ALLIANCE BIO EXPERTISE

Reference: FLWR3053 **A.B.E. - Technical Data Sheet**

Product: **Eugon LT Modified Medium - 100 ml**

Specification

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

Presentation

	Packaging Details	Shelf Life	Storage
10 Prepared bottles Bottle 125 ml with: 100 ± 3 ml	1 box with 10 bottles 125 ml. Injectable cap: Plastic screw inner cap. The use of syringes needles with a diameter greater than 0.8 mm is not recommended.	12 months	2-25 ºC

Composition

Composition (g/l):

Tryptone	15.00
Soy peptone	5.00
Polysorbate 80	15.00
Dextrose	5.50
Sodium chloride	4.00
Sodium lauryl sulfate	1.56
Lecithin	1.00
L-Cystine	0.70
Sodium sulfite	0.20

Description /Technique

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Modification of the Eugon LT 100 medium, in which Triton® X-100 (Octoxynol 9) has been replaced by sodium lauryl sulfate and the concentration of polysorbate 80 has been increased to maintain dispersing capacity.

The addition of neutralising agents polysorbase 80 - Lecithin - Sodium lauryl sulfate may inactivate a variety of disinfectants.

* The combination of lecithin and polysorbate 80 neutralises the quaternary ammonium compounds.
* The polysorbate 80 neutralises hexachlorophene and mercurial derivates.
* Lecithin neutralises clorhexidine.
* Sodium lauryl sulfate allow the dispersion of microorganisms.

This medium complies with ISO standards: ISO 16212, ISO 18415, ISO 18416, ISO 21149, ISO 21150, ISO 22717 and ISO 22718.

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

Physical/Chemical control

Color : Yellowish-brown pH: 7.0 ± 0.2 at 25ºC

Microbiological control

Prepare tubes - Inoculate: Practical range 100 ± 20 CFU. min. 50 CFU (productivity).

Microbiological control according to ISO 11133:2014/A1:2018.

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020.

Aerobic. Incubation at 30-35 ºC ≤20h (bacteria and yeast); 72h-5 days (moulds).

Microorganism	Growth
Stph. epidermidis ATCC® 12228, WDCM 00036	Good
Bacillus subtilis ATCC® 6633, WDCM 00003	Good
Salmonella typhimurium ATCC® 14028, WDCM 00031	Good
Escherichia coli ATCC® 8739, WDCM 00012	Good
Candida albicans ATCC® 10231, WDCM 00054	Good
Aspergillus brasiliensis ATCC® 16404, WDCM 00053	Good
Ps. aeruginosa ATCC® 9027, WDCM 00026	Good
Staphylococcus aureus ATCC® 6538, WDCM 00032	Good

Sterility control

Incubation 48 h at 30-35 ºC and 48 h at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

Bibliography

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. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
. ISO 4973:2023. Quality control of culture media and diluents used in cosmetics standards.
· 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)/ ADM 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.