92008 Tryptone Bile Agar (TBA)

Tryptone Bile Agar is used for rapid detection and enumeration of Escherichia coli in foods using a modified direct plating method.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	20.0
Bile salts mixture	1.5
Agar	15.0
Final pH 7.2 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C. Use before expiry date on the label.
Appearance: Faintly beige coloured, homogeneous, free flowing powder.
Color and Clarity: Light yellow clear solution.

Directions:
Suspend 36.5 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Principle and Interpretation:
Tryptone Bile Agar, formulated by Anderson and Baird-Parker (1) is recommended for the Direct Plating Method (DPM) of *E. coli* in raw meat as it is superior to the Most Probable Number (MPN) method (2). Less
variability, better recovery from frozen samples, greater rapidity and the smaller quantity of medium required was the advantages noticed. The DPM detects both anaerogenic and late lactose fermenting strains of *E. coli* which could be missed by the MPN method (about 10%) (3). This medium is also recommended by ISO committee for the enumeration of *E. coli* (4). As there is no fermentable sugar in the medium the indole production from tryptophan, present in the casein hydolysate, is supported (5, 6). So the presence of tryptophanase, which is present in *E. coli*, can be detected by using the Kovac's reagent (7, 8) other organisms are inhibited by the bile salt mixture and elevated incubation temperature.

Cultural characteristics observed after 18-24 hours after incubation at 35-37°C.

Organisms (ATCC)	Inoculum [cfu]	Growth	Recovery [%]
Escherichia coli (25922)	50-100	+++	≥50
Enterobacter aerogenes (13048)	≥10^3	-	0

Reference:
1. J.M. Anderson, A.C. Baird-Parker, J. Appl. Bacteriol., 39,111 (1975)
2. International Commission on Microbiological Specifications for Food, Can. J. Microbiol., 25, 1321 (1979)
3. W.H.Ewing, US Dept. of Health, Education and Welfare, CRC, Atlanta (1972)
4. International Organization for Standardization (ISO), Draft ISO/DIS 6391 (1988)
5. R. Holbrook, J.M. Anderson, A.C. Baird - Parker, Food Technol. in Aust., 32, 78 (1980)
6. P.H. Clarke, S.T. Cowen, J. Gen. Microbiol., 6, 187 (1952)
7. J.F. MacFaddin, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore (1985)
8. S.M. Finegold, E.J. Baron, Bailey and Scotts Diagnostic Microbiology, 7th Ed., The C.V. Mosby Co., St. Louis (1986)

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.