

IVD in vitro diagnosticum - For professional use only



MUELLER-HINTON Agar

MUELLER-HINTON agar

Cat. No. 1.05437.0500/5000
(500 g, 5 kg)

Merckoplate ® MUELLER-HINTON agar

Cat. No. 1.10414.0001
(20 plates)
Cat . No. 1.13405.0001
(480 Plates)

Media proposed by MUELLER and HINTON (1941) for testing the sensitivity of clinically important pathogens towards antibiotics or sulfonamides.

These culture media comply with the requirements of the WHO (1961, 1977) and DIN Norm 58930. MUELLER-HINTON agar is used for agar diffusion tests while MUELLER-HINTON broth is employed for the determination of the MIC in serial dilution tests.

See also General Instruction of Use

Warnings and precautions see www.merck-chemicals.com

Principle

Microbiological method

Mode of Action

The composition of the culture media provide favourable growth conditions, the media are almost totally devoid of sulfonamide antagonists.

In order to improve the growth of fastidious microorganisms, blood can be added to MUELLER-HINTON agar. According to JENKINS et al. (1985), this may lead to false results when testing the susceptibility of enterococci to aminoglycosides.

MUELLER-HINTON Agar:

Typical Composition (g/litre)

Meat infusion 2.0; casein hydrolysate 17.5; starch 1.5; agar-agar 13.0.

Preparation and Storage

Cat. No. 1.05437. ® MUELLER-HINTON Agar (500 g/5 kg)

Usable up to the expiry date when stored dry and tightly closed at +15 to +25°C. Protect from light.

After first opening of the bottle the content can be used up to the expiry date when stored dry and tightly closed at +15 to +25°C.

Suspend 34.0 g/litre and autoclave (15 min at 121 °C), if required cool to 45-50 °C and add 5-10 % defibrinated blood, pour plates.

pH: 7.4 ± 0.2 at 25 °C.

Without blood, the plates are clear to opalescent and yellowish-brown.

Cat. No. 1.10414.0001 Merckoplate ® MUELLER-HINTON Agar (20 plates, 20 ml each)

Cat. No. 1.13405.0001 Merckoplate ® MUELLER-HINTON Agar (480 plates, 20 ml each)

Ready-to-use

Usable up to the expiry date when stored at +12 to +15°C.

The plates are clear to opalescent and yellowish-brown.

Specimen

e.g. Isolated bacteria from urine, .

Clinical specimen collection, handling and processing , see general instructions of use.

Experimental Procedure and Evaluation

Carry out the sensitivity or resistance test as directed.

Incubation for 24 h at 35 °C aerobically.

Quality control of MUELLER-HINTON Agar

| Test discs | Inhibition zone diameter in mm acc. to WHO (revised) | | | |
|--|--|--------------------------|------------------------------|------------------------------|
| | TEST STRAINS | | | |
| | Esch. coli ATCC 25922 | Staph. aureus ATCC 25923 | Pseud. aeruginosa ATCC 27853 | Enteroc. faecalis ATCC 33186 |
| Ampicillin 10 µg | 16-22 | 27-35 | - | - |
| Tetracyclin 30 µg | 18-25 | 19-28 | - | - |
| Gentamicin 10 µg | 19-26 | 19-27 | 16-21 | - |
| Polymyxin B 300 IU | 12-17 | 7-13 | - | - |
| Sulfamethoxazole 1.25 µg + Trimethoprim 23.75 µg | 24-32 | 24-32 | - | > 20 |

Quality control of MUELLER-HINTON Broth

| Test strains | Growth |
|------------------------------------|-------------------------------------|
| Escherichia coli ATCC 25922 | good / very good |
| Staphylococcus aureus ATCC 25923 | good / very good |
| Pseudomonas aeruginosa ATCC 27853 | good / very good |
| Enterococcus faecalis ATCC 33186 | good / very good |
| Bacillus subtilis ATCC 6633 | good / very good (Antagonist test!) |
| Streptococcus pyogenes ATCC 12344 | Good / very good |
| Streptococcus pneumoniae ATCC 6301 | fair / good |
| Listeria monocytogenes ATCC 19118 | Fair / good |



Literature

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