

PRODUCT CODE: 416265

## Maximum Recovery Diluent (MRD) (ISO 6887) (Dehydrated Culture Media) for microbiology

### 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. The prepared medium should be stored at 2-8°C. The medium is colourless. The dehydrated medium should be homogeneous, free-flowing and beige in colour. If there are any physical changes, discard the medium.

### 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 .8ml 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. Distribute carbohydrate in the tube by rotating gently. Peptone is the nutrient source of nitrogen, vitamins, amino acids and minerals. Sodium chloride maintains the osmotic balance. Inoculate tubes with a sample and incubate at 35 ± 2°C for 18 – 24 hours. The fermentation of carbohydrate produces acid, causing a drop in the pH and a change of color to yellow; gas production is indicated by gas bubbles.

### Composition

See in Data Sheet (TDS).

### Microbiological Test

The following results were obtained from type cultures in the performance of the medium after incubation at a temperature of 35± 2°C and observed after 18-24 hours.

Microorganism	Growth
<i>Escherichia coli</i> ATCC 25922	Good
<i>Salmonella typhimurium</i> ATCC 14028	Good
<i>Staphylococcus aureus</i> ATCC 25923	Good

### Storage

Once opened keep powdered medium closed to avoid hydration.

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