

## Instaprep® Mueller Hinton Agar

### Intended Use

Instaprep® Mueller Hinton Agar is used for antimicrobial susceptibility of common and rapidly growing microorganisms by the disc diffusion technique.

### Summary

Cultivation and isolation of bacteria from pathological samples is many a times key to the identification of the underlying infections. With ever increasing strains of resistant microorganisms, susceptibility testing to antimicrobials agents complements selecting appropriate drugs / drug regimens to treat infections. Availability of microbiology testing and such procedures being available in routine laboratories has been limited due to the availability of dehydrated media which can be put to use only after substantial procedural and preparatory requirements. Instaprep® Mueller Hinton Agar media are ready to use / ready to pour and fill this long felt need using a unique proprietary technology for routine microbiological testing.

### Principle

Instaprep® Mueller Hinton Agar ready to pour media are pre-sterilised media with standard proven formulations. The pouched media only need to be kept in boiling (100°C) water for ten minutes and they become ready to pour into sterile plates. A result of Tulip's long research the Instaprep® Mueller Hinton Agar pouched media accord flexibility to the laboratories, thereby avoiding laborious preparatory steps and wastage. Instaprep® Mueller Hinton Agar media also help laboratories to set up cultures on a random basis and not to be restricted to batching of cultures. As compared to pre-poured plates and dehydrated media, variability, contamination and wastage is also avoided. Mueller Hinton Agar is the standard agar recommended for susceptibility tests using antibiotic sensitivity discs. Mueller Hinton Agar is recommended by NCCLS and WHO Committee on standardization of susceptibility testing for determining the susceptibility of microorganisms because of its reproducibility. The poured medium is light amber coloured to slightly opalescent with a pH of  $7.3 \pm 0.1$ .

### Reagent

Instaprep® Mueller Hinton Agar is a ready to pour sterilized pouched media for microbiological applications such as cultivation / isolation / selective growth /susceptibility tests.

### Formula

Ingredients	g/L
Casein Acid Hydrolysate	17.5
Beef Extract Powder	2.0
Starch	1.5
Agar	17.0
Final pH (at 25°C ± 2°C)	7.3 ± 0.1

\*Adjusted to suit performance parameters.

### Additional Material Required

Water bath (250 mL beaker) at 100°C, vertical laminar air flow/ biosafety hood with Bunsen burner, forceps/ tongs, sterile petriplates (disposable/ glass), scissors, disinfectant (70% alcohol), absorbent sterile gauze, plastic/ glass/ wire rod for hanging pouches in water bath.

### Procedure

1. Retrieve the required number of pouches from the carton.
2. Gently squeeze the gelled media to the bottom of the (Dip side) pouch, upto 'SQZ' mark.
3. Hang the pouches vertically using a hanging rod in a boiling water bath (at 100°C) with the 'DIP' side into the water and the water level upto the 'MAX' mark, for 10 minutes. Ensure that the heat source is not directly applied to the pouch. Retrieve the pouches after 10 minutes. In case rod hanger is not used for the pouches, remove the pouches using forceps/tongs. After retrieving the pouch, it should be dried diligently with gauze and then disinfected. Any residual water from the water bath should not be allowed to drip on to the poured plate to avoid contamination.
4. Wipe dry the pouch corner at the 'CUT' mark and disinfect with 70% isopropyl alcohol (IPA).
5. Cut the pouch across the 'CUT' mark with disinfected scissors.

6. For 15 mL pouches, squeeze and pour out media aseptically into a sterile 90 mm (diameter) petriplate. While for 30 mL pouches, squeeze and aseptically pour out media equally into two sterile petriplates.
7. While pouring the media take care not to splash or form air bubbles.
8. Cover the petriplate and allow the poured media to set.
9. The poured plate is now ready to use.
10. The samples should be collected and processed aseptically before plating.

### Quality Control

**Appearance:** 15 / 30 mL pouch with intact seal.

**Appearance of the poured plate:** Clear, transparent and pale yellow in colour.

**Cultural Response:** Cultural characteristics observed after an incubation of 18-24 hours at 30°C-35°C.

<b>Organisms (ATCC)</b>	<b>Growth</b>
<i>Escherichia coli</i> (25922)	Good
<i>Staphylococcus aureus</i> (25923) subsp. <i>aureus</i>	Good
<i>Enterococcus faecalis</i> (29212)	Good
<i>Pseudomonas aeruginosa</i> (27853) Strain Boston 41501	Good

**Note:** For good growth- Growth obtained on test media should not differ by a factor greater than 2 from calculated value for a standardized inoculum. Inoculum cfu for good growth is 10-100.

### Remarks

1. The temperature of water bath must be at 100°C to liquify the media. Cooler water baths will provide lumpy, uneven media.
2. Since all agar-based media solidify rapidly, it is important that minimum time be lost between retrieval of the pouch from boiling water bath and pouring aseptically into the sterile plates. This will produce evenly surfaced medium.
3. The poured plates on solidification can be used for plating specimens or for antibiotic susceptibility tests (Mueller Hinton Agar).
4. Good laboratory practices and hazard precautions must be observed at all times.
5. 15 mL media is sufficient for the standard 90 mm petriplates. In case smaller petriplates are being used more number of plates can be poured with a single pouch, proportionately.

### Storage and Stability

1. Store the pouches at room temperature (15°C-25°C).
2. Stability of the unopened pouch is as per the expiry date mentioned on the label.

### Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

### Reference

1. Basic Laboratory Procedures in Clinical Bacteriology, J. Vandepitte, K. Engbaek, P. Piot, C.C. Heuck, W.H.O. Geneva, 1991.
2. Diagnostic Microbiology, Bailey & Scott, 9th Ed., Mosby 1994, Ellen Jo Baron, Lance R. Peterson.
3. Practical Medical Microbiology, Mackie & McCartney, Vol. 1, Microbial Infections, 13th Ed., Churchill Livingstone 1978, Edited J.P. Duguid, B.P. Marmion, R.H.A. Swain.
4. Practical Medical Microbiology, Mackie & McCartney, Vol. 2, 13th Ed., Churchill Livingstone 1989, Edited by J.G. Collee Duguid, A.G. Fraser, B.P. Marmion.
5. Handbook of Microbiological Media, Ronald M. Atlas, Lawrence C. Parks, 2nd Ed., 1997.
6. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

**Product Presentation:**

**Cat. No.**

203090070015

203090070030

**Product Description**

Instaprep® Mueller Hinton Agar

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**Pack Size**

20 x 15 mL

20 x 30 mL

**Disclaimer**

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.

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