

Mueller-Hinton/Agar

356-3824
356-3901 / 355-6137
356-4884 / 356-4888

DEFINITION

Medium used for studying the sensitivity of bacteria to antibiotics and also as a base medium for the preparation of blood agar.

PRINCIPLE

The nutrient substances provided by the infusion of meat and casein hydrolysate favor growth of most bacteria.

PRESENTATION

• Pre-poured

20 dishes x 90 mm
 10 dishes x 120 mm

code 356-3824

code 356-3901

• Ready-to-use

200 ml x 6 bottles

code 355-6137

• Dehydrated

500 g
 5 kg

code 356-4884

code 356-4888

STORAGE

- Pre-poured: + 2°C to 20°C.
- Ready-to-use: + 2°C to 8°C.
- Dehydrated: + 15°C to 25°C, in carefully-sealed bottles in a cool, dry place.
- Expiration date and batch number are shown on the package.

THEORETICAL FORMULA

Dehydrated beef infusion 4 g
 Casein hydrolysate 17.5 g
 Corn starch 1.5 g
 Agar 12 g
 Distilled water 1,000 ml
 Final pH (25°C) = 7.3 ± 0.1

OTHER PRODUCTS REQUIRED (NOT SUPPLIED)

- Distilled water

EQUIPMENT REQUIRED (NOT SUPPLIED) (non-exhaustive)

- Hotplate
- Mixer-homogenizer
- 100 ml Pyrex bottles with autoclave-proof stoppers
- Sterile Petri dishes (Ø= 90 mm and 120 mm)
- Thermostatically-controlled incubator or incubating room, precise to ± 1°C
- Autoclave
- All usual laboratory equipment.

PREPARATION OF DEHYDRATED MEDIUM

Always shake well before use.

Dissolve 35 g of powder in 1 liter of distilled water. Bring to the boil until completely dissolved.

Dispense in tubes or bottles and sterilize in autoclave at 121°C for 15 minutes.

Reconstitution ratio: 35 g/l

500 g of powder makes 14.2 liters of medium.

PROTOCOL

At the moment of use, melt the medium in a boiling water-bath and pour into Petri dishes.

The layer of agar should be 4 mm thick. Dry the dishes for 30 minutes at 37°C.

For the technique and reading of antibiotic susceptibility, see the "Antibiogram" sheet.

PRECAUTIONS

Comply with Good Laboratory Practices.

PERFORMANCES / QUALITY CONTROL OF THE TEST

The growth performances of the media are verified with the following strains:

STRAINS	Growth after 24h at 37°C
<i>Escherichia coli</i> ATCC 25922	Satisfactory growth
<i>Staphylococcus aureus</i> ATCC 25923	Satisfactory growth
<i>Pseudomonas aeruginosa</i> ATCC 27853	Satisfactory growth

STRAINS	Antimicrobial susceptibility testing
<i>Escherichia coli</i> ATCC 25922	Complying with inhibition diameters current specifications (NCCLS and/or CA-SFM)
<i>Staphylococcus aureus</i> ATCC 25923	
<i>Pseudomonas aeruginosa</i> ATCC 27853	
<i>Enterococcus faecalis</i> ATCC 29212	

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QUALITY CONTROL OF MANUFACTURER

Every product manufactured and marketed by Bio-Rad is subject to a quality-assurance procedure at all stages, from the reception of raw materials to the marketing of the end-product. Each batch of finished product undergoes quality control and is marketed only if it satisfies the acceptability criteria.

Documentation relative to the production and control of each batch is kept on file.

KEY WORDS

Mueller-Hinton Agar / Blood agar / Sensitivity / Antibiotics / Antibiotic assay / Medium.

BIBLIOGRAPHY

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