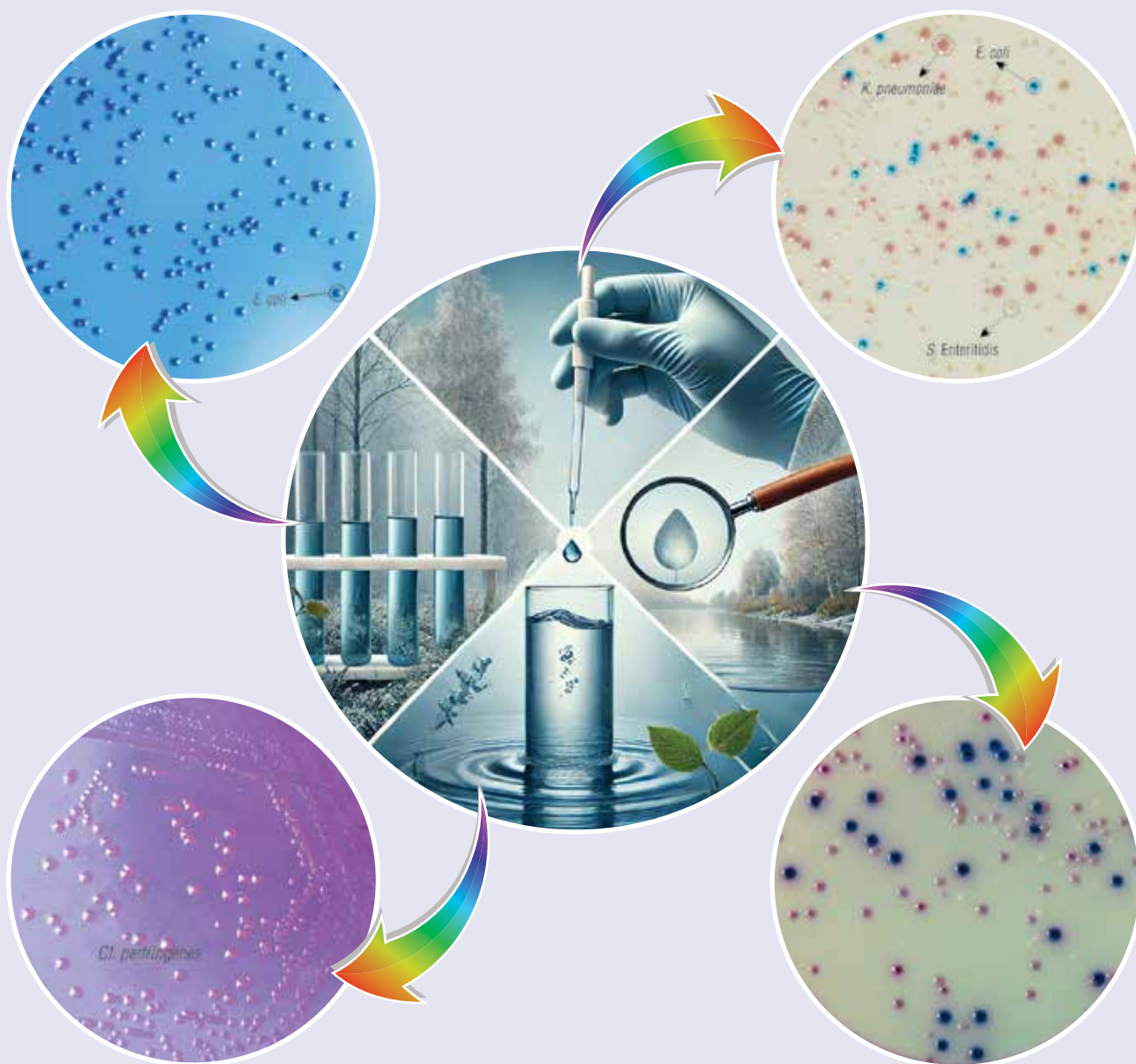


WORLD CLASS QUALITY

HiCrome®

Single Streak Rapid Differentiation Series

Water Testing



Single streak
24hr
Results

COLOURS that

Identify the Pathogens

HiMediaLaboratories™
himedialabs.com

HIMEDIA®
For Life is Precious

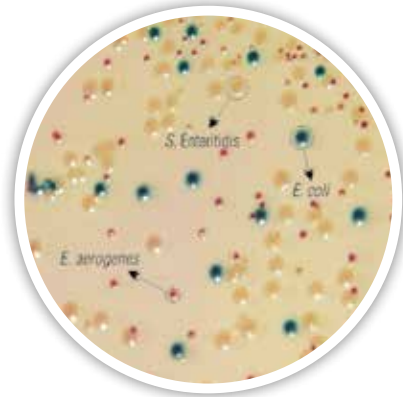
Escherichia coli and Total coliforms

HiCrome® ECC Selective Agar Base/Modified

M1294/M2056

Recommended for presumptive identification of *Escherichia coli* and other coliforms in food and water samples.

- Two chromogens to detect presence of β -glucuronidase and β -galactosidase enzymes
- β -glucuronidase produced by *E.coli* -dark blue to violet colonies
- Other coliforms possess β -galactosidase- Salmon to red
- L-Tryptophan added to improve indole detection
- Tergitol 7 and Selective supplement (M1294) or Sodium Lauryl Sulphate (M2056) for selectivity - Gram positive bacteria - inhibited
- *Salmonella* - colourless

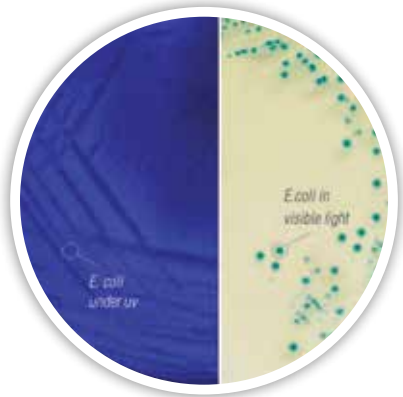


HiCrome® ECD Agar w/MUG

M1488

Recommended for detection of presence and absence of *Escherichia coli* food samples and water.

- Combination of chromogenic and fluorogenic substrate to detect presence of β -glucuronidase.
- *Escherichia coli*-blue-green, positive β -glucuronidase and positive fluorescence under uv
- Other coliforms - colourless, negative β -glucuronidase and negative fluorescence under uv
- Bile salts mixture for selectivity - Gram positive bacteria inhibited

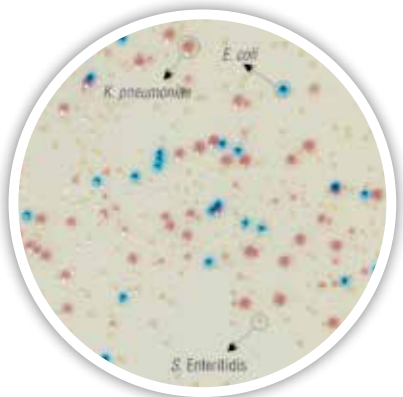


HiCrome® Coliform Agar w/SLS /Modified

M1300/ M1832

Recommended for simultaneous detection of *Escherichia coli* and total coliforms in water, milk, dairy and food samples

- Two chromogens to detect presence of β -glucuronidase and β -galactosidase enzymes
- β -glucuronidase produced by *E.coli* -dark blue to violet colonies
- L-Tryptophan added to improve indole detection
- Other coliforms possess β -galactosidase- Salmon to red
- *Salmonella* /*Shigella* species - colourless
- Sodium lauryl sulphate for selectivity -Gram positive bacteria inhibited



Coliform Broth w/SLS

M1826

Recommended for simultaneous detection of *Escherichia coli* and other *Enterobacteriaceae* in water samples

- Presence of single chromogens to detect presence of β -glucuronidase enzymes
- β -glucuronidase produced by *E.coli* -blue
- Other *Enterobacteriaceae* - colourless
- L-Tryptophan added to improve indole detection
- Sodium lauryl sulphate for selectivity -Gram positive bacteria inhibited



1. Control
3. *Klebsiella pneumoniae* ATCC 13883
5. *Shigella flexneri* ATCC 12022
7. *Enterococcus faecalis* ATCC 29212

2. *Citrobacter freundii* ATCC 8090
4. *Salmonella* Enteritidis ATCC 13076
6. *Escherichia coli* ATCC 25922
8. *Staphylococcus aureus* subsp. aureus ATCC 25923

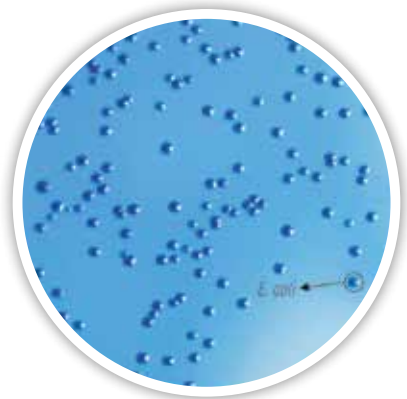
Membrane filtration

HiCrome® M-Coliform Differential Agar Base

M1951

Recommended for simultaneous detection of *Escherichia coli* and total coliforms in water samples by membrane filtration technique

- Chromogenic substrate along with aniline blue - detects presence of β -glucuronidase enzyme produced by *E. coli* to give blue coloured colonies
- *Proteus* species - tan
- Sodium deoxycholate and monensin for selectivity -Gram positive bacteria inhibited

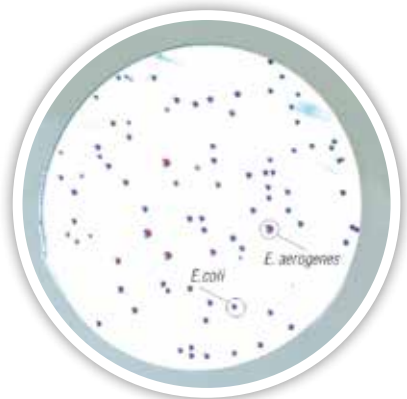


M-E.coli Broth

M1426

Recommended for simultaneous detection of *Escherichia coli* and total coliforms in water samples by membrane filtration technique

- Chromogenic substrate along with TTC - detects presence of β -glucuronidase enzyme and TTC reduction imparting blue coloured colonies of *E.coli*
- Other coliforms - red
- Bile salt mixture for selectivity-Gram positive bacteria inhibited

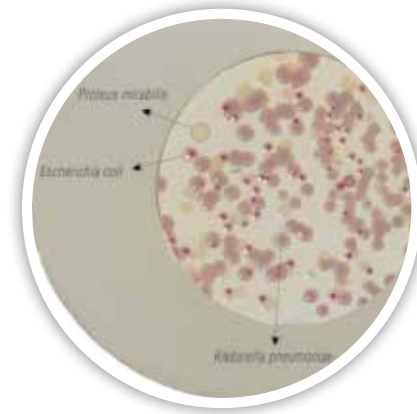


HiCrome® M-TEC Agar / Broth

M1571/M1713

Recommended by USEPA for differentiation and enumeration of thermo tolerant *Escherichia coli* in water samples by membrane filtration technique.

- Presence of chromogen to detect β -glucuronidase enzyme produced by *E.coli* give purple / magenta colonies
- *Klebsiella* gives - colourless to tan coloured colonies
- *Proteus mirabilis* - colourless to light brown
- Lactose is the fermentable carbohydrate *E.coli*-purple/magenta
- Sodium lauryl sulphate and sodium deoxycholate for selectivity - Gram positive bacteria inhibited

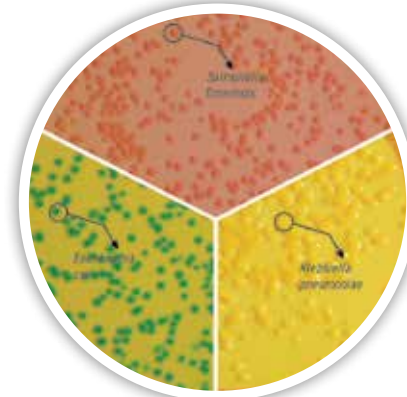


HiCrome® M-Lauryl Sulphate Agar

M1569

Recommended for simultaneous detection of *Escherichia coli* and total coliforms in water samples by membrane filtration technique

- Chromogenic substrate along with Lactose fermentation and phenol red indicator - detects presence of β -glucuronidase enzyme and differentiates between lactose fermentors and non-fermentors
- *E.coli*-green
- Lactose fermentors glucuronidase negative - yellow
- Lactose non-fermentors - pink
- Sodium lauryl sulphate for selectivity - Gram positive bacteria inhibited

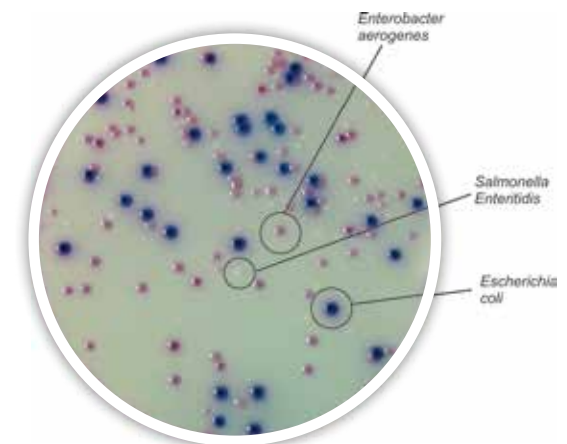


HiCrome® Chromogenic Coliform Agar (CCA)

M1991I

Recommended for simultaneous detection of *Escherichia coli* and total coliforms in water samples by membrane filtration technique

- Formulation is as per the specifications laid down in ISO 9308-1:2014.
- Mixture of three chromogens to detect β -galactosidase and β -glucuronidase enzymes. IPTG is added to enhance colour detection.
- *E.coli*-dark blue -violet
- L-Tryptophan - improved indole reaction
- Other coliforms - pink to red
- *Pseudomonas* - colourless
- Tergitol-7 for selectivity -Gram positive bacteria inhibited

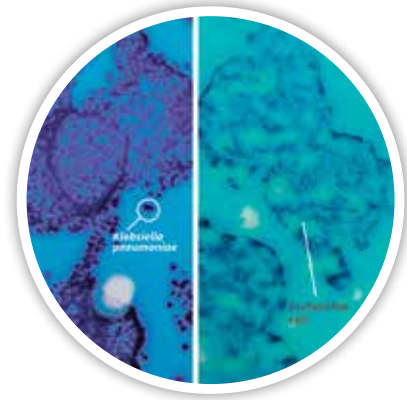


HiCrome® M-Coliconfirm Broth Base

M2064

Recommended for detection of *Escherichia coli* and other coliforms in water samples by membrane filtration.

- Recommended by APHA Standard method for the examination of water and waste water, 23rd edition
- Differentiates between *E.coli* and total coliform – chromogenic utilization and TTC reduction.
- *Escherichia coli* possess β -D-glucuronidase- Blue coloured
- Methylene blue and selective supplement inhibits gram positive bacteria.
- Other non-coliforms gives colourless colonies

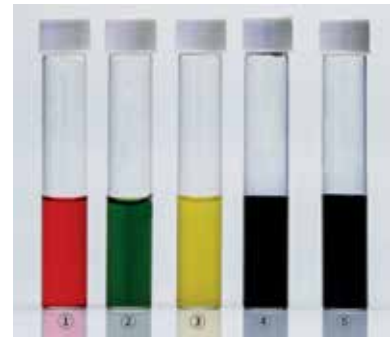


HiCrome® Rapid ECC Broth

M2011

Recommended for rapid detection of *Escherichia coli* and other *Enterobacteriaceae* from water samples.

- Rapid detection of *E.coli* and coliforms in 12-18 hours.
- Highly nutritious and can support rapid growth
- Lactose is fermentable carbohydrate and phenol red is indicator, differentiates between lactose fermenters and non-fermentors
- Chromogenic substrate to detect β -D-glucuronidase- blue coloured medium
- *Escherichia coli* ferments lactose and possess β -D-glucuronidase- Green coloured
- H₂S Detection system – *Salmonella*, *Citrobacter* imparts black colour to the medium.
- Selective mix inhibits gram positive bacteria.



1. Control
2. *Escherichia coli* ATCC 25922 (00013*)
3. *Klebsiella pneumoniae* ATCC (13883) (00097*)
4. *Citrobacter freundii* ATCC 8090
5. *Salmonella* Typhimurium ATCC 14028 (00031*)

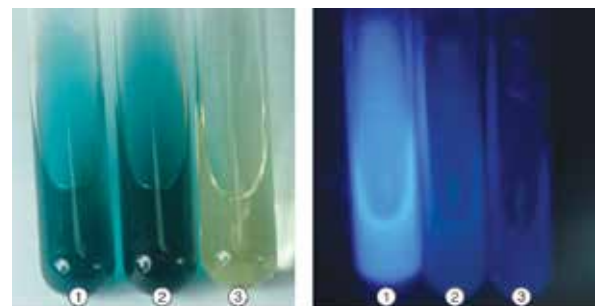
Chromogenic and fluorogenic

HiColiform® Broth Modified

M1850

Recommended for detection of presence and absence of *Escherichia coli* and total coliform in water samples.

- Presence of chromogenic substrate to detect presence of β -galactosidase and MUG to detect β -glucuronidase.
- *E.coli*-blue green, positive β -galactosidase and positive fluorescence under uv (β -glucuronidase positive)
- Other coliforms - blue green, positive β -galactosidase and negative fluorescence under uv
- Sodium lauryl sulphate for selectivity - Gram positive bacteria inhibited



M1850 - HiColiform™ Broth, Modified

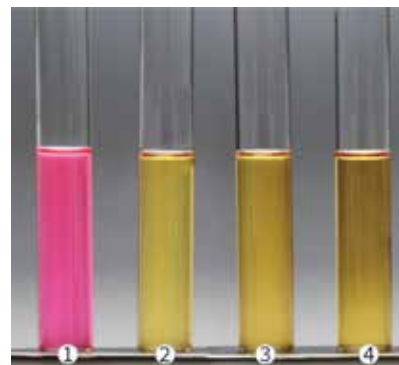
1. *Escherichia coli*
2. *Klebsiella aerogenes*
3. Control

HiCrome® Coliform Broth w/RUG

M2073

Recommended for detection of *Escherichia coli* and total coliform in water and food samples by chromogenic and fluorogenic method.

- *E.coli* is the indicator organism in detection of faecal contamination.
- It is detected by chromogenic and fluorogenic method due to the presence of β -glucuronidase.
- ▲ RUG is the newly developed fluorogenic substrate by BIOSYNTH which is more specific and sensitive.
- Lower concentrations of RUG is required for detection in comparison to MUG.
- The results with medium containing RUG can be visually detected as bright pink colour is produced due to the release of resorfin.
- It can be also be detected by fluorogenic method.



M2073 HiCrome® EC Broth w/ RUG

1. *E. coli* ATCC 25922 2. *P. aeruginosa* ATCC 27853
3. *S. Typhimurium* ATCC 14028 4. Control

HiCrome® PA Broth

M1663

Recommended for detection of presence and absence of *Escherichia coli* and total coliform in water samples.

- Presence of ONPG to detect presence or absence of β -galactosidase enzyme and MUG to detect β -glucuronidase enzyme. Lactose is the fermentable carbohydrate.
- *E.coli*-yellow colour, positive ONPG and positive fluorescence
- ONPG Positive - yellow colour
- ONPG Negative - no yellow colour
- MUG Positive - Fluorescence under uv at 366nm
- MUG Negative - No fluorescence under uv at 366nm
- Bile salts mixture for selectivity - Gram positive bacteria inhibited



M1663 - HiColume™ PA Broth

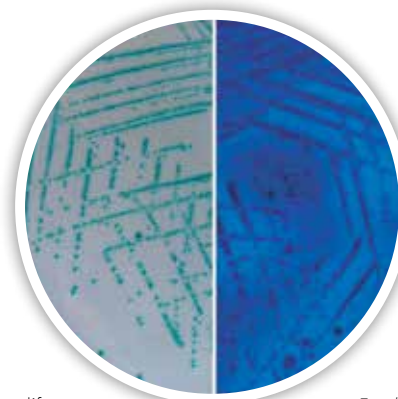
1. Control 2. *Escherichia coli*
3. *Klebsiella aerogenes* 4. *Klebsiella pneumoniae*
5. *Salmonella* Typhimurium 6. *Proteus mirabilis*
7. *Staphylococcus aureus aureus* subsp. 8. *Enterococcus faecalis*

Rapid HiColiform® Agar/Broth

M1465/M1453

Recommended for detection of presence of *Escherichia coli* and total coliform in water samples

- Presence of chromogenic substrate to detect presence of β -galactosidase and MUG to detect β -glucuronidase
- *E.coli*-blue green, positive β -galactosidase and positive fluorescence under uv (β -glucuronidase positive)
- Other coliforms - blue green, positive β -galactosidase and negative fluorescence under uv
- Confirmation of *E.coli* - Indole positive on addition of Kovacs reagent
- Sodium lauryl sulphate for selectivity - Gram positive bacteria inhibited



Other coliforms

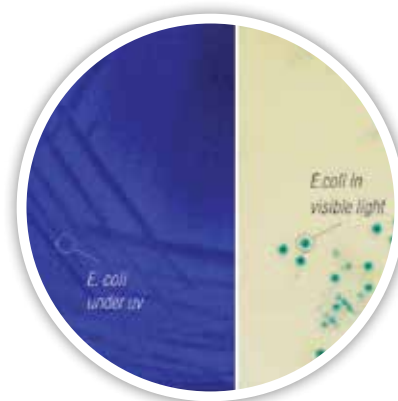
E. coli under uv

HiCrome® ECD Agar w/MUG

M1488

Recommended for detection of presence and absence of *Escherichia coli* and total coliform in water samples

- Combination of chromogenic and fluorogenic substrate to detect presence of β -glucuronidase.
- *E.coli*-blue-green, positive β -glucuronidase and positive fluorescence under uv
- Other coliforms - colourless, negative β -glucuronidase and negative fluorescence under uv
- Bile salts mixture for selectivity - Gram positive bacteria inhibited



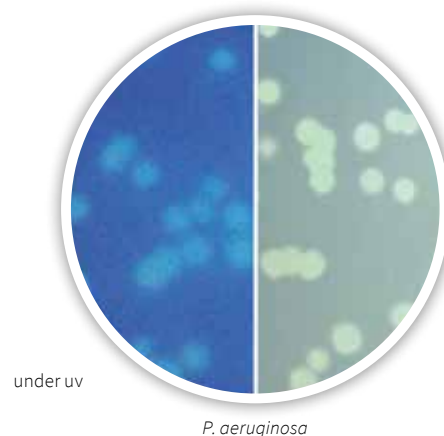
Pseudomonas

HiFluoro® Pseudomonas Agar Base

M1469

Recommended for selective isolation of *Pseudomonas aeruginosa* from water and clinical samples

- Rapid detection in 24-48 hours
- Fluorogenic compound is specifically cleaved by *Pseudomonas* to give fluorescence under uv
- Cetrimide - inhibits accompanying microflora other than *Pseudomonas*
- Salts impart pigmentation



Clostridium

M-CP Agar Base

M1354

Recommended by the Directive of the Council of the European Union 98/83/EC for the isolation and enumeration of *Clostridium* species from water sample by membrane filtration

- Medium supports growth in 24-48 hours
- Indoxyl- β -D- glucoside detects β -D- glucosidase or cellobiose
- Phenolphthalein phosphate detects acid phosphatase on exposure to ammonia fumes
- Bromo cresol purple is indicator dye and sucrose is fermentable carbohydrate
- Selective supplement - inhibits other accompanying microflora

Clostridium perfringens - yellow which turns old rose-rose pink on exposure to ammonia fumes



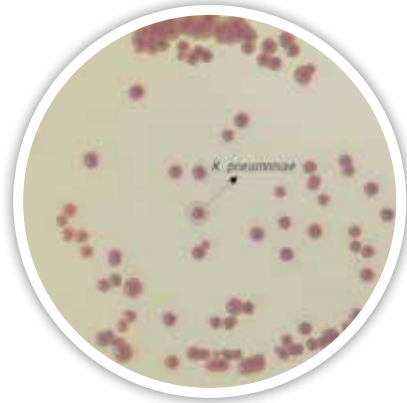
Klebsiella

HiCrome® *Klebsiella* Selective Agar Base

M1573

Recommended for the isolation and detection of *Klebsiella* species from water and other sources. Can also be used in membrane filtration

- Medium to support rapid growth in 18-24 hours
- Chromogenic mixture imparts purple-magenta colour to *Klebsiella* species
- Bile salts mixture and Sodium lauryl sulphate - inhibits gram positive organisms
- Selective supplement - inhibits other accompanying microflora



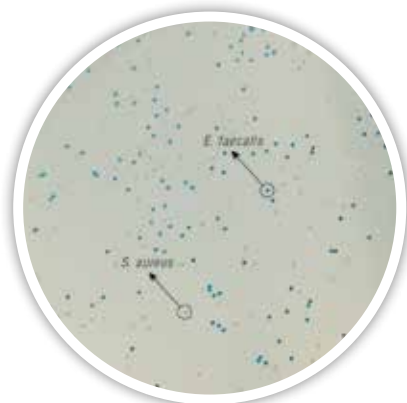
Enterococci

HiCrome® Rapid HiEnterococci Agar/Broth

M1414/M1376

Recommended for the identification and differentiation of Enterococci species from water samples

- Medium to support rapid growth in 18-24 hours
- Chromogenic substrate detects β -glucosidase, imparts blue green colour to *Enterococcus* species
- Sodium azide - inhibits accompanying microflora especially gram negative organisms



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