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, Neissaria, 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
Bacillus pumilus ATCC 14884	50-100	good (with 0.1% starch)	50-70%
Brucella abortus ATCC 4315	50-100	good (under 3-5% CO2)	50-70%
Candida albicans ATCC 26790	50-100	good	50-70%
Lactobacillus fermentum ATCC 9338	50-100	good	50-70%
Neisseria meningitidis ATCC 13090	50-100	good	50-70%
Streptococcus pneumoniae ATCC 6303	50-100	good-luxuriant(under 3-5% CO2)	>=70%
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant(under 3-5% CO2)	50-70%
Staphylococcus aureus ATCC 25923	50-100	good-luxuriant	>=70%
Staphylococcus aureus ATCC 6538	50-100	good-luxuriant	>=70%
Candida albicans ATCC 10231	50-100	good	50-70%
Bacillus subtilis ATCC 6633	50-100	good	50-70%
Pseudomonas aeruginosa ATCC 9027	50-100	good	50-70%
Escherichia coli 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.

Revision : 2 / 2015