



## Eugonic LT 100 Medium Base w/o Tween 80

M1513

Eugonic LT 100 Medium Base is recommended for the cultivation of fastidious microorganisms like *Haemophilus*, *Neisseria*, *Pasturella*, *Brucella* and *Lactobacillus* species.

### Composition\*\*

| Ingredients                    | Gms / Litre |
|--------------------------------|-------------|
| Casein enzymic hydrolysate     | 15.000      |
| Papaic digest of soyabean meal | 5.000       |
| Glucose                        | 5.500       |
| Sodium chloride                | 4.000       |
| Sodium sulphite                | 0.200       |
| L-Cystine                      | 0.700       |
| Egg lecithin                   | 1.000       |
| Triton X-100                   | 1.000       |
| Agar                           | 15.000      |
| Final pH ( at 25°C)            | 7.0±0.2     |

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 47.40 grams in 1000 ml distilled water containing 5 grams of polysorbate 80 (Tween 80). Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

Eugonic LT 100 Medium Base was developed by Pelczar and Vera (1) for cultivation of fastidious organisms like *Brucella*. Eugon media were developed to obtain eugonic (luxuriant) growth of fastidious microorganisms like *Brucella* which are otherwise difficult to cultivate (3). The unenriched medium supports rapid growth of lactobacilli associated with cured meat products, dairy products and other foods. Eugonic media is quite similar to Tryptone Soya Agar (M290) but more bacterial propagation is expected on Eugonic media. Organisms like *Bordetella* and *Neisseria* form minute colonies on Tryptone Soya Agar (M290). They may become large on Eugon Media because large amount of sulfur and carbon sources have been added in addition to the Tryptone Soya Agar (M290) formula. Eugonic LT 100 Medium w/o Tween 80 can be used for growth of a variety of fastidious microorganisms like *Neisseria*, *Francisella* and *Brucella*.

Casein enzymic hydrolysate and papaic digest of soyabean meal provide the nitrogen, vitamins and amino acids, which supports the growth of fastidious microbial species. The high concentration of glucose is the energy source for rapid growth of bacteria. L-Cystine and sodium sulphite are added to stimulate growth. Sodium chloride maintains the osmotic balance of the media. The high carbohydrate content along with high sulfur (cystine) content improves growth with chromogenicity (2). Lecithin and polysorbate 80 in Eugonic LT 100 Medium w/o Tween 80 neutralize antimicrobial agents hence this medium can be used as a neutralizing diluent.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of prepared medium

Yellow coloured, clear to slightly opalescent gel forms in Petri plates

#### Reaction

Reaction of 4.74% w/v aqueous solution at 25°C. pH : 7.0±0.2

**pH**

6.80-7.20

**Cultural Response**

M1513: Cultural characteristics observed with added 5-10% sterile defibrinated blood after an incubation at 35-37°C for 48 hours (fungal cultures incubated at 25-30°C).

| Organism                                  | Inoculum (CFU) | Growth                                       | Recovery |
|---|----------------|--|----------|
| <i>Bacillus pumilus</i> ATCC 14884        | 50-100         | good (with 0.1% starch)                      | 50-70%   |
| <i>Brucella abortus</i> ATCC 4315         | 50-100         | good (under 3-5% CO <sub>2</sub> )           | 50-70%   |
| <i>Candida albicans</i> ATCC 26790        | 50-100         | good   | 50-70%   |
| <i>Lactobacillus fermentum</i> ATCC 9338  | 50-100         | good   | 50-70%   |
| <i>Neisseria meningitidis</i> ATCC 13090  | 50-100         | good   | 50-70%   |
| <i>Streptococcus pneumoniae</i> ATCC 6303 | 50-100         | good-luxuriant (under 3-5% CO <sub>2</sub> ) | ≥70%     |
| <i>Streptococcus pyogenes</i> ATCC 19615  | 50-100         | good-luxuriant (under 3-5% CO <sub>2</sub> ) | 50-70%   |
| <i>Staphylococcus aureus</i> ATCC 25923   | 50-100         | good-luxuriant                               | ≥70%     |
| <i>Staphylococcus aureus</i> ATCC 6538    | 50-100         | good-luxuriant                               | ≥70%     |
| <i>Candida albicans</i> ATCC 10231        | 50-100         | good   | 50-70%   |
| <i>Bacillus subtilis</i> ATCC 6633        | 50-100         | good   | 50-70%   |
| <i>Pseudomonas aeruginosa</i> ATCC 9027   | 50-100         | good   | 50-70%   |
| <i>Escherichia coli</i> ATCC 8739         | 50-100         | good-luxuriant                               | 50-70%   |

**Storage and Shelf Life**

Store below 30°C in tightly closed container and the prepared media at 2-8°C. Use before expiry period on the label.

**Reference**

1. Pelczar and Vera J., 1949, Milk Plant Monthly 38:30
2. Frank H. A., 1955, J. Bacteriol., 70:269.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams & Wilkins, Baltimore, Md.

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