TSI Agar

Product: Triple Sugar Iron (TSI) Agar

Catalogue Number: i23183

Content: 500 g

Use: Triple Sugar Iron Agar (TSI Agar) is used for the differentiation of gram-negative enteric bacilli based on carbohydrate fermentation and the production of hydrogen sulfide.

Principle: TSI Agar contains three sugars (dextrose, lactose and sucrose,(phenol red for detecting carbohydrate fermentation and ferrous ammonium sulfate for detection of hydrogen sulfide production (indicated by blackening in the butt of the tube.(Carbohydrate fermentation is indicated by the production of gas and a change in the color of the pH indicator from red to yellow. To facilitate the detection of organisms that only ferment dextrose, the dextrose concentration is one-tenth the concentration of lactose or sucrose. The small amount of acid produced in the slant of the tube during dextrose fermentation oxidizes rapidly, causing the medium to remain red or revert to an alkaline pH. In contrast, the acid reaction (yellow) is maintained in the butt of the tube because it is under lower oxygen tension. After depletion of the limited dextrose, organisms able to do so will begin to utilize the lactose or sucrose. To enhance the alkaline condition of the slant, free exchange of air must be permitted by closing the tube cap loosely. If the tube is tightly closed, an acid reaction (caused solely by dextrose fermentation) will also involve the slant.

Composition g / l:

Peptone	20.000
Meat extract	3.000
Yeast extract	3.000
Lactose	10.000
Sucrose	10.000
Glucose	1.000
Iron(III) citrate	0.300
Sodium chloride	5.000
Sodium thiosulphate	0.300
Phenol red	0.024

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Agar	12.000

Dehydrated Appearance: Pink, free-flowing.

Solution: 6.5% solution, soluble in purified water upon boiling. Solution is red, very slightly opalescent, may contain up to a small amount of dark brown precipitate.

Prepared Appearance: Red, slightly opalescent.

pH at 25 °C: 7.4 ± 0.2

Storage: Store at 15-30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label

Shelf life: If stored under recommended conditions the unopened container has a shelf-life of 3 years after day of production (see expiry date on the label).

شرکت زیست کاوش ایرانیان

تهران، اتوبان تهران- کرج، شهرک پژوهش، بلوار پژوهش، تلفکس: ۴۴۷۸۷۴۴۸، همراه: ۰۹۳۹۱۰۰۳۵۶۵

www.ibresco.com
info@ibresco.com