Reference: 641071ZA **Technical Data Sheet**

Product: # Triple Sugar Iron Agar - Inclinated Tube 7.5 ml

Specification

Differential medium for the identification of enterobacteria, according to ISO standards 6579, 6785 and 10272.

Presentation

	Packaging Details	Shelf Life	Storage
20 Tubes / Slant Tube 16 x 113 mm with: 7,5 ± 0.2 ml	1 box with 20 tubes, 16x113 mm glass tubes, ink labelled and metal cap.	9 months	8-25 ºC

Composition

Composition (g/l):

Casein peptone	10.000
Meat peptone	10.000
Meat extract	3.000
Yeast extract	3.000
Sodium chloride	5.000
Lactose	10.000
Sacarose	10.000
D(+) Glucose	1.000
Phenol red	0.025
Ferric ammonium citrate	0.300
Sodium thisulfate	0.300
Agar	13.000

Description /Technique

Description

TSI Agar is a modification of the classical Kliger's agar. 1% sucrose has been added to this medium to differentiate Proteus and Hafnia (sucrose positive) from Salmonella and Shigella (sucrose negative).
Sugar degradation with acid formation is detected by turning an indicator (phenol red) to yellow, whereas alkalinization turns it to purple. When only glucose is degraded, the acid production is weak and is evaporated on the surface, so the indicator may be re-oxidised producing an alkaline surface (red) and an acid butt (yellow). If lactose or sucrose is degraded, acid production is intense and the entire medium (surface and butt) turns yellow. Gas production is detected by the formation of bubbles and occasionally cracks in the agar. Hydrogen sulfide production, from thiosulfate or sulphured amino-acids from peptones, is detected by the formation of black FeS precipitate when the medium reacts with iron salts.
Use the medium in slanted tubes with a good butt and a short slant. Inoculate by streaking on the surface and stabbing deeply. It is advisable to use tubes with cotton plugs, in order to allow a re-oxidation of the indicator. If screw caps are used, they must be loose. See the following page for the table of reading (observations) and interpretation of results in TSI Agar.

Technique

To inoculate tubes follow the standard laboratory methods or the applicable norms: stab inoculation, loop inoculation etc.

Quality control

Physical/Chemical control

Color : Reddish pH: 7.4 ± 0.2 at 25ºC

Microbiological control

Inoculate by stabbing the butt + streak the slant

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020.

Aerobiosis. Incubation at 37 ± 1 ºC, reading after 24 ± 3 h

Microbiological control according to ISO 11133:2014/A1:2018; A2:2020.

Microorganism	Growth
Escherichia coli ATCC® 25922, WDCM 00013	Good / Slant:Ac /Butt:Ac /Gas (+)/ SH2(-)
Salmonella enterica ATCC® 13076, WDCM 00030	Good /Slant: Alk/Butt:Ac /Gas (+)/ SH2(+)
Shigella sonnei ATCC® 25931	Good /Slant: Alk/Butt:Ac /Gas (-)/ SH2(-)
Proteus mirabilis ATCC® 43071	Good /Slant: Alk/Butt:Ac /Gas (+)/ SH2(+)
Shigella sonnei ATCC® 9290	Good /Slant: Alk/Butt:Ac /Gas (-)/ SH2(-)
Ps. aeruginosa ATCC® 27853, WDCM 00025	Good /Slant: Alk/Butt:Ac /Gas (-)/ SH2(-)

Sterility Control

Incubation 48 h at 30-35 ºC and 48 h at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

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