanyl-L-Glutamine | 542.500 |
| L-Arginine hydrochloride | 147.500 |

| | |
|---------------------------------------|--------|
| L-Asparagine monohydrate | 7.500 |
| L-Aspartic acid | 6.650 |
| L-Cysteine dihydrochloride | 17.560 |
| L-Cystine hydrochloride monohydrate | 31.290 |
| L-Glutamic acid | 7.350 |
| L-Histidine hydrochloride monohydrate | 31.480 |
| L-Isoleucine | 54.470 |
| L-Leucine | 59.050 |
| L-Lysine hydrochloride | 91.250 |
| L-Methionine | 17.240 |
| L-Phenylalanine | 35.480 |
| L-Proline | 17.250 |
| L-Serine | 26.250 |
| L-Threonine | 53.450 |
| L-Tryptophan | 9.020 |
| L-Tyrosine disodium salt | 48.100 |
| L-Valine | 52.850 |

VITAMINS

| | |
|--------------------------|--------|
| Choline chloride | 8.980 |
| D-Biotin | 0.0035 |
| D-Ca-Pantothenate | 2.240 |
| Folic acid | 2.660 |
| Niacinamide | 2.020 |
| Pyridoxal hydrochloride | 2.000 |
| Pyridoxine hydrochloride | 0.031 |
| Riboflavin | 0.219 |
| Thiamine hydrochloride | 2.170 |
| Vitamin B12 | 0.680 |
| myo-Inositol | 12.600 |

OTHERS

| | |
|--------------------------|-------------|
| D-Glucose | 3151.000 |
| DL-Thioctic acid | 0.105 |
| Growth Supplement mix | Proprietary |
| HEPES buffer | 3574.500 |
| Hypoxanthine | 2.400 |
| Linoleic acid | 0.042 |
| Phenol red sodium salt | 8.630 |
| Putrescine hydrochloride | 0.081 |
| Sodium pyruvate | 110.000 |
| Thymidine | 0.365 |

Methodology

Recommendations for use with MicSera Media:

1. MicSera media have been optimized at 2.5% serum concentration for a broad range of cell culture applications. Recommended concentrations of serum using MicSera media ranges from 1-5%. However the concentration of serum used may need to be adjusted for specific cell types or applications to achieve optimal results. Titration of FBS concentration is recommended to determine maximum serum reduction.
2. In case of antibiotics being used to control contamination, it is recommended to reduce the amount of antibiotics in proportion to the amount of serum reduced.

Material required but not provided

Fetal Bovine Serum (BA3112/BA12432)

Quality control

Appearance

Red colored, clear solution.

pH

7.00 -7.60

Osmolality in mOsm/Kg H₂O

300.00 -340.00

Sterility

No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Cultural Response

The growth promotion capacity of the medium is assessed qualitatively by analyzing the cells for the morphology and quantitatively by estimating the cell counts and comparing it with a control medium through minimum three subcultures.

Endotoxin Content

NMT 5EU/ml

Storage and Shelf Life

- Store at 2-8°C away from bright light.
- Shelf life is 12 months.
- Use before expiry date given on the product label.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
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