

70194 Tryptone water

A liquid medium for the detection of indole-forming microorganisms. Due to its high content of tryptophan, it is more reliable than peptone water for this purpose. The ability of certain organisms to break down the amino-acid tryptophan with formation of indole is an important property which is used for the classification and identification of bacteria.

Composition:

Ingredients	Grams/Litre
Tryptone (tryptic hydrolysate of casein)	10.0
Sodium chloride	5.0
Final pH 7.5 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:

Add 15 g to 1 litre of distilled water. Mix well, distribute into final containers and sterilize by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:

Tryptone provides nitrogen, vitamins and minerals. Sodium chloride is for osmotic balance. Tryptone is a good substrate for indole production because of its high tryptophan content. Certain organisms are able to break down the aminoacid tryptophan with the help of hydrolytic enzymes and as result indole is formed. Indole can be detected with Kovacs Indole (60983) or Ehrlich's Reagent (03891). Indole combines with the aldehyde present in the reagent to form a red color. The alcohol in the reagent extracts and concentrates the red colored complex in an upper layer.

Cultural characteristics after 12-24 hours at 35-37°C.

Organisms (ATCC)	Growth	Indole formation (red color)
<i>Escherichia coli</i> (25922)	+++	+
<i>Proteus vulgaris</i> (13315)	++	+
<i>Enterobacter aerogenes</i> (13048)	+++	-
<i>Staphylococcus aureus</i> (25923)	++	-
<i>Salmonella typhimurium</i> (14028)	++	-



References:

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5. J.J. Farmer III et al., J. Clin. Microbiol., 21, 46 (1985)
6. DHSS. Report 71, The Bacteriological Examination of Drinking Water Supplies, HMSO, London (1982)
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Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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