

# DATA SHEET

Rev.ver: 01

## 1. Identification

|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Product name</b> | <b>Basal Medium Eagle (BME), w/ Earle's salts, L-Glutamine and 25mM HEPES buffer w/o Sodium bicarbonate</b> |
| <b>Catalog.no</b>   | <b>CCMP002</b>                                                                                              |

## 2. Description

**Basal Medium Eagle (BME)** is a classical basal formulation for mammalian cell culture originally described by Harry Eagle. This variant contains Earle's salts, L-glutamine and 25 mM HEPES buffer, and is supplied without sodium bicarbonate. The added HEPES provides a strong zwitterionic buffering capacity at physiological pH and improves pH stability for manipulations outside CO<sub>2</sub> incubators or when a bicarbonate buffer is not used.

BME is formulated to support a wide range of mammalian cell types. Compared with DMEM, BME contains fewer and lower concentrations of amino acids and vitamins (historically BME/MEM were the original "minimal" formulations). This version includes Earle's salts for use with CO<sub>2</sub> incubators and L-glutamine added at a standard cell culture concentration.

This formulation is provided without sodium bicarbonate so end users may choose to use HEPES buffering only or add bicarbonate later if required.

## 3. Product Specifications

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Appearance             | Off-white to Creamish white, homogenous powder. |
| Solubility             | Clear solution at 15.5 gms/L.                   |
| Storage and shelf life | Store at +2°C to +8°C protected from light.     |
| Shipping conditions    | Ambient                                         |

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### 4. Formulation

| Components                       | Concentration<br>mg/L |
|----------------------------------|-----------------------|
| <b>Amino Acids:</b>              |                       |
| L-Arginine HCl                   | 21.0                  |
| L-Cystine 2HCl                   | 15.650                |
| L-Glutamine                      | 292.00                |
| L-Histidine HCl                  | 10.500                |
| L-Isoleucine                     | 26.200                |
| L-Leucine                        | 26.200                |
| L-Lysine HCl                     | 36.480                |
| L-Methionine                     | 7.500                 |
| L-Phenylalanine                  | 16.500                |
| L-Threonine                      | 23.800                |
| L-Tryptophan                     | 4.000                 |
| L-Tyrosine 2Na 2H <sub>2</sub> O | 25.950                |
| L-Valine                         | 23.400                |
| <b>Vitamins:</b>                 |                       |
| Choline chloride                 | 1.000                 |
| D-Biotin                         | 1.000                 |
| D-Calcium                        | 1.000                 |

| Components                            | Concentration<br>mg/L |
|---------------------------------------|-----------------------|
| Pantothenate                          |                       |
| Folic Acid                            | 1.000                 |
| Nicotinamide                          | 1.000                 |
| Pyridoxal HCl                         | 1.000                 |
| Thiamine HCl                          | 1.000                 |
| i-Inositol                            | 2.000                 |
| Riboflavin                            | 0.100                 |
| <b>Inorganic Salts</b>                |                       |
| CaCl <sub>2</sub> 2H <sub>2</sub> O   | 265.000               |
| MgSO <sub>4</sub>                     | 97.720                |
| KCl                                   | 400.000               |
| Sodium chloride                       | 6800.000              |
| Sodium dihydrogen phosphate anhydrous | 122.000               |
| <b>Other Components:</b>              |                       |
| D-Glucose                             | 1000.000              |
| HEPES Buffer                          | 5958.000              |
| Phenol red sodium salt                | 11.000                |

### Directions:

- Suspend 15.5 gms in 900ml tissue culture grade water with constant, gentle stirring until the powder is completely dissolved. Do not heat the water.
- Add 2.2 gms of Sodium bicarbonate powder or 29.3 ml of 7.5% Sodium bicarbonate solution for 1 liter of medium and stir until dissolved.
- Adjust the pH to 0.2 - 0.3 pH units below the desired pH using 1N HCl or 1N NaOH since the pH tends to rise during filtration.
- Make up the final volume to 1000ml with tissue culture grade water.
- Sterilize the medium immediately by filtering through a sterile membrane filter with a porosity of 0.22 micron or less, using positive pressure rather than vacuum to minimize the loss of carbon dioxide.
- Aseptically add sterile supplements as required and dispense the desired amount of sterile medium into sterile containers.
- Store liquid medium at 2-8°C and in dark till use.

### 5. Precautions and Disclaimer

This product is for research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.