

M-(Mannose) Broth

For the accelerated detection of Salmonella in dried foods and feeds within the enrichment serology (ES) procedure.

Mode of Action

M-(Mannose) Broth is based on the formulation of SPERBER and DEIBEL (1969), eliminating dextrose of APT-Broth to allow citrate to serve as an energy source. Mannose was added to the medium to prevent fibril agglutination in Salmonella in the serological procedure. Inorganic salt ions stimulate Salmonella growth. Tween® is a source for fatty acids.

Typical Composition (g/litre)

Yeast extract 5.0; peptone from casein 12.5; D-mannose 2.0; sodium citrate 5.0; sodium chloride 5.0; di-potassium hydrogen phosphate 5.0; manganese chloride 0.14; magnesium sulfate 0.8; ferrous(II) sulfate 0.04; Tween® 80 0.75.

Preparation

Suspend 36.2 g in 1 litre of demin. water and autoclave (15min at 121 °C).

pH: 7.0 ± 0.2 at 25 °C.

The prepared broth is clear and yellowish-brown.

Experimental Procedure and Evaluation

1. Suspend sample in Buffered Peptone Water, incubate for 18-24hours at 35 °C aerobically.
2. Transfer 1 ml each to 9 ml RAPPAPORT-VASSILIADIS (RVS) Broth and 9 ml Selenite Cystine Broth, incubate for 24 hours at 35 °C.
3. Transfer 1 drop of each selective broth in 10 ml M-Broth; incubate for 6-8 hours at 35 °C.
4. Perform a modified H-agglutination test according to SPERBER and DEIBEL literature.

Literature

SPERBER, W.H., a. DEIBEL, R.H.: Accelerated procedure for Salmonella detection in dried foods and feeds involving only broth culture and serological reaction. - **Appl. Microbiol.** 17 ; 533-539 (1969).

Ordering Information

Product	Merck Cat. No.	Pack size
M-(Mannose) Broth	1.10658.0500	500 g
Peptone Water (buffered)	1.07228.0500	500 g
RVS Broth	1.07700.0500	500 g
Selenite Cystine Broth	1.07709.0500	500 g

Quality control

Test strains	Growth
Salmonella choleraesuis ATCC 12011	good / very good
Salmonella typhimurium ATCC 14028	good / very good
Salmonella enteritidis ATCC13076	good / very good