



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Eugonic LT 100 Broth Base w/o Tween 80

Product Code: DM 2517

Application: - Eugonic LT 100 Broth Base is used for the enrichment and detection of mesophilic aerobic bacteria present in cosmetic products. The composition and performance criteria of the medium are as per the specifications laid down in ISO 21149.

Composition**

Ingredients	Gms / Litre
Tryptone	15.000
Soya peptone	5.000
Sodium chloride	4.000
L-Cystine	0.700
Sodium sulphite	0.200
Glucose	5.500
Egg lecithin	1.000
Triton X-100	1.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Eugonic LT 100 Broth 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 (DM1290) but more bacterial propagation is expected on Eugonic media. Organisms like *Bordetella* and *Neisseria* grow luxuriantly in Eugon Media because large amount of sulfur and carbon sources have been added in the formula. Eugonic LT 100 Broth Base can be recommended for growth of a variety of fastidious microorganisms like *Neisseria*, *Francisella* and *Brucella*. The composition of the medium is as per ISO (4) for the detection of mesophilic aerobic bacteria from cosmetic products.

Tryptone and soya peptone supply 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 helps to maintain 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.

Methodology

Suspend 32.4 grams of dehydrated media in 1000 ml distilled water containing 5 grams of polysorbate 80 (Tween 80). Mix thoroughly & heat if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder





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Colour and Clarity

Yellow coloured, clear to slightly opalescent solution.

Reaction

Reaction of 3.24% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH Range

6.80-7.20

Cultural Response

DM 2517: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours (fungal cultures incubated at 25-30°C for 2-7 days).

Cultural Response

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

Storage and Shelf Life

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

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

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.
4. ISO 21149 (2006) Cosmetics-Microbiology- Enumeration and detection of aerobic mesophilic bacteria.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate
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