Glucose Agar

M1746

Intended Use:

Recommended for differentiation of *Enterobacteriaceae* in urine, water and food samples.

Composition**

Ingredients	g/ L
Tryptone	2.000
Dextrose (Glucose)	10.000
Sodium chloride	5.000
Yeast extract	1.000
Dipotassium hydrogen phosphate	0.300
Bromothymol blue	0.080
Agar	2.500
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 20.88 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and dispense as desired.

Principle And Interpretation

Glucose agar is used for the differentiation of *Enterobacteriaceae* in urine, water and food. It differentiates species on the basis of glucose fermentation. The *Enterobacteriaceae* are gram- negative chemoautotroph that posses both respiratory and fermentative metabolism.

Tryptone and yeast extract provide essential nutrients for growth: nitrogen, vitamins, minerals and amino acids; Glucose is the fermentable carbohydrate providing carbon and energy; Sodium chloride maintains the osmotic balance; Bromothymol blue is a pH indicator.

Inoculate and incubate at 35 ± 2°C for 18 - 24 hours. The glucose fermenting microorganisms produce yellow colour (acid) and the non-fermenting ones, blue colour or colourless.

Type of specimen

Clinical samples: Urine sample, Food and dairy samples; Water samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,4,5).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (6).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro Diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3. Other biochemical and serological tests must be carried out for confrimation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Light yellow to light green homogeneous free flowing powder
Colour and Clarity of prepared medium
Blue green coloured, clear to slightly opalescent gel forms in tubes as butts.
Reaction
Reaction of 2.08% w/v aqueous solution at 25°C. pH : 7.1±0.2
pH
6.90-7.30
Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Growth	Acid production
# *Klebsiella aerogenes* ATCC 13048(00175*)	good	Positive reaction (Colour changes to yellow)
Escherichia coli ATCC 25922 (00013*)	good	Positive reaction (Colour changes to yellow)
Salmonella Typhimurium ATCC 14028 (00031*)	good	Positive reaction (Colour changes to yellow)

Key : (*) Corresponding WDCM numbers. (#)
Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington,D.C.
4. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
5. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed.,APHA Inc., Washington, D.C.
6. Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.

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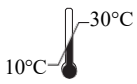
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE Marking

Do not use if package is damaged

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