

Saline Peptone Water ISO

Recommended as a diluent and for the homogenization of microbiological samples.

Practical information

Applications	Categories
Diluent	General use

Industry: General cultivation

Regulations: ISO 11133 / ISO 22718 / ISO 6887 / ISO 8199

Principles and uses

Saline Peptone Water (Maximum Recovery Diluent) is an isotonic diluent used for maximum recovery of microorganisms, and for the growth of bacterial cultures, principally marine bacteria.

ISO 6887 recommends this medium as a diluent for the preparation of initial suspension for microbiological samples. The low concentration of peptone does not cause a multiplication of the organisms within 1-2 hours of dilution of the sample. It is also used for carbohydrate fermentation tests in many food and environment studies, amongst others. To determine carbohydrate fermentation patterns, add 1,8 ml of 1% Phenol red to reconstitute the dry medium. After dispensing into test tubes with Durham gas collecting vials for gas detection, sterilize at 121 °C for 15 minutes. Aseptically add sterile carbohydrate solution (Dextrose) to yield 1% final concentration.

Peptone is the nutrient source of nitrogen, vitamins, amino acids and minerals. Sodium chloride maintains the osmotic balance.

Formula in g/L

Casein peptone	1	Sodium chloride	8,5
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Preparation

Suspend 9,5 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121 °C for 15 minutes.

Instructions for use

- Refer to the relevant references for details on test methods.
- Inoculate the tubes with the test sample.
- Incubate tubes at 35±2 °C for 18-24 hours under aerobic conditions, or as indicated in the references.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Beige	Colorless	7,0±0,2

Microbiological test

According to ISO 11133:

Incubation conditions: (20-25 °C /45 min-1 h).

Inoculation conditions: Diluent (10³-10⁴ CFU).

Reference media: TSA.

Microrganisms	Specification
Staphylococcus aureus ATCC 25923	±30% of colonies compared to the original count

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

Coccolin L, Manzano M, Cantur C., Comi G. App. Environ Microbiolog 2001. nov. 67 (11) 5113-21. Destoumieux – garzon D. Saulnier, D. Garnier et al. J. Biol Chem. Vol. 276. Issue 50 -47070-47077 (14 December-2001).
ISO 6887 Microbiology – general guidance for the preparation of dilutions for microbiology examinations.

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