

## IRON SULPHITE AGAR

Medium for the detection and enumeration of sulphite-reducing bacteria in food and other samples.

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Casein	10.0
Sodium Sulphite	0.5
Ferric Citrate	0.5
Agar	15.0
Final pH 7.1 ± 0.2	

### DESCRIPTION

IRON SULPHITE AGAR is a medium used for the detection and enumeration of sulphite-reducing bacteria in food and other samples.

### PRINCIPLE

Enzymatic digest of casein provides nitrogen, vitamins, minerals and amino acids essential for growth. Sodium sulphite and ferric citrate are H<sub>2</sub>S indicators: Sulphite-reducing bacteria reduce sulphite to sulphide which react with iron of ferric citrate to form a black precipitate of iron sulphide turning the colonies black. Agar is the solidifying agent.

### PREPARATION

Suspend 26 g of powder in 1 liter of distilled water. Heat until completely dissolved. Autoclave at 121°C for 15 minutes. Dispense aseptically into final containers.

### TECHNIQUE

Dispense the medium in 10 ml amount in tubes. Inoculate the sample when the medium is at about 50°C. Allow to solidify before incubating. Alternatively, filter diluted samples through membrane filters. Then, place each one of these filters either in tube (rolled up filter and medium at 50°C) or onto Petri dish containing IRON SULPHITE AGAR. Incubate anaerobically at 35±2°C for 24-48 hours. If thermophilic bacteria are suspected, incubate at 55°C.

### INTERPRETATION OF RESULTS

Sulphite-reducing bacteria cultivate with black colonies. Confirmation tests should be further carried out to identify the organism growing in the medium. There are many gram-negative bacteria that are able to reduce sulphite to sulphide with iron sulphide production in this medium, but in these cases the enzymes are extracellular and the entire medium becomes dark, rendering their enumeration impossible.

### STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

### WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for *In vitro* diagnostic use and must be used by properly trained operators only.

### DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

### REFERENCES

- Mossel, D.A.A., Golstein Brouwers G.W.M.V. and De Bruin A.S. (1959). J. Path. Bact. 78: 290-291.
- Tanner, F.W. (1944). The microbiology of foods, 2nd ed, p. 1127.

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**PRODUCT SPECIFICATIONS**

**NAME**

IRON SULPHITE AGAR

**PRESENTATION**

Dehydrated medium

**STORAGE**

10-30°C

**PACKAGING**

Ref.	Content	Packaging
611401	500 g	500 g of powder in plastic bottle
621401	100 g	100 g of powder in plastic bottle

**pH OF THE MEDIUM**

7.1 ± 0.2

**USE**

IRON SULPHITE AGAR is a medium used for the detection and enumeration of sulphite-reducing bacteria in food and other samples

**TECHNIQUE**

Refer to technical sheet of the product

**APPEARANCE OF THE MEDIUM**

Dehydrated medium

Appearance: free-flowing, homogeneous

Colour: beige

Prepared medium

Appearance: slightly opalescent

Colour: light amber

**SHELF LIFE**











4 years

**QUALITY CONTROL**

- Control of general characteristics, label and print
- Microbiological control  
 Inoculum for productivity: 10-100 CFU/ml  
 Inoculum for specificity: ≤10<sup>4</sup> CFU/ml  
 Incubation Conditions: 24-48 hours at 55°C, in anaerobic atmosphere

Microorganism		Growth	Colour
<i>Clostridium sporogenes</i>	ATCC® 19404	Good	Black colonies
<i>Clostridium perfringens</i>	ATCC® 11437	Good	Black colonies
<i>Escherichia coli</i>	ATCC® 25922	Good	No blackening

**TABLE OF SYMBOLS**

 Batch code	 <i>In vitro</i> Diagnostic Medical Device	 Manufacturer	 Use by	 Fragile, handle with care
 Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult instructions for use	 Do not reuse

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