

WORLD CLASS QUALITY

# HiCrome®

Single Streak Rapid Differentiation Series

## Clinical Testing



Single streak  
**24hr**  
Results

COLOURS that

Identify the Pathogens

HiMediaLaboratories™  
himedialabs.com

**HIMEDIA**®  
For Life is Precious

## Urinary Tract Infection

### HiCrome® UTI Agar, Modified / HiCrome® UTI Selective Agar

M1418 / M1505

A chromogenic differential medium for identification, differentiation and confirmation of enteric bacteria from specimens such as urine which may contain large number of *Proteus* species as well as potentially pathogenic gram-positive organisms.

- Chromogenic mixture to detect presence of  $\beta$ -glucosidase and  $\beta$ -D-galactosidase enzymes.
- One chromogenic substrate is cleaved by  $\beta$ -glucosidase possessed by Enterococci resulting in formation of blue colonies.
- *Escherichia coli* produce purple-magenta colonies due to  $\beta$ -D-galactosidase which cleaves the other chromogenic substrate.
- Rich source of phenylalanine and tryptophan provides an indication of tryptophan deaminase activity by *Proteus* species, *Morganella* species and *Providencia* species.

<i>Escherichia coli</i>	purple-magenta
<i>Enterococcus faecalis</i>	blue-blue green (small)
<i>Klebsiella pneumonia</i>	blue to purple, mucoid
<i>Proteus mirabilis</i>	light brown
<i>Pseudomonas aeruginosa</i>	colourless (greenish pigment may be observed)
<i>Staphylococcus aureus</i>	golden yellow
<i>subsp. aureus</i> *	

\* inhibited on selective media (M1505)



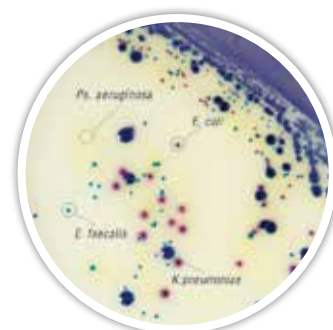
### HiCrome® UTI Agar

M1353 / M1353R

Recommended for presumptive identification and confirmation of microorganisms mainly causing urinary tract infections, can also be used for testing water, food, environmental and other clinical samples.

- It has broader application as a general nutrient agar for isolation of various microorganisms.
- It facilitates the identification on basis of different contrasted colony colours produced by enzymes with two chromogenic substrate.
- Enterococci possess  $\beta$ -glucosidase giving blue coloured colonies
- *E.coli* produce purple-magenta colonies due to  $\beta$ -D-galactosidase which cleaves the other chromogenic substrate.
- M1353R opaque background helps in better visibility

<i>Escherichia coli</i>	Purple to magenta
<i>Enterococcus faecalis</i>	blue-blue green (small)
<i>Klebsiella pneumonia</i>	blue to purple, mucoid
<i>Proteus mirabilis</i>	light brown
<i>Pseudomonas aeruginosa</i>	colourless (greenish pigment may be observed)
<i>Staphylococcus aureus</i>	golden yellow
<i>subsp. aureus</i>	



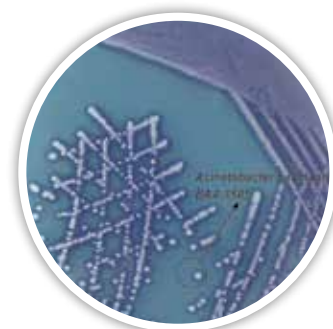
## Acinetobacter

### HiCrome® Acinetobacter Agar Base

M1938

Recommended for detection of *Acinetobacter* species from clinical specimen.

- Medium supports growth with detection in 24-48 hours.
- Chromogenic mixture imparts light purple colour to *Acinetobacter* (MDR)
- Selective supplement helps in selective growth.



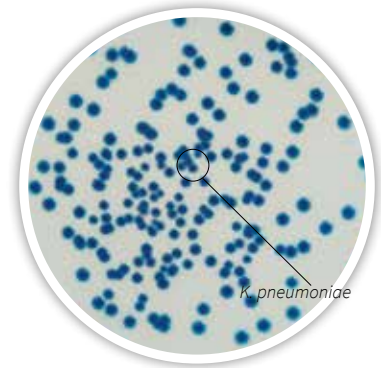
## ESBL/Carbapenem Resistant *Enterobacteriaceae*

### HiCrome® CarbaResist Agar Base

M2099

Recommended for isolation and differentiation of Carbapenem resistant *Enterobacteriaceae* from clinical samples.

- Production of carbapenemase enzyme results in resistance to penicillins, cephalosporins (i.e. cefepime, ceftriaxone), carbapenems (i.e. meropenem, ertapenem) and aztreonam thereby making these pathogens multi drug resistant.
- Most carbapenemase producing bacteria are included in the family *Enterobacteriaceae*, and are thus termed as carbapenem resistant *Enterobacteriaceae* (CRE).
- Chromogenic mixture incorporated helps in colour differentiation.
- Colistin resistant *E.coli* resulting in pink to purple coloured colonies.
- Colistin resistant *K. pneumoniae* cleaves the other chromogenic substrate producing metallic blue coloured colonies.
- Selective supplement inhibits accompanying and sensitive bacteria.



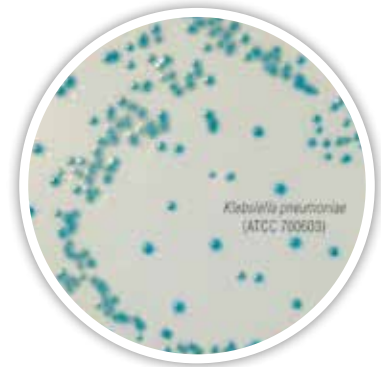
### HiCrome® ESBL Agar Base

M1829

Recommended for selective isolation of Extended Spectrum  $\beta$ -lactamase producing *Enterobacteriaceae*.

- Medium supports rapid growth with detection in 18-24 hours.
- Selective supplement helps in selective growth of ESBL producing *Enterobacteriaceae*
- Distinct colours allows proper differentiation
  - Resistant *Escherichia coli* - pink to purple
  - Resistant KESC group - bluish green
  - Proteus*, *Morganella* and *Providencia* - colourless to light brown
- \*Inhibits accompanying and sensitive bacteria.

\* Selective supplement

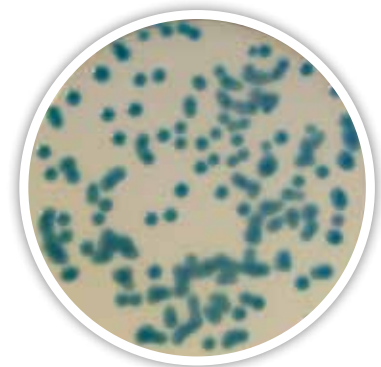


### HiCrome® KPC Agar Base

M1831

Recommended for detection of gram negative bacteria with a reduced susceptibility to carbapenem agents.

- Medium supports rapid growth with detection in 18-24 hours.
- Selective supplement helps in selective growth of Carbapenem resistant strains.
- Distinct colours of Carbapenem resistant bacteria allows proper differentiation
  - Escherichia coli* - pink to purple (confirmation with indole)
  - Klebsiella*, *Enterobacter*, *Serratia* spp. - bluish green
  - Acinetobacter* and *Salmonella*- smooth colourless colonies
  - Pseudomonas* species - colourless to light yellowish green translucent colonies with wrinkled edges.



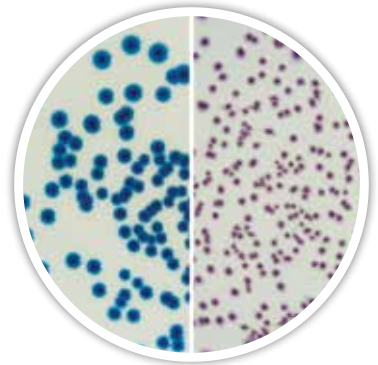
## Colistin Resistant Bacteria

### HiCrome® Colistin Resistant Agar Base

M2094

Recommended for isolation and differentiation of gram negative colistin resistant microorganisms.

- With the increasing prevalence of infections caused by MDR gram-negative bacteria, colistin has reemerged as therapy agent.
- The chromogenic substrates are specifically cleaved by enzyme  $\beta$ -D-galactosidase produced by colistin resistant *E.coli* resulting in pink to purple coloured colonies.
- colistin resistant *K.pneumoniae* cleaves the other chromogenic substrate producing metallic blue coloured colonies.



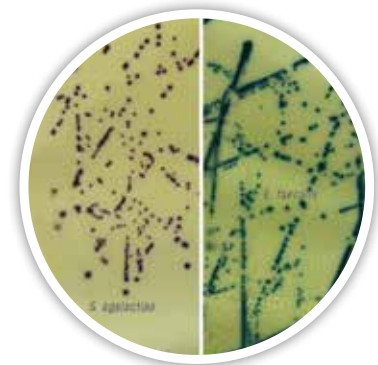
## Group B Streptococci

### HiCrome® Strep B Selective Agar Base, Modified

M1966

Recommended for the selective isolation of Group B *Streptococcus* from clinical samples.

- Chromogenic substrate is cleaved by group B-Streptococci resulting in purple coloured colonies.
- Other Streptococci give bluish green to green coloured colonies with yellow background due to fermentation indicated by phenol red.
- Selective supplements - inhibits other microorganisms.



## *Staphylococcus aureus* (MRSA/MRSE)

### HiMRSA® Confirmation Agar Base

M2126

Recommended for selective isolation of Methicillin Resistant *Staphylococcus aureus* (MRSA) from other Methicillin resistant Staphylococci species on the basis of coagulase activity from clinical samples.

- Coagulase test is used to differentiate *Staphylococcus aureus* from other Staphylococci species like *S.epidermidis* and *S.saprophyticus* on the basis of the ability to produce the coagulase enzyme.
- Mannitol positive staphylococci appears as yellow coloured colonies and negative appears as light mauve to purple coloured colonies.
- Coagulase positive organisms are surrounded by an opaque zone while the absence of opaque zone indicates coagulase negative *Staphylococcus*.





## HiCrome® MeReSa Agar Base

M1674

Recommended for the isolation and selective identification of Methicillin Resistant *Staphylococcus aureus* (MRSA) from clinical isolates.

- The chromogenic mixture incorporated in the medium is specifically cleaved by *Staphylococcus aureus* (MRSA) to give bluish green coloured colonies.
- *Staphylococcus aureus* (MSSA) and other accompanying flora - inhibited by selective supplement (Methicillin and Cefoxitin)



## HiCrome® MRSA Agar Base, Modified

M1953

Recommended for the differentiation and identification of MRSA and MRSE *Staphylococcus* species from clinical isolates.

- The chromogenic mixture incorporated in the medium is specifically cleaved by *Staphylococcus*
- *Staphylococcus aureus* (MRSA) - green
- *Staphylococcus epidermidis* (MRSE)-blue
- *Staphylococcus aureus* (MSSA) and other accompanying flora - inhibited by Inhibitor mixture and selective supplement (Methicillin and Cefoxitin)



## HiCrome® Rapid MRSA Agar Base

M1974

It is recommended for rapid isolation and identification of Methicillin Resistant *Staphylococcus aureus* (MRSA) from clinical isolates

- Rapid detection in 18-24 hours
- The chromogenic mixture incorporated in the medium is specifically cleaved by *Staphylococcus*. Carbohydrate fermentation is detected by phenol red indicator
- Methicillin Resistant *Staphylococcus aureus* (MRSA) - greenish yellow (Note: Green colour may develop after 48 hours)
- Methicillin Resistant *Staphylococcus epidermidis* (MRSE) - blue
- *Staphylococcus aureus* (MSSA) and other accompanying flora - inhibited by selective supplement.



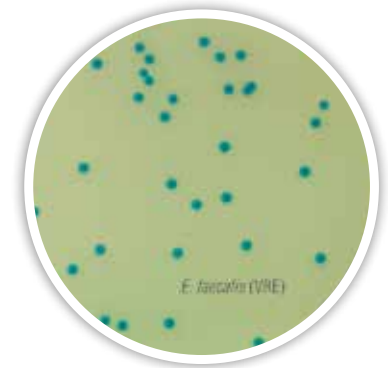
## Vancomycin Resistant Enterococci

### HiCrome® VRE Agar Base

M1830

Recommended for the identification and differentiation of VRE from clinical samples.

- Medium to support growth in 24-48 hours
- Chromogenic substrate is cleaved by  $\beta$ -glucosidase enzyme which imparts bluish green colour to VRE species
- Selective supplement - inhibits VSE and other gram positive organisms
- Opaque background for better visibility

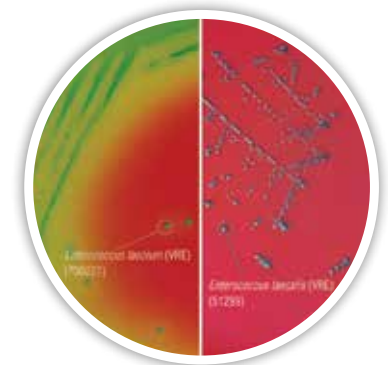


### HiCrome® VRE Agar Base, Modified

M1925

Recommended for the identification and differentiation of Vancomycin Resistant *Enterococcus faecalis* and *Enterococcus faecium* from clinical samples.

- Medium to support growth in 24-48 hours
- Chromogenic substrate is cleaved by  $\beta$ -glucosidase, enzyme which imparts blue green colour to *Enterococcus* species
- Presence of arabinose and phenol red aids to differentiate between *Enterococcus faecalis* and *Enterococcus faecium*
- *E. faecalis*(VRE) - blue colour and *E. faecium* (VRE) - green w/yellow background
- Selective supplement - inhibits VSE and other gram positive organisms



## Yeast and moulds

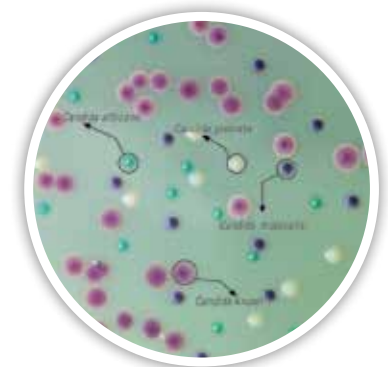
### HiCrome® Candida Differential Agar/ Base Modified

M1297A/M1456A

Recommended for rapid isolation and identification of *Candida* species from mixed cultures.

- Medium supports growth with detection in 40-48 hours.
- Chromogenic mixture helps differentiate between *Candida* species
- Chloramphenicol and Selective supplement (in M1456A) helps in inhibiting bacterial growth.
- Candida albicans* - light green
- Candida tropicalis* - blue-purple
- # *Teuomyces krusei* - purple, fuzzy
- Candida glabrata* - cream to white
- Candida parapsilosis*- cream to white

# Formerly known as *Candida krusei*



## HiCrome® *C.auris* MDR Selective Agar Base

M2114

Recommended for selective isolation of *Candida auris* MDR strains from clinical samples and mixture of other *Candida* species.

- Chromogenic mixture in the medium helps in imparting purple colour to *Candida auris*.
- The selective supplement and incubation temperature (40-42°C) helps in selection of MDR *C.auris* strains.
- It is recommended that cultures are processed within BSL2 biosafety cabinet alongwith gloves and lab coats.



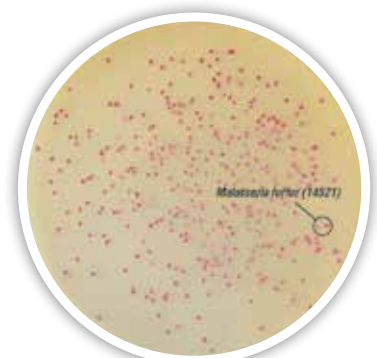
## HiCrome® *Malassezia* Agar (Twin Pack)

M1985

Recommended for isolation, cultivation and identification of *Malassezia furfur*.

- Medium supports growth with detection in 48-72 hours.
  - Tween 40, Glycerol monooleate are fatty acids which helps support luxuriant growth of *Malassezia furfur*.
- Malassezia furfur*- mauve, small  
*Candida albicans* - pale green to green  
*Candida tropicalis* - metallic blue  
 # *Teunomyces krusei*- purple  
*Candida glabrata*- colourless

# Formerly known as *Candida krusei*



## HiCrome® Shiga Toxin EC Agar Base

M2092

Recommended as a chromogenic differential medium for selective isolation of Shiga toxin producing *E.coli* from clinical and nonclinical samples..

- Certain non EC O157 Shiga toxin producing *E.coli* are usually sorbitol fermenting strains and hence Mac sorbitol Agar fails to detect this organism, posing a problem in its detection.
- Chromogenic mixture in the medium imparts mauve to purple colour to Shiga toxin producing *E.coli* strains.
- Other *Enterobacteriaceae* strains appear as colourless or blue coloured or are inhibited.



## Antimicrobial Susceptibility Testing

### HiCrome® Mueller Hinton Agar

M2010

Recommended for differentiation of organisms from clinical samples based on chromogenic identification and determination of susceptibility of microorganisms to antimicrobial agents.

- Traditional method takes 48 hours for organism identification and antimicrobial susceptibility
- This medium gives rapid and reliable results in 24 hours
- Chromogenic differentiation of various Urinary Tract pathogens
- Simultaneous detection of Antimicrobial susceptibility
- Can be employed in clinical testing of urinary tract infection

<i>Escherichia coli</i>	purple-magenta
<i>Enterococcus faecalis</i>	blue-blue green
<i>Klebsiella or Enterobacter</i>	metallic blue
<i>Proteus mirabilis</i>	light brown
<i>Pseudomonas aeruginosa</i>	colourless (greenish pigment may be observed)
<i>Staphylococcus aureus</i>	golden yellow
subsp. <i>aureus</i>	



### HiCrome® Mueller Hinton Agar (For Antifungal Testing)

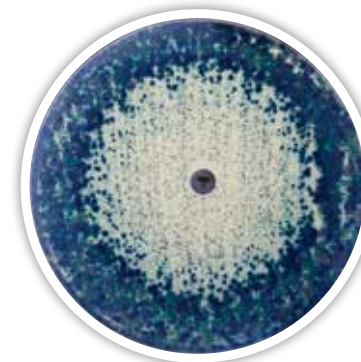
M2067

Recommended for the chromogenic differentiation of yeast from clinical samples and determination of susceptibility to antifungal agents.

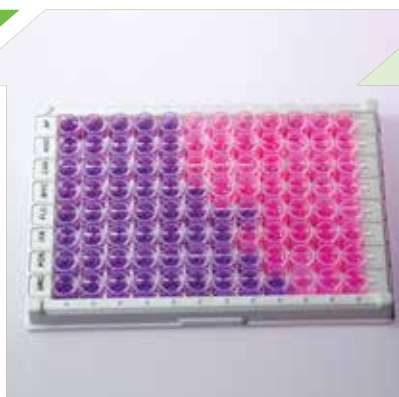
- Identification of organisms and antifungal susceptibility takes 96 hrs with traditional method
- The medium gives rapid and reliable results in 48 hours.
- Chromogenic differentiation of yeast cells along with antifungal susceptibility
- Can be employed in clinical testing

<i>Candida albicans</i>	Green
<i>Candida tropicalis</i>	Blue
# <i>Teunomyces krusei</i>	Purple
<i>Candida parapsilosis</i>	Cream
<i>Saccharomyces cerevisiae</i>	Cream

# Formerly known as *Candida krusei*



Code no. : MPK901 /  
MPK910 / MPK911



### Multi HiMIC™ Plate Kit

- A single plate to determine antibacterial/ antifungal profile
- **Dodecafungi** : Twelve antibacterial/antifungal agents in a single plate with 7 concentrations
- **Octofungi** : Eight antifungal agents with 11 concentrations in a single plate
- User friendly substitute of traditional broth micro dilution method.
- As per CLSI & EUCAST guidelines
- Recommended for Bacteria, Yeast and Fungi

### Octofungi 1 HiMIC™ Plate Kit (MPK901)

#### Eight Antifungal Agents

Amphotericin (AP) (0.008 - 8 mcg/ml)  
Anidulafungin (AND) (0.008 - 8 mcg/ml)  
Caspofungin (CAS) (0.008 - 8 mcg/ml)  
Micafungin (MYC) (0.008 - 8 mcg/ml)

Fluconazole (FLC) (0.25 - 256 mcg/ml)  
Itraconazole (ITR) (0.016 - 16 mcg/ml)  
Posaconazole (POS) (0.008 - 8 mcg/ml)  
Voriconazole (VRC) (0.008 - 8 mcg/ml)

**HIMEDIA**®  
For Life is Precious

HiMedia Laboratories Pvt. Ltd.  
[www.himedialabs.com](http://www.himedialabs.com)

- CORPORATE OFFICE -

Plot No. C-40, Road No. 21Y, MIDC, Wagle Industrial Estate, Thane (West) - 400604, Maharashtra, INDIA.  
Tel : +91-22-6147 1919 / 6116 9797 / 6903 4800 | Email : [info@himedialabs.com](mailto:info@himedialabs.com)