Specification

Liquid medium used for the enrichment of aerobic bacteria including *E. coli*, in cosmetic products with and without preservatives.

Formula * in g/L

Tryptone..... 15.00
Soy peptone..... 5.00
Dextrose..... 5.50
Sodium chloride..... 4.00
Lecithin..... 1.00
Sodium lauryl sulphate 1.56
L-Cystine..... 0.70
Sodium sulfite..... 0.20

Final pH at 25 ºC, 7,0 ±0,2
* Adjusted and /or supplemented as required to meet performance criteria

Directions

Dissolve 32.96 g of the powder in 1 L of distilled water with 15 mL of Polysorbate 80 (Art. No. DSHB3131). Distribute in suitable containers and autoclave at 121ºC for 15 minutes.

Description

Modification of the Eugon LT 100 medium, in which Triton® X-100 (Octoxynol 9) has been replaced by sodium lauryl sulfate and the concentration of polysorbate 80 has been increased to maintain dispersing capacity.

Technique

Prepare a 1:10 dilution of the sample using Eugon broth directly. If the sample is not water-miscible, a suitable suspension should be prepared with a suitable dispersing agent and then diluted in a suitable amount of Eugon broth (eg 1:10 or 1:50).
If the sample is filterable, it is recommended to filter it through a membrane with a nominal pore not greater than 0.45 µm and wash it with defined volumes of water or diluents (Maximum Recovery Diluent). The membrane is immediately transferred to a container containing a suitable volume of the Eugon broth. The broth inoculated either with the sample, its dispersion or with the membrane is incubated 32.5 ± 2.5ºC for at least 20 hours and at most 72 hours.
If what is desired is to have an estimate of the population by the NMP method, proceed as follows:
Prepare a decimal bank of dilutions from the product under examination. Inoculate the tubes or containers of each series with the established volume and incubate them according to the temperatures and times standardized in the analytical protocol applied. The enumeration will be done according to the tables of the Most Probable Number that are applicable in each case.

Quality control

Incubation temperature: 32,5 ± 2,5 ºC **Incubation time:** 20 - 72h

Inoculum: Practical range 100 ± 20 CFU. Min. 50 CFU (Productivity) according to ISO 11133:2014/Amd 1:2018.

Microorganism	Growth	Remarks
Staphylococcus aureus ATCC® 6538	Good	-
Escherichia coli ATCC® 8739	Good	-
Pseudomonas aeruginosa ATCC® 9027	Good	-
Bacillus subtilis ATCC® 6633	Good	-
Staphylococcus epidermidis ATCC® 12228	Good	-
Salmonella typhimurium ATCC® 14028	Good	-
Candida albicans ATCC® 10231	Good	-
Aspergillus niger ATCC® 16404	Good	-

References

· GUISNO, R., I.W. GIBBY & M.J. FOTER (1946) A neutralizing medium for evaluation of the germicidal potency of the quaternary ammonium salts. Amer. J. Pharm. 118:320-323.
. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
· ISO 16212 Standard (2017) Cosmetics - Microbiology - Enumeration of yeast and mould.
· ISO 18415 Standard (2017) Cosmetics - Microbiology - Detection of specified and non-specified microorganisms.
· ISO 18416 Standard (2015) Cosmetics - Microbiology - Detection of Candida albicans.
· ISO 21149 Standard (2017) Cosmetics - Microbiology - Enumeration and detection of aerobic mesophilic bacteria.
· ISO 21149 (2017)/ DAM 1:2021 Cosmetics - Microbiology - Enumeration and detection of aerobic mesophilic bacteria.
· ISO 21150 Standard (2015) Cosmetics - Microbiology - Detection of Escherichia coli.
· ISO 22717 Standard (2015) Cosmetics - Microbiology - Detection of Pseudomonas aeuruginosa.
· ISO 22718 Standard (2015) . Cosmetics - Microbiology - Detection of Staphylococcus aureus.
· WILLIAMSON, P. & A.M. KLIGMAN (1965) A new method for the quantitative investigation of cutaneous bacteria. J. Inv. Dermatol. 45:498-503.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 ºC to 30 ºC).