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|----------------|-----------------------------|--------------|--------------------|
| Document ID:   | TDS-MCP-032-500ML           | Version:     | 005                |
| Date of Issue: | 10-JAN-2021                 | Approved by: | Dr. Iman Kamranfar |
| Review Date:   | 10-JAN-2023                 | Signature:   |                    |
| Title:         | <b>TECHNICAL DATA SHEET</b> |              |                    |

**SPECIMEN**

|   |  |
|---|--|
| <b>Product Name</b>                         | Medium 199   |
| <b>Filtration/Treatment</b>                 | With Earle's Salts and L-Glutamine.<br>Without Phenol Red. |
| <b>Product Codes</b>                        | MCP-032-50L  |
| <b>Shelf Life</b>                           | 4 years  |
| <b>Storage Temperature</b>                  | 2 to 8 °C  |
| <b>Shipping Temperature</b>                 | ambient  |
| <b>Substance</b>                            | <b>Concentration (mg/L)</b>                                |
| <b>Amino Acids</b>                          |  |
| Glycine                                     | 50.00  |
| L-Alanine                                   | 25.00  |
| L-Arginine, Hydrochloride                   | 70.00  |
| L-Aspartic Acid                             | 30.00  |
| L-Cysteine, Hydrochloride, Monohydrate      | 0.11   |
| L-Cystine, Dihydrochloride                  | 26.00  |
| L-Glutamic Acid                             | 75.00  |
| L-Glutamine                                 | 100.00   |
| L-Histidine, Hydrochloride, Monohydrate     | 21.88  |
| L-Hydroxyproline                            | 10.00  |
| L-Isoleucine                                | 40.00  |
| L-Leucine                                   | 60.00  |
| L-Lysine, Hydrochloride                     | 70.00  |
| L-Methionine                                | 15.00  |
| L-Phenylalanine                             | 25.00  |
| L-Proline                                   | 40.00  |
| L-Serine                                    | 25.00  |
| L-Threonine                                 | 30.00  |
| L-Tryptophan                                | 10.00  |
| L-Tyrosine, Disodium, Dihydrate             | 57.87  |
| L-Valine                                    | 25.00  |
| <b>Vitamins</b>                             |  |
| (+/-) a-Tocopherol Phosphate, Disodium Salt | 0.01   |
| Biotin                                      | 0.01   |
| Choline Chloride                            | 0.50   |
| D-Calcium Pantothenate                      | 0.01   |
| D-Ribose                                    | 0.50   |
| Ergocalciferol                              | 0.10   |
| Folic Acid                                  | 0.01   |
| L-Ascorbic Acid                             | 0.05   |
| Menadione Sodium Bisulfite                  | 0.02   |
| Myo-Inositol                                | 0.05   |
| Niacinamide                                 | 0.03   |
| Nicotinic Acid                              | 0.03   |
| para-Aminobenzoic Acid                      | 0.05   |
| Pyridoxine, Hydrochloride                   | 0.05   |
| Riboflavin                                  | 0.01   |
| Thiamine, Hydrochloride                     | 0.01   |
| Thymine                                     | 0.30   |

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|  |                                  |
|--|----------------------------------|
| Uracil                                   | 0.30                             |
| <b>Substance</b>                         | <b>Concentration (mg/L)</b>      |
| Vitamin A, Acetate                       | 0.14                             |
| <b>Other Components</b>                  |                                  |
| 2-Deoxy-D-Ribose                         | 0.50                             |
| Adenine Sulfate, Dihydrate               | 12.13                            |
| Adenosine 5'-Monophosphate, Monohydrate  | 0.20                             |
| Adenosine 5'-Triphosphate, Anhydrous     | 1.00                             |
| Cholesterol                              | 0.20                             |
| D-Glucose, Anhydrous                     | 1000.00                          |
| Glutathione, Reduced                     | 0.05                             |
| Guanine HCl                              | 0.30                             |
| Hypoxanthine, Sodium                     | 0.35                             |
| Polysorbate 80                           | 20.00                            |
| Sodium Acetate, Anhydrous                | 50.00                            |
| <b>Inorganic Salts</b>                   |                                  |
| Calcium Chloride, Anhydrous              | 200.00                           |
| Ferric Nitrate, Nonahydrate              | 0.72                             |
| Magnesium Sulfate, Anhydrous             | 97.70                            |
| Potassium Chloride                       | 400.00                           |
| Sodium Chloride                          | 6800.00                          |
| Sodium Phosphate, Monobasic, Monohydrate | 140.00                           |
| Xanthine, Monosodium Salt                | 0.34                             |
| <b>Specifications</b>                    |                                  |
| Appearance                               | Off-white to light-orange powder |
| Solubility                               | 9.46 g/L in ≤ 30 minutes         |
| Moisture Content                         | ≤ 2.0 %                          |
| Particle Size (100 mesh)                 | ≥ 90%                            |
| pH without NaHCO <sub>3</sub>            | Record                           |
| pH with NaHCO <sub>3</sub>               | Record                           |
| Osmolality without NaHCO <sub>3</sub>    | Record                           |
| Osmolality with NaHCO <sub>3</sub>       | Record                           |
| Endotoxin                                | ≤ 1.0 EU/ml                      |
| Mycoplasma                               | Not detected                     |
| Cell Culture – Cell Growth Promotion     | 3 Passages                       |
| Viability                                | ≥ 75%                            |

Note: Sodium Bicarbonate is not included in the powdered media (2200.00 mg/L).

**THIS PRODUCT IS FOR LABORATORY USE ONLY.**