



Reference : 02-418

Scharlau Microbiology - Technical data sheet

Product :
TRYPTOPHAN BROTH

Specification

Liquid medium used for the detection of indol production according to ISO standards.

Formula * in g/L

Casein peptone..... 10,0
DL-Tryptophan..... 1,0
Sodium chloride..... 5,0

Final pH 7,2 ±0,2 at 25 °C

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Dissolve 16 g of powder in 1 L of distilled water. Distribute into tubes (5 ml) and sterilize in the autoclave at 121°C for 15 minutes.

Description

This broth allows indol to be produced from tryptophan, and therefore it is suitable for the differentiation and identification of coliforms from water and food. Its formulation is according to the German standards for waters and foods, and complies with the specifications of several ISO standards related to the presence and identification of *Escherichia*, *Salmonella* and *Shigella* in different products.

Technique

Medium is inoculated with a previously isolated culture, and then incubated at 37 ±1 °C for 24 ± 3 hours. Indol production is observed by adding a few drops (1 ml) of Kovacs' Reagent to the broth (with or without previous extraction) and shaking gently. Formation of a red ring indicates indol production.

Quality control

Incubation temperature: 37°C ±1,0

Incubation time: 24 ± 3 h

Inoculum: ≥ 10³ CFU (specificity) according to ISO 11133:2014/Amd 1:2018 & Adm 2:2020

Microorganism	Growth	Remarks
<i>Escherichia coli</i> ATCC® 8739	Good	Indol (+)
<i>Escherichia coli</i> ATCC® 25922	Good	Indol (+)
<i>Salmonella typhimurium</i> ATCC® 14028	Good	Indol (-)
<i>Salmonella enteritidis</i> ATCC® 13076	Good	Indol (-)
<i>Citrobacter freundii</i> ATCC® 43864	Good	Indol (-)
<i>Enterobacter aerogenes</i> ATCC® 13048	Good	Indol (-)

References

- BUNDESGESMELHEITSAMT: Amtliche Sammlung von Untersuchungs Verfahren nach #35LMBG. Beuth Verlag. Berlin-Köln.
- DIN 38411-6 (1991) Deutsche Einheitsverfahren zur Wasser-, Abwasser- und Schlammuntersuchung; Mikrobiologische Verfahren (Gruppe K); Nachweis von *Escherichia coli* und coliformen Keimen (K6)
- ISO Standard 6785: 2001. Milk and Milk Products. Detection of *Salmonella* spp.
- ISO Standard 6579-1 (2017) Microbiology of food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* - Part 1 : Detection of *Salmonella* spp.
- ISO Standard 9308-1: 2000. Water Quality. Detection and enumeration of *Escherichia coli* and coliform bacteria. Part 1: Membrane filtration method.
- ISO 11133:2014/ Adm 1:2018/ Adm 2:2020/ Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- ISO Standard 16654 (2001) Microbiology of food and animal feeding stuffs. Horizontal method for the detection of *Escherichia coli* O157.
- ISO Standard 21567: 2004. Microbiology of Foods and animal feeding stuffs - Horizontal method for the detection of *Shigella* spp.
- VERORDNUNG über Trinkwasser und über Wasser für Lebensmittelbetriebe vom 12-12-1990. Bundesgesetzbl. I. 2613 -2619.

Storage

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



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