

MUELLER HINTON AGAR

Medium for susceptibility test (Kirby-Bauer method).

TYPICAL FORMULA (g/L)

Meat Extract	2.0
Casamino Acids, Technical	17.5
Starch	1.5
Agar	15.0
Final pH 7.3 ± 0.1	

DESCRIPTION

MUELLER HINTON AGAR is used for antimicrobial susceptibility testing of rapidly growing aerobic microorganisms by the disk diffusion technique.

PRINCIPLE

Casamino acids and meat extract are a source of amino acids, nitrogen, minerals, vitamins, carbon and other factors which increase the growth of microorganisms. Starch acts as a protective substance against toxic molecules which can be present in the medium. Hydrolysis of starch during sterilization supplies a little amount of glucose which represents a source of energy. Agar is the solidifying agent. Kirby-Bauer method is based on the diffusion, through the agar, of antimicrobial substances which soaks paper disks: microorganism growth shows an inhibition halo around the disk and the diameter of the halo is correlated to the Minimal Inhibiting Concentration (MIC).

PREPARATION

Suspend 36.0 g of powder in 1 litre of distilled or deionized water. Heat to boiling and shake until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes. Dispense in final containers.

TECHNIQUE

Transfer 4-5 colonies in an appropriate broth.

Place it in a 37°C incubator until an opacity is obtained equivalent to the standard opacity of 0.5 on the MacFarland scale. Introduce a sterile swab into the inoculum and inoculate the agar passing 2 or 3 times onto the entire surface.

Press the disk containing the antimicrobial on the agar surface.

Incubate at 36±1°C for 18 hours, measure the inhibition zone with a compass and compare to the NCCLS recommended zone ranges.

INTERPRETATION OF RESULTS

Compare obtained values of inhibition halo diameter with the values reported on NCCLS M100(M2) document.

STORAGE

10-30°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

WARNING and PRECAUTIONS

The product is not classified as hazardous by current legislation and does not contain harmful substances in concentrations of ≥1%. The product is designed for *In vitro* diagnostic use and must be used only by properly trained operators.

DISPOSAL of WASTE

Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

1. Bauer et al. (1966). J. Clin. Pathol. 45:493-496.
2. Mueller, J.H., and Hinton. 1941. Proc. Soc. Exp. Biol. Med. 48: 330-333.
3. NCCLS. Performance standards for susceptibility testing; Twelve Informational Supplement. NCCLS Document M100-S12, January 2002.



Liofilchem s.r.l.

Via Scozia-Zona industriale - 64026 Roseto degli Abruzzi Tel. +39.085.8930745 - Fax +39.085.8930330
Web site: <http://www.liofilchem.net> E-mail: liofilchem@liofilchem.net

PRODUCT SPECIFICATIONS

NAME

MUELLER HINTON AGAR

PRESENTATION

Dehydrated culture medium

STORAGE

10-30°C

PACKAGING

Code	Content	Packaging
610033	500 g	500 g of powder in plastic bottle
620033	100 g	100 g of powder in plastic bottle
6100335	5 kg	5 kg of powder in plastic container

pH OF THE MEDIUM

7.3 ± 0.1

USE

MUELLER HINTON AGAR is used for antimicrobial susceptibility testing of rapidly growing aerobic microorganisms by the disk diffusion technique.

TECHNIQUE

Refer to technical sheet of the product.

APPEARANCE OF THE MEDIUM

Amber medium, slightly opalescent.

SHELF LIFE






4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Sterility control
7 days at 25 ± 1°C, in aerobiosis
7 days at 36 ± 1°C, in aerobiosis
- Microbiological control
Incubation conditions: 18-24 h at 36 ± 1°C

Microorganism	ATCC	Growth	Characteristics
<i>Enterococcus faecalis</i>	ATCC 29212	Good	White colonies
<i>Escherichia coli</i>	ATCC 25922	Good	Colorless colonies
<i>Proteus mirabilis</i>	ATCC 25933	Good	Colorless colonies
<i>Staphylococcus aureus</i>	ATCC 25923	Good	White colonies

TABLE of SYMBOLS

IVD In vitro Diagnostic Medical Device	LOT Batch code	 Manufacturer	 Contains sufficient for <n> tests
REF Catalogue number	 Temperature limitation	 Use by	 Caution, consult accompanying documents



Liofilchem s.r.l.

Via Scozia-Zona industriale - 64026 Roseto degli Abruzzi Tel. +39.085.8930745 - Fax +39.085.8930330
Web site: <http://www.liofilchem.net> E-mail: liofilchem@liofilchem.net