

**YERSINIA PSB BROTH
YERSINIA ITC BROTH BASE
TICARCILLIN IRGASAN ANTIMICROBIC SUPPLEMENT
POTASSIUM CHLORATE SUPPLEMENT**

Enrichment broths and selective supplements
for the detection of *Yersinia enterocolitica* in food and water samples

TYPICAL FORMULAS**Yersinia PSB Broth (g/l)**

Peptone	5.00
Sorbitol	10.00
Sodium Chloride	5.00
Disodium Hydrogen Phosphate	8.23
Sodium Dihydrogen Phosphate	1.20
Bile Salts n° 3	1.50

Yersinia ITC Broth Base (g/l)

Tryptone	10.00
Yeast Extract	1.00
Magnesium Chloride Anhydrous	28.10
Sodium Chloride	5.00
Malachite Green	0.01

Ticarcillin Irgasan Antimicrobial Supplement (vial contents for 250 ml of medium)

Ticarcillin	0.25 mg
Irgasan	0.25 mg

Potassium Chlorate Supplement (vial contents for 250 ml of medium)

Potassium Chloride 5% solution	5 ml
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DIRECTIONS

Yersinia PSB Broth: suspend 31g in 1000ml of cold distilled water. Distribute in tubes or flasks and sterilise by autoclaving at 121°C for 15 minutes.

Final pH 7.6 ± 0.1

Yersinia ITC Broth: suspend 11g in 250 ml of cold distilled water. Heat to dissolve completely and sterilise by autoclaving at 121°C for 15 minutes. Cool to approximately 50°C and aseptically add the contents of one vial of Potassium Chlorate Supplement and one vial of Ticarcillin Irgasan Supplement reconstituted with 5ml of sterile distilled water. Aseptically distribute into sterile tubes or flasks.

Final pH 6.9 ± 0.2

DESCRIPTION

Yersinia PSB Broth and Yersinia ITC Broth are recommended by ISO 10273 for the detection of human presumptive pathogenic strains of *Yersinia enterocolitica* in food and water used for human and animal feeding, with a "Presence-Absence Test". ITC Broth has been proposed by Wanters et al. for the isolation of *Y. enterocolitica* biotype 4/serotype 0:3 from meat products. Zutter et al. recommend to omit the potassium chlorate solution for a better recovery of *Y. enterocolitica* serotype 0:9. Yersinia PSB Broth is used for the enrichment of 1:10 dilution of the sample at 22-25°C for 5 days. Yersinia ITC Broth is used for the enrichment of 1:100 dilution of the sample at 25°C for 48 hours.

TECHNIQUE

- 1 - Prepare the sample suspension with a suitable diluent solution (e.g. Maximum Recovery Diluent REF 401691)
- 2 - Add the sample suspension to Yersinia PSB Broth to obtain a dilution 1:10.
- 3 - Add the sample suspension to Yersinia ITC Broth to obtain a dilution 1:100.
- 4 - Incubate the inoculated Yersinia PSB Broth at 22°C or 25°C for 2-3 days with agitation or for 5 days without agitation.
- 5 - Incubate the inoculated Yersinia ITC Broth at 25°C for 48 hours.
- 6 - Streak a loopful of the enrichment broth onto CIN Agar plates to obtain well isolated colonies and incubate at 30°C for 24 hours.
- 7 - Add 0.5ml of Yersinia PSB Broth to 4.5ml of KOH solution (0.25g in 100 ml of saline solution); with this treated broth streak a plate of CIN Agar and incubate at 30°C for 24 hours.
- 8 - The typical colonies on CIN Agar must be confirmed by serological and biochemical tests.

USER QUALITY ASSURANCE

(PSB Broth: 25°C- 5 days); (ITC Broth: 25°C-48 hrs)

Productivity control

Y. enterocolitica ATCC 23715 :growth

Selectivity control

E. coli ATCC 25922: inhibited**STORAGE**

Dehydrated media: 10-30°C

REFERENCES

- ISO 10273:1994-Microbiology - General guidance for the detection of presumptive pathogenic *Y. enterocolitica* pathogens.
- De Zutter, L., Le Mort, L., Janssens, M., Wanters, G. (1994) Int. J. Food Microbiol. **23**.
- Wanters, G., Goossens, V., Janssens, M., Vandepitte, J., (1988). Appl. Environ. Microbiol. **54**, 851

PACKAGING**4022701 Yersina PSB Broth 100g (3.2 l)****4022702 Yersina PSB Broth 500g (16 l)****4022651 Yersina ITC Broth Base 100g (2.2 l)****4022652 Yersina ITC Broth Base 500g (11.3 l)****4240060 Ticarcillin Irgasan Antimicrobial Supplement 10 vials, each for 250ml of medium****4240065 Potassium Chlorate Supplement 10 vials, each for 250ml of medium**