

Tryptic Soy Agar - LI 30 ml - Casein Soya Bean Digest Agar

Art.-No. 03074e

Intended Use

Tryptic Soy Agar is a universal complex medium for cultivation and isolation of fastidious bacteria, yeasts and moulds. The medium can be incubated under aerobic or anaerobic conditions. The formulation of the medium is prepared according to the recommendations of the current United States Pharmacopoeia (USP, Medium II) and European Pharmacopoeia (EP, Medium B)

TSA is mainly used for total viable count determinations of non sterile products according to EP and USP.

Features of heipha TS-Agar - LI:

- ✓ storage at 15-25°C
- ✓ 30 ml filling volume
- ✓ reduced formation of condensed water
- ✓ long incubation times without desiccation
- ✓ shelf life 6 months[#]

= shelf life is valid from the date of production

Typical Composition per litre

Soy Peptone	5 g
Casein Peptone	15 g
Sodium Chloride	5 g
Agar	15 g

Final pH 7.3 ± 0.2

The medium is clear and yellowish.

Description

The nutrient content of Tryptic Soy Agar promotes the growth of fastidious bacteria as well as moulds and yeasts.

Culture Conditions

According to EP the determination of the total viable count of samples using membrane filtration is prepared as follows:

10 g or 10 ml of the product to be examined are dissolved or diluted within buffered Sodium Chloride Peptone Solution or another suitable diluent (usually a one to ten dilution is prepared).

A suitable amount of the diluted sample (e.g. representing 1g or 1 ml of the original sample) is transferred to the membrane filter and filtered immediately. The filter is washed three times with 100 ml buffered Sodium Chloride Peptone Solution or another suitable solution added by neutralizers if necessary.

The filter is transferred onto the surface of a TSA plate and incubated at 30 to 35°C for five days.

The total viable count is calculated from the plate with the highest colony count but less than 100 CFU (Colony Forming Units).

Quality Control

During quality control different physical and microbiological examinations are carried out.

A typical growth promotion test for Tryptic Soy Agar – LI 30 ml (Art.-No. 03074e) is shown in the table below.

Test strain	Culture conditions	Recovery rate CFU (% test to ref.)	Colony characteristics
<i>Staphylococcus aureus</i> ATCC 6538	1d 34 ± 1 °C	≥ 70 %	medium sized, slightly yellowish colonies
<i>Escherichia coli</i> ATCC 8739	1d 34 ± 1 °C	≥ 70 %	large, slightly yellowish colonies
<i>Pseudomonas aeruginosa</i> ATCC 9027	1d 34 ± 1 °C	≥ 70 %	medium sized, slightly yellowish colonies
<i>Bacillus subtilis</i> ATCC 6633	1d 34 ± 1 °C	≥ 70 %	large flat dry and irregular shaped colonies
<i>Candida albicans</i> ATCC 10231	2d 22.5 ± 2.5 °C	≥ 70 %	small white dry colonies
<i>Aspergillus niger</i> ATCC 16404	3d 22.5 ± 2.5 °C	≥ 70 %	black conidia on a light mycelium

10 to 100 CFU inoculated = reference

Further Identification

In case of growth it is recommended to identify the colonies using microbiological methods (e.g. selective media, biochemical methods) in order to identify and remove the source of contamination.

References

European Pharmacopoeia 5.0 (2004) 2.6.12. Microbiological examination of non-sterile products – Total viable aerobic count

International Harmonisation: (2003): Pharmeuropa 15, No. 3, July 2003: 563-573

United States Pharmacopoeia XXVII <61>. Microbial Limit Tests.

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