Iron Sulphite Agar

Intended Use
Iron Sulphite Agar is recommended for the detection of thermophilic anaerobic organisms causing sulphide spoilage in foods.

Summary
Iron Sulphite Agar is a modification of Cameron Sulphite Agar developed by the National Canners Association of America. It was shown by Beerens that 0.1% sulphite concentration in the original formula was inhibitory to some strains of *Clostridium sporogenes*. This observation was later confirmed by Mossel et al, who consequently showed that 0.05% sulphite concentration was not inhibitory to the organisms. Most clostridia have sulfite reductase in their cytoplasm but they are unable to expel them to the exterior. So, when H_2S is produced from sulfite, the colony becomes dark due to the formation of precipitates of iron sulfide from citrate.

Principle
Tryptone provides nitrogen and other nutrients necessary to support bacterial growth. Sulphite-reducing bacteria usually produce black colonies as a result of the reduction of sulphite to sulphide, which reacts with the iron (III) salt.

Formula*

Ingredients	**g/L**
Tryptone	10.0
Sodium Sulphite	0.5
Iron(III) citrate	0.5
Agar	15.0
Final pH (at 25°C)	7.1 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen
Food and dairy samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 26.00 g of the powder in 1000 mL purified / distilled water.
2. Heat with frequent agitation and boil for 1 minute to dissolve the powder completely.
3. Dispense as required in vials.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control
Dehydrated Appearance: Light yellow to brownish yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Yellow to light amber coloured, slightly opalescent gel forms in petridishes / tubes as butts.
Cultural Response: Cultural characteristics was observed after an incubation at 35°C±2°C for 48 hours under anaerobic conditions.

Organism (ATCC)	Growth	Colour of Colony/Medium
Clostridium sporogenes (11437)	Good	Black
Clostridium sporogenes (19404)	Good	Black

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Beerens H., 1958, DSIR, Proc. 2nd Internat. Sym. Food Microbiol., 1957, HMSO, London, P. 235.
2. Mossel D. A. A., Golstein Brouwers G. W. M. V. and de Bruin A. S., 1959, J. Path. Bacteriol., 78:290.
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201090010100	Dehydrated Culture Media	100 g
201090010500	Dehydrated Culture Media	500 g