CORNING

# Minimum Essential Medium (MEM)

## Formulation

| Cat. No. | 50-004 | 50-010 | 50-019 | 50-011 | 51-010 | 90-009 | 10-009 | 10-010 | 15-010 | 15-015 | 17-305 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Description** | **Powder** | **Powder** | **Powder** | **Powder** | **Powder** | **Powder** | **Liquid, 1x** | **Liquid, 1x** | **Liquid, 1x** | **Liquid, 1x** | **Liquid, 1x** |
| **Units** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** |
| **Components** | | | | | | | | | | | |
| *Inorganic Salts* | | | | | | | | | | | |
| $CaCl_2$ (anhydrous) | 200.00 | 200.00 | 140.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | -- | 200.00 |
| $Fe(NO_3)_3 \cdot 9H_2O$ | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| KCl | 400.00 | 400.00 | 400.00 | 400.00 | 400.00 | 400.00 | 400.00 | 400.00 | 400.00 | 400.00 | 400.00 |
| $KH_2PO_4$ | -- | -- | 60.00 | -- | -- | -- | -- | -- | -- | -- | -- |
| $MgSO_4$ (anhydrous) | 97.67 | 97.70 | 97.67 | 97.70 | 97.00 | 97.70 | 97.70 | 97.70 | 97.70 | -- | 97.70 |
| NaCl | 6400 | 6800 | 8000 | 6800 | 6800 | 6800 | 6800.00 | 6800.00 | 6800.00 | 6800.00 | 6800.00 |
| $NaH_2PO_4 \cdot H_2O$ | 124.00 | 140.00 | 47.88 | 140.00 | 140.00 | 140.00 | 140.00 | 140.00 | 140.00 | 1217.00 | 140.00 |
| Na succinate $\cdot 6H_2O$ | -- | -- | -- | -- | 100.00 | -- | -- | -- | -- | -- | -- |
| $NaHCO_3$ | -- | -- | -- | -- | -- | -- | 1500.00 | 2200.00 | 2200.00 | 2200.00 | 2200.00 |
| *Amino Acids* | | | | | | | | | | | |
| L-Alanine | -- | -- | | 8.90 | -- | -- | 8.90 | -- | -- | -- | -- |
| L-Arginine • HCl | 42.00 | 126.40 | 126.00 | 126.40 | 126.40 | 126.40 | 126.40 | 126.40 | 126.40 | 126.40 | 126.40 |
| L-Asparagine $\cdot H_2O$ | -- | -- | -- | 15.00 | -- | -- | 15.00 | -- | -- | -- | -- |
| L-Aspartic acid | -- | -- | -- | 13.30 | -- | -- | 13.30 | -- | -- | -- | -- |
| L-Cystine • 2HCl | 31.28 | 31.20 | 31.39 | 31.20 | 31.10 | 31.20 | 31.20 | 31.20 | 31.20 | 31.20 | 31.20 |
| L-Glutamic acid | -- | -- | -- | 14.70 | -- | -- | 14.70 | -- | -- | -- | -- |
| L-Glutamine | 292.00 | 292.00 | 292.00 | 292.00 | -- | -- | 292.00 | 292.00 | -- | -- | -- |
| Glycine | -- | -- | -- | 7.50 | -- | -- | 7.50 | -- | -- | -- | -- |
| L-Histidine $\cdot$ HCl $\cdot H_2O$ | 21.00 | 41.90 | 42.00 | 41.90 | 41.90 | 41.90 | 41.90 | 41.90 | 41.90 | 41.90 | 41.90 |
| L-Isoleucine | 52.40 | 52.50 | 52.00 | 52.50 | 52.50 | 52.50 | 52.50 | 52.50 | 52.50 | 52.50 | 52.50 |
| L-Leucine | 52.40 | 52.50 | 52.00 | 52.50 | 52.50 | 52.50 | 52.50 | 52.50 | 52.50 | 52.50 | 52.50 |
| L-Lysine • HCl | 73.10 | 72.50 | 72.50 | 72.50 | 73.06 | 72.50 | 72.50 | 72.50 | 72.50 | 72.50 | 72.50 |
| L-Methionine | 15.00 | 15.00 | 15.00 | 15.00 | 14.90 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| L-Phenylalanine | 33.00 | 32.50 | 32.00 | 32.50 | 33.02 | 32.50 | 32.50 | 32.50 | 32.50 | 32.50 | 32.50 |
| L-Proline | -- | -- | -- | 11.50 | -- | -- | 11.50 | -- | -- | -- | -- |
| L-Serine | -- | -- | -- | 10.50 | -- | -- | 10.50 | -- | -- | -- | -- |
| L-Threonine | 47.60 | 47.60 | 48.00 | 47.60 | 47.64 | 47.60 | 47.60 | 47.60 | 47.60 | 47.60 | 47.60 |
| L-Tryptophan | 8.00 | 10.00 | 10.00 | 10.00 | 10.20 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| L-Tyrosine $\cdot$ 2Na $\cdot 2H_2O$ | 52.19 | 51.90 | 51.90 | 51.90 | -- | 51.90 | 51.90 | 51.90 | 51.90 | 51.90 | 51.90 |
| L-Tyrosine, free base | -- | -- | -- | -- | 36.00 | -- | -- | -- | -- | -- | -- |
| L-Valine | 46.80 | 46.80 | 46.00 | 46.80 | 46.90 | 46.80 | 46.80 | 46.80 | 46.80 | 46.80 | 46.80 |
| *Vitamins* | | | | | | | | | | | |
| Choline bitartrate | -- | -- | -- | -- | 1.80 | -- | -- | -- | -- | -- | -- |
| D-Calcium pantothenate | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Choline chloride | 2.00 | 1.00 | 1.00 | 1.00 | -- | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Folic acid | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| *i*-Inositol | 3.60 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Nicotinamide | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Pyridoxine • HCl | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Riboflavin | 0.20 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| Thiamine • HCl | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| *Other* | | | | | | | | | | | |
| D-Glucose | 4500 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000.00 | 1000.00 | 1000.00 | 1000.00 |
| Phenol red • Na | 15.00 | 10.00 | 10.00 | 10.00 | 6.00 | -- | 10.00 | 10.00 | 10.00 | 10.00 | -- |
| Succinic acid | -- | -- | -- | -- | 75.00 | -- | -- | -- | -- | -- | -- |
| Sodium Pyruvate | -- | -- | -- | -- | -- | -- | 110.00 | -- | -- | -- | -- |

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| Cat. No. | 50-004 | 50-010 | 50-019 | 50-011 | 51-010 | 90-009 | 10-009 | 10-010 | 15-010 | 15-015 | 17-305 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Description | Powder | Powder | Powder | Powder | Powder | Powder | Liquid, 1x | Liquid, 1x | Liquid, 1x | Liquid, 1x | Liquid, 1x |
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| *Add* | | | | | | | | | | | |
| $NaHCO_3$ | | | | | | | | | | | |
| Powder (g/L) | 2.75 | 2.20 | -- | 2.20 | 2.20 | 2.20 | -- | -- | -- | -- | -- |
| 7.5% Solution (mL/L) | 33.40 | 26.70 | -- | 26.70 | 26.70 | 26.70 | -- | -- | -- | -- | -- |
| L-Glutamine | | | | | | | | | | | |
| Powder (mg/L) | -- | -- | -- | -- | 292.00 | 292.00 | -- | -- | -- | -- | -- |
| 200 mM Solution (mL/L) | -- | -- | -- | -- | 10.00 | 10.00 | -- | -- | -- | -- | -- |

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