

MAST® Culture Media and Supplements

Technical Information Sheet

Product Code DM 185



Peptone Water

A multipurpose liquid medium.

1. Description

MAST Peptone Water is a versatile liquid growth medium, which can also act as a base for the performance of carbohydrate fermentation tests. The ability of organisms to ferment different sugars has long been used in differentiation of the *Enterobacteriaceae*. The medium contains a blend of peptones completely free from carbohydrate, but which permits excellent growth of non-fastidious bacteria. Usually for carbohydrate fermentation tests, the test sugar, a pH indicator and a Durham tube are

all included to detect acid and gas production. In the examination of convalescent patients or suspected carriers of pathogenic vibrios, peptone water adjusted to pH 8.4 has been recommended.¹ A rectal swab is incubated for 6-8 hours in this medium with the addition of 0.1-0.2% Teepol, to reduce spore bearing contaminants. Subcultures are then taken onto selective media and another peptone water tube.

2. Technical Formula*

Formula	grams per litre
Peptone mixture	10.0
Sodium chloride	5.0
pH approx.7.2	

3. Directions

1. Suspend by swirling 15g of powder in 1 litre or the contents of the sachet in the stated volume of distilled or deionised water.
2. Mix well and distribute into final containers.
3. Autoclave at 121°C (15 p.s.i.) for 15 minutes.
4. In carbohydrate fermentation tests, where sugars are added after sterilisation, the volume of water for reconstitution should be reduced accordingly.

4. In Use

The performance of carbohydrate fermentation tests has been fully described by Cowan and Steel (1974).²

Many indicators with a pK between pH6 and 8 have been used, but the most common is Andrade's Indicator. Edwards and Ewing (1972)³ preferred this indicator because it is cheap, allows early fermentation to be observed, is not reduced easily and reversion from acid to alkaline is more clear cut than with other indicators.

5. References

1. Cruikshank R, Duguid JP, Marmion BP, Swain, RHA. *Medical Microbiology* 1975; 12th.ed. Churchill Livingstone p441
2. Cowan ST, Steel KJ. *Manual for the Identification of Medical Bacteria* 1974; 2nd.ed. Cambridge University Press p.146
3. Edwards PR, Ewing WH. *Identification of Enterobacteriaceae* 1972; Cambridge University Press p.164

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