

## Normal Human Dermal Fibroblasts (NHDF)

### Growth Medium, High glucose

With 4.5 gms glucose per litre, 1 mM sodium pyruvate, L-glutamine, 1.5 gms per litre sodium bicarbonate

### PRODUCT CODE

FcbFEM-229

### PRODUCT DESCRIPTION

Normal Human Dermal Fibroblasts (NHDF) growth medium is one of the most widely used modification of Eagle's medium. NHDF growth medium is a modification of Basal Medium Eagle (BME) that contains four-fold concentration of amino acids and vitamins. Additionally, the formulation also includes glycine, serine and ferric nitrate. The original formulation contains 1000 mg/L of glucose and was originally used to culture embryonic mouse cells.

NHDF growth medium high glucose is a further modification of original DMEM and contains 4500 mg/L of glucose. The additional glucose has proved to be useful in cultivating various other cell lines including primary cultures of mouse and chicken cells as well as various normal and transformed cell lines.

NHDF growth medium is Dulbecco's Modified Eagle Medium with 4.5 gms glucose per litre, L-glutamine, 1.5 gms per litre sodium bicarbonate and 1 mM sodium pyruvate. Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific for different cell lines

### COMPOSITION

Ingredients (mg/L)

#### INORGANIC SALTS

|                                      |          |
|--------------------------------------|----------|
| Calcium chloride dihydrate           | 265.000  |
| Ferric nitrate nonahydrate           | 0.100    |
| Magnesium sulphate anhydrous         | 97.720   |
| Potassium chloride                   | 400.000  |
| Sodium bicarbonate                   | 1500.000 |
| Sodium chloride                      | 6400.000 |
| Sodium phosphate monobasic anhydrous | 109.000  |

#### AMINOACIDS

|                                       |         |
|---------------------------------------|---------|
| Glycine                               | 30.000  |
| L-Arginine hydrochloride              | 84.000  |
| L-Cystine dihydrochloride             | 62.570  |
| L-Glutamine                           | 584.000 |
| L-Histidine hydrochloride monohydrate | 42.000  |
| L-Isoleucine                          | 105.000 |
| L-Leucine                             | 105.000 |
| L-Lysine hydrochloride                | 146.000 |
| L-Methionine                          | 30.000  |
| L-Phenylalanine                       | 66.000  |
| L-Serine                              | 42.000  |
| L-Threonine                           | 95.000  |
| L-Tryptophan                          | 16.000  |
| L-Tyrosine disodium salt              | 103.790 |
| L-Valine                              | 94.000  |

#### VITAMINS

|                        |       |
|------------------------|-------|
| Choline chloride       | 4.000 |
| D-Ca-Pantothenate      | 4.000 |
| Folic acid             | 4.000 |
| Nicotinamide           | 4.000 |
| Pyridoxal 5 phosphate  | 4.000 |
| Riboflavin             | 0.400 |
| Thiamine hydrochloride | 4.000 |
| i-Inositol             | 7.200 |

#### OTHERS

|                        |          |
|------------------------|----------|
| D-Glucose              | 4500.000 |
| Phenol red sodium salt | 15.900   |
| Sodium pyruvate        | 110.000  |

## QUALITY CONTROL

### Appearance

Red colored, clear solution

### pH

7.00-7.60

### Osmolality in mOsm/Kg H<sub>2</sub>O

285.00-325.000

### 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.

### Endotoxin content

NMT 1EU/ml

## STORAGE & 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.

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