

Technical Information

Glasgow's Minimum Essential Medium (GMEM)

With NEAA and Sodium bicarbonate Without L-Glutamine, Sodium phosphate and Tryptose phosphate broth
1X Liquid Cell Culture Medium

Product Code:AL1058

Application:—Glasgow's Minimum Essential Medium (GMEM) is a modification of Basal Medium Eagle (BME). Ian Macpherson and Michael Stoker added tryptose phosphate broth and twice the concentration of amino acids and vitamins to BME. The medium was originally used to culture BHK-21 clone 13 cells, used for investigating the genetic factors affecting cell competence.

AL1058 is Glasgow's Minimum Essential Medium with sodium bicarbonate and non-essential amino acids. It does not contain L-glutamine, sodium phosphate and tryptose phosphate broth. 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 | |
| Calcium chloride dihydrate | 265.000 |
| Ferric nitrate nonahydrate | 0.100 |
| Magnesium sulphate anhydrous | 97.720 |
| Potassium chloride | 400.000 |
| Sodium bicarbonate | 2750.000 |
| Sodium chloride | 6400.000 |
| AMINO ACIDS | |
| Glycine | 7.500 |
| L-Alanine | 8.900 |
| L-Arginine hydrochloride | 42.000 |
| L-Asparagine monohydrate | 15.000 |
| L-Aspartic acid | 13.000 |
| L-Cystine | 24.000 |
| L-Glutamic acid | 14.700 |
| L-Histidine hydrochloride | 21.000 |
| L-Isoleucine | 52.400 |
| L-Leucine | 52.400 |
| L-Lysine hydrochloride | 73.100 |
| L-Methionine | 15.000 |
| L-Phenylalanine | 33.000 |
| L-Proline | 11.500 |
| L-Serine | 10.500 |
| L-Threonine | 47.600 |
| L-Tryptophan | 8.000 |
| L-Tyrosine disodium salt | 52.000 |
| L-Valine | 46.800 |

VITAMINS

| | |
|-------------------------|-------|
| Choline chloride | 2.000 |
| D-Ca-Pantothenate | 2.000 |
| Folic acid | 2.000 |
| Nicotinamide | 2.000 |
| Pyridoxal hydrochloride | 2.000 |
| Riboflavin | 0.200 |
| Thiamine hydrochloride | 2.000 |
| i-Inositol | 3.600 |

OTHERS

| | |
|------------------------|----------|
| D-Glucose | 4500.000 |
| Phenol red sodium salt | 15.000 |

Methodology

1. Add 10ml of 200mM L-glutamine (TCL1012) for 1 litre of medium.

Material required but not provided

L-Glutamine solution 200mM (TCL1012)

Quality control

Appearance

Red colored, clear solution.

pH

7.00 -7.60

Osmolality in mOsm/Kg H₂O

275.00 -315.00

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 sub cultures.

Endotoxin Content

NMT 5EU/ml

Storage and Shelf Life

Store at 2-8°C away from bright light. Shelf life is 18 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.
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