IVD in vitro diagnosticum - For professional use only

CE

MUELLER-HINTON Broth

MUELLER-HINTON broth **Cat. No. 1.10293.0500 (500 g)**

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 Broth:
Typical Composition (g/litre)
Meat infusion 2.0; casein hydrolysate 17.5; starch 1.5.

Preparation Preparation and Storage
Cat. No. 1.10293. MUELLER-HINTON Broth (500 g)
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 21 g/litre, dispense into test tubes, autoclave (15 min at 121 ℃).
pH: 7.4 ± 0.2 at 25 ℃.
The prepared broth is clear and yellowish and stable for 2 weeks at 2-8 ℃.

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 ℃ aerobically.

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**
Streptococcus pneumoniae ATCC 6301	**fair / good**
Listeria monocytogenes ATCC 19118	**fair**

Literature

BAUER, A.W., KIRBY, W.M.M., SHERRIS, J.C., a. TURCK, M.: Antibiotic susceptibility testing by a standardized single disk method. - **Amer. J. Clin. Pathol., 45**; 493-496 (1966).
DIN Deutsches Institut für Normung: Methoden zur Empfindlichkeitsprüfung von bakteriellen Krankheitserregern (außer Mycobakterien) gegen Chemotherapeutika. Agar-Diffusionstest. - **DIN 58940**.
ERICSSON, H.M., a. SHERRIS, J.C.: Antibiotic Sensitivity Testing. Report of an International Collaborative Study. - **Acta path. microbiol. scand., B. Suppl., 217**; 90 pp (1971).
JENKINS, R.D., STEVENS, S.L., CRAYTHORN, J.M., THOMAS, T.W., GUINAN, M:E., a. MATSEN, J.M.: False susceptibility of enterococci to aminoglycosides with blood-enriched Mueller-Hinton agar for disk susceptibility testing. - **J. Clin. Microbiol., 22**; 369-374 (1985).
MUELLER, H.J., a. HINTON, J.: A protein-free medium for primary isolation of the Gonococcus and Meningococcus. - **Proc. Soc. Expt. Biol. Med., 48**; 330-333 (1941).
World Health Organization: Standardization of methods for conducting microbic sensitivity tests (Technical Report Series No. 210, Geneva 1961).
World Health Organization: Requirements for antibiotic susceptibility tests. I. Agar diffusion tests using antibiotic susceptibility discs. (Technical Report Series No. 610, Geneva 1977).