Condalab

**Reference:** 6051 **Technical Data Sheet**

**Product:** **ITC SUPPLEMENT**

## Specification

Selective supplement for isolation of *Yersinia enterocolitica*

## Presentation

| | Packaging Details | Shelf Life | Storage |
|---|---|---|---|
| 10 Freeze dried vial<br>Vial<br>with: 6 ± 0.1 g | 22±0.25 x 55±0.5 mm glass vials, tag labelled, White plastic cap - 10 vials per box. | 36 months | 2-25 ºC |

## Composition

Compositon (mg/vial)

Irgasan..... 0.5
Ticarcillin..... 0.5
Potassium chlorate..... 500

Reconstitute the original freeze-dried vial by adding Sterile Distilled Water.....10 ml

**Note**: Each vial is sufficient to supplement 500 ml of ITC Broth

## Description /Technique

Description:

Irgasan Ticarcillin and Potassium Chlorate Broth (ITC)ISO (Cat. 1361) is recommended by ISO 10273 as a selective enrichment broth for the detection of the human pathogenic strain of *Yersinia enterocolitica* in food and water samples.

Enzymatic casein digest provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is a source of vitamins, particularly of the B-group essential for bacterial growth. Magnesium chloride and malachite green, make the broth highly selective. Irgasan inhibits Gram-positive bacteria, Ticarcillin has bactericide on Gram-negative and Gram-positive bacteria and potassium chlorate has a disinfecting property.

Technique:

Aseptically reconstitute 1 vial with 10 ml of sterile distilled water. Mix gently until complete dissolution and aseptically add to 500 ml of Irgasan Ticarcillin and Potassium Chlorate Broth (ITC) ISO (Cat.1361), autoclaved and cooled to 50 ºC. Mix well and distribute into sterile containers.

Instructions for use:

For the detection of Yersinia enterocolitica according to ISO 10273:

- To obtain the initial suspension, mix 25 g of the sample with 225 ml of PSB (Cat. 1298) preheated to room temperature.
- Prepare the suspension in Irgasan Ticarcillin and Potassium Chlorate Broth (ITC) (Cat. 1361) by transferring 10 ml of PSB over 90 ml of ITC medium.
- Using the initial suspension in PSB, divide 1 ml between 2-4 CIN Agar (1126) plates and spread it on the plate surface using an extension handle. Incubate at 30 ºC for 24 ± 2 hours.
- Incubate both suspensions at 25 ºC for 44 ± 4 hours.
- Transfer 0,5 ml of each suspension onto 4,5 ml of KOH solution (separately) prepared the day before. Inoculate both solutions in CIN agar plates.
- Incubate the plates in an inverted position at 30 ºC for 24 ± 2 hours.
- Verify the morphology of the colony as presumptive pathogenic *Y. enterocolitica* by successive culturing on selective plates. Typical colonies of *Y. enterocolitica*, will appear colorless, with dark red centers, such as the bull's eye, surrounded by a transparent border.
- Confirm the presence of pathogenic species of *Y. enterocolitica* by biochemical or molecular confirmation tests.

## Quality control

### Physical/Chemical control

Color : White pH: at 25ºC

### Microbiological control

Add 1 vial to 500 ml of medium base. DO NOT HEAT once supplemented.

Inoculate: Practical range 100 ± 20 CFU. min. 50 CFU (productivity)/ $10^4$-$10^6$ (selectivity).

Aaerobiosis. Incubation at 25 ºC ± 1, reading at 44 ± 4h

Microbiological control according to ISO 11133:2014/A1:2018.

| Microorganism | Growth |
|---|---|
| *Ps. aeruginosa ATCC® 27853* | Inhibited |
| *Proteus mirabilis ATCC® 29906* | Inhibited |
| *Y. entero ATCC® 23715 + ATCC® 8739 + ATCC® 27853* | recovery ≥10 UFC characteristic colonies in *Yersinia* medium. |

### Sterility Control

Incubation 48 hours at 30-35 ºC and 48 hours at 20-25 ºC: NO GROWTH.

## Bibliography

ISO 10273 Standard. (2003) Microbiology of food and animal feeding stuffs- Horizontal methods for the detection of presumptive pathogenic Yersinia enterocolitica.
SO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
American Public Health Association Compendium of Methods for the microbiological Examination of Foods.
Schiemann, DA: Synthesis of a selective agar medium for Yersinia enterocolitica. - Canad. J. Microbiol, 25 1 298 -130 4.