

M 17 Broth acc. to TERZAGHI

Media proposed by TERZAGHI and SANDINE (1975) for the cultivation and enumeration of lactic streptococci in milk and dairy products and for the differentiation of bacteriophages infecting lactic streptococci.

The M 17 media are superior to other comparable culture media for the cultivation of the fastidious species *Strept. cremoris*, *Strept. diacetylactis* and *Strept. lactis*. Mutants which are incapable of metabolizing lactose can also be isolated on these media.

Mode of Action

Addition of sodium β -glycerophosphate increases the buffering capacity of the medium; this promotes the growth of lactic streptococci and the development of large bacteriophage plaques.

Typical Composition (g/litre)

Peptone from soymeal 5.0; peptone from meat 2.5; peptone from casein 2.5; yeast extract 2.5, meat extract 5.0; lactose monohydrate 5.0; ascorbic acid 0.5; sodium β -glycerophosphate 19.0; magnesium sulfate 0.25.

Preparation

Suspend 42.5 g M 17 broth/litre; dispense the broth into test tubes, autoclave (15 min at 121 °C).

pH: 7.2 \pm 0.2 at 25 °C.

The prepared media are clear and brown.

Experimental Procedure and Evaluation

Inoculate the tubes.

Incubation: 24-48 hours at 28 °C aerobically.

Literature

BRINCHMANN, E., NAMORK, E., JOHANSEN, B.V., a. LANGSRUD, T.: A morphological study of lactic streptococcal bacteriophages isolated from Norwegian cultured milk. - *Milchwirtschaft.*, **38**; 1-4 (1983).

KEOGH, B.P.: Appraisal of media and methods for assay of bacteriophages of lactic streptococci. - *Appl. Environ. Microbiol.*, **40**; 798-802 (1980).

TERZAGHI, B.E.: Morphologies and host sensitivities of lactic streptococcal phages from cheese factories. - *N.Z.J. Dairy Sci. Technol.*, **11**; 155-163 (1976).

TERZAGHI, B.E., a. SANDINE, W.E.: Improved medium for lactic streptococci and their bacteriophages. - *Appl. Microbiol.*, **29**; 807-813 (1975).

Ordering Information

Product	Merck Cat. No.	Pack size
M 17 Broth acc. to TERZAGHI	1.15029.0500	500 g

Quality control

Test strains	Growth
<i>Streptococcus agalactiae</i> ATCC 13813	good / very good
<i>Lactococcus lactis</i> spp. <i>cremoris</i> ATCC 19257	good / very good
<i>Lactococcus lactis</i> spp. <i>lactis</i> ATCC 19435	good / very good
<i>Enterococcus faecalis</i> ATCC 11700	good / very good
<i>Escherichia coli</i> ATCC 25922	good / very good
<i>Staphylococcus aureus</i> ATCC 25923	good / very good
<i>Lactobacillus acidophilus</i> ATCC 4356	good / very good
<i>Lactobacillus casei</i> ATCC 393	good / very good
<i>Lactobacillus fermentum</i> ATCC 9338	fair / very good