



Reference : 02-519

Scharlau Microbiology - Technical data sheet

Product :
LACTOSE SULFITE BROTH BASE

Also known as

CLS BASE

Specification

Liquid medium for the determination of H₂S production by *Clostridium perfringens* according to ISO standard.

Formula * in g/L

Peptone.....	5,00
Yeast extract.....	2,50
Sodium chloride.....	2,50
Lactose.....	10,00
L-Cysteine.....	0,30

Final pH 7,1 ±0,2 at 25 °C

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Dissolve completely 10,1 g of powder in 500 mL of distilled water and sterilize in the autoclave at 121°C for 15 minutes. Cool and aseptically add a flask sterile sodium meta-bisulfite solution (Art. No. 06-114LYO1) and a flask of sterile ammonium ferric citrate solution (Art. No. 06-113LYO1). Mix well and distribute into sterile containers containing Durham tubes.

Description

This is a simple medium that selects *C. perfringens* over other sulfite reducing clostridia by their ability to produce gas from lactose, at 46°C. *C. parapfringens* also has this ability, however this microorganism is very rare in food samples.

Technique

All of the freshly prepared or reconstituted media tubes are inoculated in duplicate with 5 drops of fresh thioglycollate culture in sterile conditions. Tubes are incubated in aerobic conditions at 46°C for a period of 18-24 hours. *C. perfringens* presence is observed by an iron sulfide precipitate appearing in the tubes. It indicates sulfite reducing activity. Accumulation of gas in the Durham's tubes is a sign of lactose fermentation.

Necessary supplements

Sodium Disulfite (Sodium Meta-Bisulfite) for Bacteriology (Art. No. 06-114LYO1)

Vial Contents:

Necessary amount for 500 mL of complete medium.

Di-sodium sulfite.....375,00 mg

Distilled water (Solvent)

Ferric Ammonium Citrate Supplement (Art. No. 06-113LYO1)

Vial Contents:

Necessary amount for 500 mL of complete medium.

Ferric ammonium citrate..... 312,00 mg

Distilled water (Solvent)



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Quality control

Incubation temperature: 46°C ±0,5 / ANA

Incubation time: 18-24 h

Inoculum: ≥ 10⁸ CFU (specificity) according to ISO 11133:2014/Amd 1:2018 & Adm 2:2020

Microorganism

Clostridium perfringens ATCC® 13124

Clostridium perfringens ATCC® 10543

Growth

Good

Good

Remarks

H₂S (+) Gas (+)

H₂S (+) Gas (+)



Left: *Clostridium perfringens* ATCC 10543

Center: *Clostridium perfringens* ATCC

Right: Uninoculated tube

References

- ISO Standard 7937 (2004) Microbiology of food and animals feeding stuffs. Horizontal method for enumeration of *Clostridium perfringens*. Colony count technique.
- ISO 11133:2014/ Adm 1:2018/ Adm 2:2020/ Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- PASCUAL ANDERSON, M^a R. (1992) Microbiología Alimentaria. Díaz de Santos. Madrid.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).