

## MUELLER HINTON AGAR II

Ready to use plates of an improved  
antimicrobial susceptibility testing medium

### TYPICAL FORMULA \* (g/l)

Beet Extract	2.0
Acid Digest of Casein	17.5
Starch	1.5
Agar Bios Special	17.0

\*Adjusted or supplemented to meet performance standard

Final pH 7.3 ± 0.1

### DESCRIPTION

Mueller Hinton Agar was originally prepared for the cultivation of gonococci and because of its low level of p-aminobenzoic acid it was used for sensitivity tests with sulphonamides.

Mueller Hinton Agar is recommended by NCCLS for antimicrobial disc susceptibility test of most common, rapidly growing bacteria, by the Kirby-Bauer diffusion method. To test strains that fail to grow satisfactorily on Mueller Hinton Agar, 5% defibrinated sheep blood is added to the melted and cooled medium. For tests with *H. influenzae* the Mueller Hinton Agar must be supplemented with 15mg/L NAD, 15mg/L bovine hematin, 5g/L yeast extract (see Haemophilus Test Agar cat. N°549901). Biolife Mueller Hinton Agar II is prepared with selected raw materials. It contains low levels of thymine and thymidine since they affect sulphonamide and trimethoprim MIC values, and controlled levels of Ca<sup>++</sup> and Mg<sup>++</sup> to obtain aminoglycosides inhibition zones against *P. aeruginosa* and tetracycline inhibition zones against staphylococci within the ranges suggested by NCCLS M100-S12.

### TECHNIQUE

Use Mueller Hinton Agar II in plates of 90mm or 140mm. To prepare the inoculum, suspend 4-5 colonies grown in a primary isolation medium in 4-5ml of Tryptic Soy Broth and incubate for 2-6 hours until the broth culture reaches the same density as the opacimetric standard prepared by adding 0.5ml of 0.1% barium chloride to 99.5ml of 0.36 N sulphuric acid. Within 15 minutes, dip a sterile swab into the broth culture, squeeze it against the walls of the tube to remove excess liquid, then streak it over the surface of the agar plates to obtain a uniform distribution of the inoculum. Leave the plates to dry then lay the paper discs pressing them onto the surface of the agar.

Incubate at 35 C for 18 hours then read the inhibition zones by taking in to consideration the zones, which are completely free of microbial growth and which have distinct borders.

Compare the zone sizes obtained to those reported on the table no. 2 of the NCCLS Document M100-S12 "Zone Diameter Interpretative Standards" to detect whether the organism is resistant, intermediate or susceptible to antimicrobial agents.

### STORAGE

Store at 2-8° - When stored as directed the plates remain stable until the expiry date shown on the label. Do not use beyond stated expiry date.

### REFERENCES

- Bauer, A.W.; Kirby, W.M.M.; Sherris, K.C. & Truck, M. (1966), Amer. Clin. Path, **45**, 493-496.
- National Committee for Clinical Laboratory Standard. Performance Standards for Antimicrobial Disk Susceptibility Tests; Approved Standard M2 A4 - Seventh Edition. American National Standard.
- NCCLS Performance Standard for Antimicrobial Susceptibility Testing; Twelfth Informational Supplement. NCCLS Document M100 – S12, January 2002.

### PACKAGING

<b>541740</b>	<b>Mueller Hinton Agar II</b>	<b>20 ready to use plates (90mm)</b>
<b>501740P</b>	<b>Mueller Hinton Agar II</b>	<b>5 ready to use plates (140mm)</b>