

**YERSINIA IDENTIFICATION BROTH BASE****TM 925**for identification of *Yersinia* species**Composition**

Ingredients	Gms/Ltr.
Sodium chloride	5.000
L-Tryptophan	3.000
Monopotassium phosphate	1.000
Dipotassium phosphate	1.000
Phenol red	0.025

* Dehydrated powder, store in a dry place, in tightly-sealed containers at 24°C and protect from direct Sunlight.

Instructions for Use

Dissolve 10.00gms in 1000 ml of distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes. Cool to 45 - 50°C and aseptically add UREA SOLUTION (TS 030). Mix well and dispense as desired.

Appearance: Orange-red coloured clear solution without any precipitate

PH (at 25°C): 6.9 ± 0.2

Principle

YERSINIA IDENTIFICATION BROTH BASE is used for identification of *Yersinia* species. The portal of entry of *Yersinia* in humans is the oral digestive route, with infection occurring in the terminal ileum. There are three main species of *Yersinia* with unquestionable pathogenicity for humans are *Yersinia pestis*, *Yersinia pseudotuberculosis* and *Yersinia enterocolitica*. Among these, *Y. enterocolitica* is usually associated with food born gastroenteritis. . It is the most common species of *Yersinia* recovered from clinical specimens.

Sodium chloride maintains the osmotic equilibrium of the medium while phosphates buffer the medium well. L-Tryptophan serves as a base to test indole reaction. . Phenol red is the pH indicator dye. Urea (TS 030) is broken down by enzyme urease to yield ammonia. Ammonia increases the pH of the medium towards alkalinity, consequently making the phenol red indicator dye to change from a orange-red to a pink-violet colour.

Inoculate the sample in ITC BROTH (TM 1357) and PSB BROTH (TM 1064) for enrichment. After incubation at 25°C for 2 - 3 days, inoculate onto YERSINIA SELECTIVE AGAR BASE (TM 501). Presumptive *Yersinia* colonies are confirmed biochemically by inoculating into YERSINIA IDENTIFICATION BROTH BASE (TM 925).



PRODUCT DATA SHEET

Interpretation

Cultural characteristics observed, after incubation at 30 - 32°C for 18 - 24 hours with added UREA SOLUTION (TS 030).

Microorganisms	ATCC	Inoculum (CFU)	Growth	Urease production	Colour change of medium
<i>Yersinia enterocolitica</i>	27729	10 ³	Luxuriant	Positive reaction	Orange-red to cerise

References

1. Koneman E. W., Allen S. D., Janda W. M., Schreckenberger P. C., Winn W. C. Jr., 1992, Colour Atlas and Textbook of Diagnostic Microbiology, 4th Ed., J. B. Lippincott Company.
2. International organization for standardization, (ISO), 1994, Draft ISO 10273.