Dulbecco's Modified Eagle Medium/ Nutrient Mixture F-12 Ham (DMEM/ F12, 1:1 Mixture)

With HEPES buffer, L-Glutamine, Sodium bicarbonate and Trace elements

1X Liquid Cell Culture Medium

Product Code: AL139A

**Product Description:**

Dulbecco’s Modified Eagle Medium / Nutrient Mixture F12 Ham (DMEM/F12, 1:1 mixture) was originally formulated for rat neuroblastoma cells and MDCK cells. The mixture is extremely nutritious and supports growth of a wide variety of cells including certain epithelial, endothelial and granulosa cells.

AL139A is DMEM/Nutrient Mixture F-12 Ham with L-glutamine, sodium bicarbonate, 15mM HEPES buffer and trace elements. 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:**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium metavanadate</td>
<td>0.00058</td>
</tr>
<tr>
<td>Ammonium molybdate tetrahydrate</td>
<td>0.00618</td>
</tr>
<tr>
<td>Calcium chloride dihydrate</td>
<td>154.500</td>
</tr>
<tr>
<td>Copper sulphate pentahydrate</td>
<td>0.0013</td>
</tr>
<tr>
<td>Disodium hydrogen phosphate</td>
<td>71.020</td>
</tr>
<tr>
<td>Ferric nitrate ninhydrinate</td>
<td>0.050</td>
</tr>
<tr>
<td>Ferrous sulphate heptahydrate</td>
<td>0.417</td>
</tr>
<tr>
<td>Magnesium chloride hexahydrate</td>
<td>61.200</td>
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<tr>
<td>Magnesium sulphate anhydrous</td>
<td>48.840</td>
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<tr>
<td>Manganese sulphate</td>
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</tr>
<tr>
<td>Nickel chloride</td>
<td>0.00012</td>
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<tr>
<td>Potassium chloride</td>
<td>311.800</td>
</tr>
<tr>
<td>Sodium bicarbonate</td>
<td>1200.000</td>
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<tr>
<td>Sodium chloride</td>
<td>6996.000</td>
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<tr>
<td>Sodium dihydrogen phosphate</td>
<td>54.300</td>
</tr>
<tr>
<td>Sodium metasilicate nonahydrate</td>
<td>0.0142</td>
</tr>
<tr>
<td>Sodium selenite</td>
<td>0.00519</td>
</tr>
<tr>
<td>Stannous chloride heptahydrate</td>
<td>0.00011</td>
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<tr>
<td>Zinc sulphate heptahydrate</td>
<td>0.432</td>
</tr>
</tbody>
</table>

**AMINO ACIDS**

- Glycine: 18.750
- L-Alanine: 4.450
- L-Arginine hydrochloride: 147.500
- L-Asparagine monohydrate: 7.500
- L-Aspartic acid: 6.650
- L-Cysteine hydrochloride monohydrate: 17.560
- L-Cystine dihydrochloride: 31.290
- L-Glutamic acid: 7.350
- L-Glutamine: 365.000
- 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
- HEPES buffer: 3574.500
- Hypoxanthine sodium salt: 2.400
- Linoleic acid: 0.042
Phenol red sodium salt 8.630
Putrescine hydrochloride 0.081
Sodium pyruvate 110.000
Thymidine 0.365

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.

Endotoxin Content
NMT 1 EU/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.

Revision : 1 / 2015

Disclaimer :
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Email: info@himedialabs.com