Product Data Sheet

LEAD ACETATE AGAR
Product No. GB-DCM-00321-1A

INTENDED USE
For detection of H2S producing enteric bacteria.

PRODUCT SUMMARY
Salmonella, Shigella, Yersinia species and certain strains of Escherichia coli cause severe gastroenteritis and lifethreatening systemic illness in human. Of these, Salmonella Typhi can be differentiated due to their ability to form hydrogen sulphide. Lead Acetate Agar is the modification of the original formulation of Spray. This medium was successfully used to study hydrogen sulphide production. Lead Acetate Agar can also be used to differentiate between Salmonella Paratyphi A and Salmonella Paratyphi B. The latter produces hydrogen sulphide, observed as browning of the medium, within 18-24 hours, whereas the former fails to produces hydrogen sulphide.

Product Specifications

Ingredients	Gms / Ltr
Peptone	15.000
Proteose peptone	5.000
Dextrose (Glucose)	1.000
Lead acetate	0.200
Sodium thiosulphate	0.080
Agar	15.000

PRINCIPLE
This medium consists of Peptone, proteose peptone and dextrose which provide all the essential nutrients for the growth of bacteria. Bacteria capable of using sulphur from sodium thiosulphate in their metabolic activities produce hydrogen sulphide. Lead acetate acts as an indicator of hydrogen sulphide production observed as browning of the medium. Dextrose is the fermentable carbohydrate source. Production of gas from dextrose is indicated by the presence of bubbles in the butt.

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INSTRUCTION FOR USE

- Dissolve 36.28 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense into test tubes and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C. Allow the tubes to cool in a slanted position to obtain slants with generous butts. Inoculate pure culture by surface streaking the slant and stabbing the butt.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Gas production	H2S production	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	Positive reaction	Negative reaction	35-37°C	18-24 Hours
Enterobacter aerogenes	13048	50-100	Luxuriant	Positive reaction	Negative reaction	35-37°C	18-24 Hours
Salmonella Paratyphi A	9150	50-100	Luxuriant	Negative reaction	Negative reaction	35-37°C	18-24 Hours
Salmonella Paratyphi B	8759	50-100	Luxuriant	Negative reaction	Positive reaction, browning of the medium	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Luxuriant	Variable reaction	Positive reaction, browning of the medium	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	Negative reaction	Positive reaction, browning of the medium	35-37°C	18-24 Hours
Shigella dysenteriae	13313	50-100	Luxuriant	Negative reaction	Negative reaction	35-37°C	18-24 Hours
Shigella flexneri	12022	50-100	Luxuriant	Negative reaction	Negative reaction	35-37°C	18-24 Hours

Goslar Biotech, 255A Barking Road East Ham, London E6 1LB, United Kingdom
Email: info@goslarbiotech.com, Website: www.goslarbiotech.com

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow coloured homogeneous free flowing powder.

Appearance of prepared : Medium amber coloured clear to slightly opalescent gel forms in tubes as slants.

pH (at 25°C) : 6.6± 0.2

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

This product is for research use only.

Goslar Biotech, 255A Barking Road East Ham, London E6 1LB, United Kingdom
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