

# HyClone classical media

## Formulation

### Minimum Essential Medium Liquid media

| Component description                       | Product code<br>SH30024, SH30310 |          | Product code<br>SH30235 suspension |          | Product code<br>SH30244 |          |
|---------------------------------------------|----------------------------------|----------|------------------------------------|----------|-------------------------|----------|
|                                             | mg/L                             | mmol/L   | mg/L                               | mmol/L   | mg/L                    | mmol/L   |
| <b>Inorganic salts</b>                      |                                  |          |                                    |          |                         |          |
| Calcium chloride (anhydrous)                | 200                              | 1.8021   | 0                                  | 0        | 200                     | 1.8021   |
| Potassium chloride                          | 400                              | 5.3655   | 400                                | 5.3655   | 400                     | 5.3655   |
| Magnesium sulfate (anhydrous)               | 97.67                            | 0.8112   | 0                                  | 0        | 97.67                   | 0.8112   |
| Magnesium chloride-6H <sub>2</sub> O        | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| Magnesium sulfate-7H <sub>2</sub> O         | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| Sodium chloride                             | 6800                             | 116.3587 | 6800                               | 116.3587 | 6800                    | 116.3587 |
| Sodium phosphate monobasic H <sub>2</sub> O | 140                              | 1.0146   | 1400                               | 10.0146  | 140                     | 1.0146   |
| Ferric chloride-6H <sub>2</sub> O           | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| Zinc sulfate-7H <sub>2</sub> O              | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| Linoleic acid                               | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| <b>Amino acids</b>                          |                                  |          |                                    |          |                         |          |
| L-Alanine                                   | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| L-Arginine-HCl                              | 126.98                           | 0.6028   | 126.98                             | 0.6028   | 126.98                  | 0.6028   |
| L-Asparagine-H <sub>2</sub> O               | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| L-Aspartic acid                             | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| L-Cysteine-HCl-H <sub>2</sub> O             | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| L-Cystine-2HCl                              | 31.28                            | 0.0999   | 31.28                              | 0.0999   | 31.28                   | 0.0999   |
| L-Glutamic acid                             | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| L-Glutamine                                 | 292                              | 1.9979   | 292                                | 1.9979   | 0                       | 0        |
| Glycine                                     | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| L-Histidine-HCl-H <sub>2</sub> O            | 41.88                            | 0.1998   | 41.88                              | 0.1998   | 41.88                   | 0.1998   |
| L-Isoleucine                                | 52                               | 0.3964   | 52                                 | 0.3964   | 52                      | 0.3964   |
| L-Leucine                                   | 52                               | 0.3964   | 52                                 | 0.3964   | 52                      | 0.3964   |
| L-Lysine-HCl                                | 72.47                            | 0.3968   | 72.47                              | 0.3968   | 72.47                   | 0.3968   |
| L-Methionine                                | 15                               | 0.1005   | 15                                 | 0.1005   | 15                      | 0.1005   |
| L-Phenylalanine                             | 32                               | 0.1937   | 32                                 | 0.1937   | 32                      | 0.1937   |
| L-Proline                                   | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| L-Serine                                    | 0                                | 0        | 0                                  | 0        | 0                       | 0        |
| L-Threonine                                 | 48                               | 0.403    | 48                                 | 0.403    | 48                      | 0.403    |
| L-Tryptophan                                | 10                               | 0.049    | 10                                 | 0.049    | 10                      | 0.049    |
| L-Tyrosine-2Na-2H <sub>2</sub> O            | 51.9                             | 0.1987   | 51.9                               | 0.1987   | 51.9                    | 0.1987   |
| L-Valine                                    | 46                               | 0.3927   | 46                                 | 0.3927   | 46                      | 0.3927   |

# Minimum Essential Medium

## Liquid media

| Component description              | Product code<br>SH30024, SH30310 |         | Product code<br>SH30235 suspension |         | Product code<br>SH30244 |         |
|------------------------------------|----------------------------------|---------|------------------------------------|---------|-------------------------|---------|
|                                    | mg/L                             | mmol/L  | mg/L                               | mmol/L  | mg/L                    | mmol/L  |
| <b>Vitamins</b>                    |                                  |         |                                    |         |                         |         |
| L-Ascorbic acid                    | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| D-Biotin                           | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| Calcium D-pantothenate             | 1                                | 0.0021  | 1                                  | 0.0021  | 1                       | 0.0021  |
| Choline chloride                   | 1                                | 0.0072  | 1                                  | 0.0072  | 1                       | 0.0072  |
| Folic acid                         | 1                                | 0.0023  | 1                                  | 0.0023  | 1                       | 0.0023  |
| Myo-inositol                       | 2                                | 0.0111  | 2                                  | 0.0111  | 2                       | 0.0111  |
| Niacinamide                        | 1                                | 0.0082  | 1                                  | 0.0082  | 1                       | 0.0082  |
| Pyridoxal hydrochloride            | 1                                | 0.0049  | 1                                  | 0.0049  | 1                       | 0.0049  |
| Pyridoxine-HCl                     | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| Riboflavin                         | 0.1                              | 0.0003  | 0.1                                | 0.0003  | 0.1                     | 0.0003  |
| Thiamine-HCl                       | 1                                | 0.003   | 1                                  | 0.003   | 1                       | 0.003   |
| Vitamin B12                        | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| Putrescine-2HCl                    | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| <b>Other</b>                       |                                  |         |                                    |         |                         |         |
| Adenosine                          | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| Cytidine                           | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| D-Glucose (anhydrous)              | 1000                             | 5.5506  | 1000                               | 5.5506  | 1000                    | 5.5506  |
| Guanosine                          | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| DL- $\alpha$ -Lipoic acid          | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| Phenol red-Na                      | 11                               | 0.0292  | 11                                 | 0.0292  | 11                      | 0.0292  |
| Sodium pyruvate                    | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| Thymidine                          | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| 2'-Deoxyadenosine-H <sub>2</sub> O | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| 2'-Deoxycytidine-HCl               | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| 2'-Deoxyguanosine                  | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| Uridine                            | 0                                | 0       | 0                                  | 0       | 0                       | 0       |
| Sodium bicarbonate                 | 2200                             | 26.1874 | 2200                               | 26.1874 | 2200                    | 26.1874 |

# Minimum Essential Medium

## Liquid media

| Component description                       | Product code<br>SH30318 |          | Product code<br>SH30600 |          | Product code<br>SH30601 |          |
|---------------------------------------------|-------------------------|----------|-------------------------|----------|-------------------------|----------|
|                                             | mg/L                    | mmol/L   | mg/L                    | mmol/L   | mg/L                    | mmol/L   |
| <b>Inorganic salts</b>                      |                         |          |                         |          |                         |          |
| Calcium chloride (anhydrous)                | 200                     | 1.8021   | 200                     | 1.8021   | 200                     | 1.8021   |
| Potassium chloride                          | 400                     | 5.3655   | 400                     | 5.3655   | 400                     | 5.3655   |
| Magnesium sulfate (anhydrous)               | 97.67                   | 0.8112   | 0                       | 0        | 0                       | 0        |
| Magnesium chloride-6H <sub>2</sub> O        | 0                       | 0        | 183                     | 0.9001   | 183                     | 0.9001   |
| Magnesium sulfate-7H <sub>2</sub> O         | 0                       | 0        | 25                      | 0.1014   | 25                      | 0.1014   |
| Sodium chloride                             | 6800                    | 116.3587 | 6800                    | 116.3587 | 6800                    | 116.3587 |
| Sodium phosphate monobasic H <sub>2</sub> O | 140                     | 1.0146   | 150                     | 1.087    | 150                     | 1.087    |
| Ferric chloride-6H <sub>2</sub> O           | 0                       | 0        | 0.54                    | 0.002    | 0.54                    | 0.002    |
| Zinc sulfate-7H <sub>2</sub> O              | 0                       | 0        | 0.14                    | 0.0005   | 0.14                    | 0.0005   |
| Linoleic acid                               | 0                       | 0        | 0.09                    | 0.0003   | 0.09                    | 0.0003   |
| <b>Amino acids</b>                          |                         |          |                         |          |                         |          |
| L-Alanine                                   | 0                       | 0        | 0                       | 0        | 0                       | 0        |
| L-Arginine-HCl                              | 126.98                  | 0.6028   | 127                     | 0.6029   | 127                     | 0.6029   |
| L-Asparagine-H <sub>2</sub> O               | 0                       | 0        | 60                      | 0.3997   | 60                      | 0.3997   |
| L-Aspartic acid                             | 0                       | 0        | 0                       | 0        | 0                       | 0        |
| L-Cysteine-HCl-H <sub>2</sub> O             | 0                       | 0        | 0                       | 0        | 0                       | 0        |
| L-Cystine-2HCl                              | 31.28                   | 0.0999   | 31.28                   | 0.0999   | 31.28                   | 0.0999   |
| L-Glutamic acid                             | 0                       | 0        | 0                       | 0        | 0                       | 0        |
| L-Glutamine                                 | 0                       | 0        | 292                     | 1.9979   | 292                     | 1.9979   |
| Glycine                                     | 0                       | 0        | 0                       | 0        | 0                       | 0        |
| L-Histidine-HCl-H <sub>2</sub> O            | 41.88                   | 0.1998   | 42                      | 0.2004   | 42                      | 0.2004   |
| L-Isoleucine                                | 52                      | 0.3964   | 52                      | 0.3964   | 52                      | 0.3964   |
| L-Leucine                                   | 52                      | 0.3964   | 131.2                   | 1.0002   | 131.2                   | 1.0002   |
| L-Lysine-HCl                                | 72.47                   | 0.3968   | 72.6                    | 0.3975   | 72.6                    | 0.3975   |
| L-Methionine                                | 15                      | 0.1005   | 15                      | 0.1005   | 15                      | 0.1005   |
| L-Phenylalanine                             | 32                      | 0.1937   | 32                      | 0.1937   | 32                      | 0.1937   |
| L-Proline                                   | 0                       | 0        | 0                       | 0        | 0                       | 0        |
| L-Serine                                    | 0                       | 0        | 42                      | 0.3997   | 42                      | 0.3997   |
| L-Threonine                                 | 48                      | 0.403    | 48                      | 0.403    | 48                      | 0.403    |
| L-Tryptophan                                | 10                      | 0.049    | 10                      | 0.049    | 10                      | 0.049    |
| L-Tyrosine-2Na-2H <sub>2</sub> O            | 51.9                    | 0.1987   | 51.9                    | 0.1987   | 51.9                    | 0.1987   |
| L-Valine                                    | 46                      | 0.3927   | 46                      | 0.3927   | 46                      | 0.3927   |
| <b>Vitamins</b>                             |                         |          |                         |          |                         |          |
| L-Ascorbic acid                             | 0                       | 0        | 0                       | 0        | 0                       | 0        |
| D-Biotin                                    | 0                       | 0        | 0.1                     | 0.0004   | 0.1                     | 0.0004   |
| Calcium D-pantothenate                      | 1                       | 0.0021   | 1                       | 0.0021   | 1                       | 0.0021   |
| Choline chloride                            | 1                       | 0.0072   | 56                      | 0.4011   | 56                      | 0.4011   |
| Folic acid                                  | 1                       | 0.0023   | 2.2                     | 0.0158   | 2.2                     | 0.0158   |
| Myo-inositol                                | 2                       | 0.0111   | 36                      | 0.2578   | 36                      | 0.2578   |
| Niacinamide                                 | 1                       | 0.0082   | 1                       | 0.0082   | 1                       | 0.0082   |
| Pyridoxal hydrochloride                     | 1                       | 0.0049   | 0                       | 0        | 0                       | 0        |
| Pyridoxine-HCl                              | 0                       | 0        | 1                       | 0.0048   | 1                       | 0.0048   |
| Riboflavin                                  | 0.1                     | 0.0003   | 0.1                     | 0.0003   | 0.1                     | 0.0003   |
| Thiamine-HCl                                | 1                       | 0.003    | 1                       | 0.003    | 1                       | 0.003    |
| Vitamin B12                                 | 0                       | 0        | 1.36                    | 0.001    | 1.36                    | 0.001    |
| Putrescine-2HCl                             | 0                       | 0        | 0.16                    | 0.001    | 0.16                    | 0.001    |

# Minimum Essential Medium

## Liquid media

| Component description              | Product code<br>SH30318 |         | Product code<br>SH30600 |         | Product code<br>SH30601 |         |
|------------------------------------|-------------------------|---------|-------------------------|---------|-------------------------|---------|
|                                    | mg/L                    | mmol/L  | mg/L                    | mmol/L  | mg/L                    | mmol/L  |
| <b>Other</b>                       |                         |         |                         |         |                         |         |
| Adenosine                          | 0                       | 0       | 0                       | 0       | 0                       | 0       |
| Cytidine                           | 0                       | 0       | 0                       | 0       | 0                       | 0       |
| D-Glucose (anhydrous)              | 1000                    | 5.5506  | 2000                    | 16.7898 | 2000                    | 16.7898 |
| Guanosine                          | 0                       | 0       | 0                       | 0       | 0                       | 0       |
| DL- $\alpha$ -Lipoic acid          | 0                       | 0       | 0.2                     | 0.001   | 0.2                     | 0.001   |
| Phenol red-Na                      | 11                      | 0.0292  | 0                       | 0       | 10                      | 0.0266  |
| Sodium pyruvate                    | 0                       | 0       | 110                     | 0.9996  | 110                     | 0.9996  |
| Thymidine                          | 0                       | 0       | 0                       | 0       | 0                       | 0       |
| 2'-Deoxyadenosine-H <sub>2</sub> O | 0                       | 0       | 0                       | 0       | 0                       | 0       |
| 2'-Deoxycytidine-HCl               | 0                       | 0       | 0                       | 0       | 0                       | 0       |
| 2'-Deoxyguanosine                  | 0                       | 0       | 0                       | 0       | 0                       | 0       |
| Uridine                            | 0                       | 0       | 0                       | 0       | 0                       | 0       |
| Sodium bicarbonate                 | 2200                    | 26.1874 | 2200                    | 26.1874 | 2200                    | 26.1874 |

# Minimum Essential Medium

## Liquid media

| Component description                       | Product code<br>SH30265 (Alpha mod.) |          | Product code<br>SH30568 (Alpha mod.) |          | Product code<br>SH30603 suspension |          |
|---------------------------------------------|--------------------------------------|----------|--------------------------------------|----------|------------------------------------|----------|
|                                             | mg/L                                 | mmol/L   | mg/L                                 | mmol/L   | mg/L                               | mmol/L   |
| <b>Inorganic salts</b>                      |                                      |          |                                      |          |                                    |          |
| Calcium chloride (anhydrous)                | 200                                  | 1.8021   | 265                                  | 1.8026   | 0                                  | 0        |
| Potassium chloride                          | 400                                  | 5.3655   | 400                                  | 5.3655   | 400                                | 5.3655   |
| Magnesium sulfate (anhydrous)               | 97.67                                | 0.8112   | 0.00                                 | 0.00     | 0.00                               | 0.00     |
| Magnesium chloride-6H <sub>2</sub> O        | 0                                    | 0        | 0                                    | 0        | 0                                  | 0        |
| Magnesium sulfate-7H <sub>2</sub> O         | 0                                    | 0        | 200                                  | 0.8114   | 0                                  | 0        |
| Sodium chloride                             | 6800                                 | 116.3587 | 6800                                 | 116.3587 | 6800                               | 116.3587 |
| Sodium phosphate monobasic H <sub>2</sub> O | 140                                  | 1.0146   | 140                                  | 1.0146   | 140                                | 1.0146   |
| Ferric chloride-6H <sub>2</sub> O           | 0                                    | 0        | 0                                    | 0        | 0                                  | 0        |
| Zinc sulfate-7H <sub>2</sub> O              | 0                                    | 0        | 0                                    | 0        | 0                                  | 0        |
| Linoleic acid                               | 0                                    | 0        | 0                                    | 0        | 0                                  | 0        |
| <b>Amino acids</b>                          |                                      |          |                                      |          |                                    |          |
| L-Alanine                                   | 25                                   | 0.2806   | 25                                   | 0.2806   | 0                                  | 0        |
| L-Arginine-HCl                              | 126.98                               | 0.6028   | 126.4                                | 0.60     | 126.98                             | 0.6028   |
| L-Asparagine-H <sub>2</sub> O               | 50                                   | 0.333    | 50                                   | 0.333    | 0                                  | 0        |
| L-Aspartic acid                             | 30                                   | 0.2254   | 30                                   | 0.2254   | 0                                  | 0        |
| L-Cysteine-HCl-H <sub>2</sub> O             | 100                                  | 0.5693   | 100                                  | 0.5693   | 0                                  | 0        |
| L-Cystine-2HCl                              | 31.28                                | 0.0999   | 24                                   | 0.999    | 31.28                              | 0.0999   |
| L-Glutamic acid                             | 75                                   | 0.5098   | 75                                   | 0.5098   | 0                                  | 0        |
| L-Glutamine                                 | 292                                  | 1.9979   | 0                                    | 0        | 0                                  | 0        |
| Glycine                                     | 50                                   | 0.666    | 50                                   | 0.666    | 0                                  | 0        |
| L-Histidine-HCl-H <sub>2</sub> O            | 41.88                                | 0.1998   | 42                                   | 0.2004   | 41.88                              | 0.1998   |
| L-Isoleucine                                | 52.5                                 | 0.4002   | 52.4                                 | 0.3995   | 52                                 | 0.3964   |
| L-Leucine                                   | 52.4                                 | 0.3995   | 52.4                                 | 0.3995   | 52                                 | 0.3964   |
| L-Lysine-HCl                                | 72.47                                | 0.3968   | 73                                   | 0.3997   | 72.47                              | 0.3968   |
| L-Methionine                                | 15                                   | 0.1005   | 15                                   | 0.1005   | 15                                 | 0.1005   |
| L-Phenylalanine                             | 32                                   | 0.1937   | 33                                   | 0.1998   | 32                                 | 0.1937   |
| L-Proline                                   | 40                                   | 0.3474   | 40                                   | 0.3474   | 0                                  | 0        |
| L-Serine                                    | 25                                   | 0.2379   | 25                                   | 0.2379   | 25                                 | 0.2379   |
| L-Threonine                                 | 48                                   | 0.403    | 47.6                                 | 0.3996   | 48                                 | 0.403    |
| L-Tryptophan                                | 10                                   | 0.049    | 10.2                                 | 0.0499   | 10                                 | 0.049    |
| L-Tyrosine-2Na-2H <sub>2</sub> O            | 51.9                                 | 0.1987   | 36.2                                 | 0.1386   | 51.9                               | 0.1987   |
| L-Valine                                    | 46                                   | 0.3927   | 46.8                                 | 0.3995   | 46                                 | 0.3927   |
| <b>Vitamins</b>                             |                                      |          |                                      |          |                                    |          |
| L-Ascorbic acid                             | 50                                   | 0.2839   | 50                                   | 0.2839   | 0                                  | 0        |
| D-Biotin                                    | 0.1                                  | 0.0004   | 0.1                                  | 0.0004   | 0                                  | 0        |
| Calcium D-pantothenate                      | 1                                    | 0.0021   | 1                                    | 0.0021   | 1                                  | 0.0021   |
| Choline chloride                            | 1                                    | 0.0072   | 1                                    | 0.0072   | 1                                  | 0.0072   |
| Folic acid                                  | 1                                    | 0.0023   | 1                                    | 0.0023   | 1                                  | 0.0023   |
| Myo-inositol                                | 2                                    | 0.0111   | 2                                    | 0.0111   | 2                                  | 0.0111   |
| Niacinamide                                 | 1                                    | 0.0082   | 1                                    | 0.0082   | 1                                  | 0.0082   |
| Pyridoxal hydrochloride                     | 1                                    | 0.0049   | 0                                    | 0        | 1                                  | 0.0049   |
| Pyridoxine-HCl                              | 0                                    | 0        | 1                                    | 0.0049   | 0                                  | 0        |
| Riboflavin                                  | 0.1                                  | 0.0003   | 0.1                                  | 0.0003   | 0.1                                | 0.0003   |
| Thiamine-HCl                                | 1                                    | 0.003    | 1                                    | 0.003    | 1                                  | 0.003    |
| Vitamin B12                                 | 1.36                                 | 0.001    | 1.33                                 | 0.001    | 0                                  | 0        |
| Putrescine-2HCl                             | 0                                    | 0        | 0                                    | 0        | 0                                  | 0        |

# Minimum Essential Medium

## Liquid media

| Component description              | Product code<br>SH30265 (Alpha mod.) |         | Product code<br>SH30568 (Alpha mod.) |         | Product code<br>SH30603 suspension |         |
|------------------------------------|--------------------------------------|---------|--------------------------------------|---------|------------------------------------|---------|
|                                    | mg/L                                 | mmol/L  | mg/L                                 | mmol/L  | mg/L                               | mmol/L  |
| <b>Other</b>                       |                                      |         |                                      |         |                                    |         |
| Adenosine                          | 10                                   | 0.0374  | 0                                    | 0       | 0                                  | 0       |
| Cytidine                           | 10                                   | 0.0411  | 0                                    | 0       | 0                                  | 0       |
| D-Glucose (anhydrous)              | 1000                                 | 5.5506  | 1000                                 | 5.5506  | 1000                               | 5.5506  |
| Guanosine                          | 10                                   | 0.0353  | 0                                    | 0       | 0                                  | 0       |
| DL- $\alpha$ -Lipoic acid          | 0.2                                  | 0.001   | 0.2                                  | 0.001   | 0                                  | 0       |
| Phenol red-Na                      | 11                                   | 0.0292  | 10                                   | 0.0266  | 11                                 | 0.0292  |
| Sodium pyruvate                    | 110                                  | 0.9996  | 110                                  | 0.9996  | 0                                  | 0       |
| Thymidine                          | 10                                   | 0.0413  | 0                                    | 0       | 0                                  | 0       |
| 2'-Deoxyadenosine-H <sub>2</sub> O | 10                                   | 0.0371  | 0                                    | 0       | 0                                  | 0       |
| 2'-Deoxycytidine-HCl               | 11                                   | 0.0417  | 0                                    | 0       | 0                                  | 0       |
| 2'-Deoxyguanosine                  | 10                                   | 0.0351  | 0                                    | 0       | 0                                  | 0       |
| Uridine                            | 10                                   | 0.041   | 0                                    | 0       | 0                                  | 0       |
| Sodium bicarbonate                 | 2200                                 | 26.1874 | 2200                                 | 26.1874 | 2200                               | 26.1874 |

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CY12683-03Jul20-DF

