



Iron Sulphite Agar

RDM-ISA-01

Principle

Iron sulphite agar is composed of tryptone, sodium sulphite, Ferric citrate and agar. Tryptone provides nitrogen and other trace nutrients for the growth of bacteria. Sodium sulphite is selective agent and sulphite source. Ferric citrate is sulphite reduction indicator. The sulphite reducing bacteria reduce sulphite to sulphide, which react with iron salt and forms black color complex. Since the sulphite reducing bacteria forms black color colonies. Agar is solidifying agent.

Use: Recommended for detection of anaerobic sulphide spoilage causing microorganism in food.

Contents*

| Ingredients | Gram/Litre |
|--------------------|-------------------|
| Tryptone | 10.000 |
| Sodium Sulphite | 0.500 |
| Ferric citrate | 0.500 |
| Agar | 15.000 |
| pH at 25°C | 7.1 ±0.2 |

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 26.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 50-52 °C and distribute aseptically in test tubes (10 ml). Inoculate 1ml of test sample in molten state mix well. Allow to set the medium in up write position and incubate at desired temperature.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

| | |
|--|--|
| Appearance | Light beige colored free flowing, homogeneous powder |
| Reaction of 2.6% solution | 7.1 ±0.2 at 25 °C |
| pH | 6.90- 7.30 |
| Gelling | Firm comparable with 1.5% agar gel |
| Color and clarity of ready medium | Light amber colored opalescent gel |
| Growth Promotion properties | Best at ≤ 100 CFU at 32-37 °C for 18-72 h |
| Indicative properties | Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h |
| Negative control | Performed using sterile distilled water |

Different Microbial Response

| Organism | ATCC | Inoculum | Growth | Colony color | Incubation |
|-------------------------------|-------|----------|-----------|--------------|-------------------|
| <i>Clostridium sporogenes</i> | 19404 | 50-100 | Luxurious | Black | 33-37 °C, 18-48 h |

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) *Manual of Clinical Microbiology*, 11th Edition. Vol. 1.
2. Salfinger Y., and Tortorello M.L., (2015), *Compendium of Methods for the Microbiological Examination of Foods*, 5th Ed., American Public Health Association, Washington, D.C

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