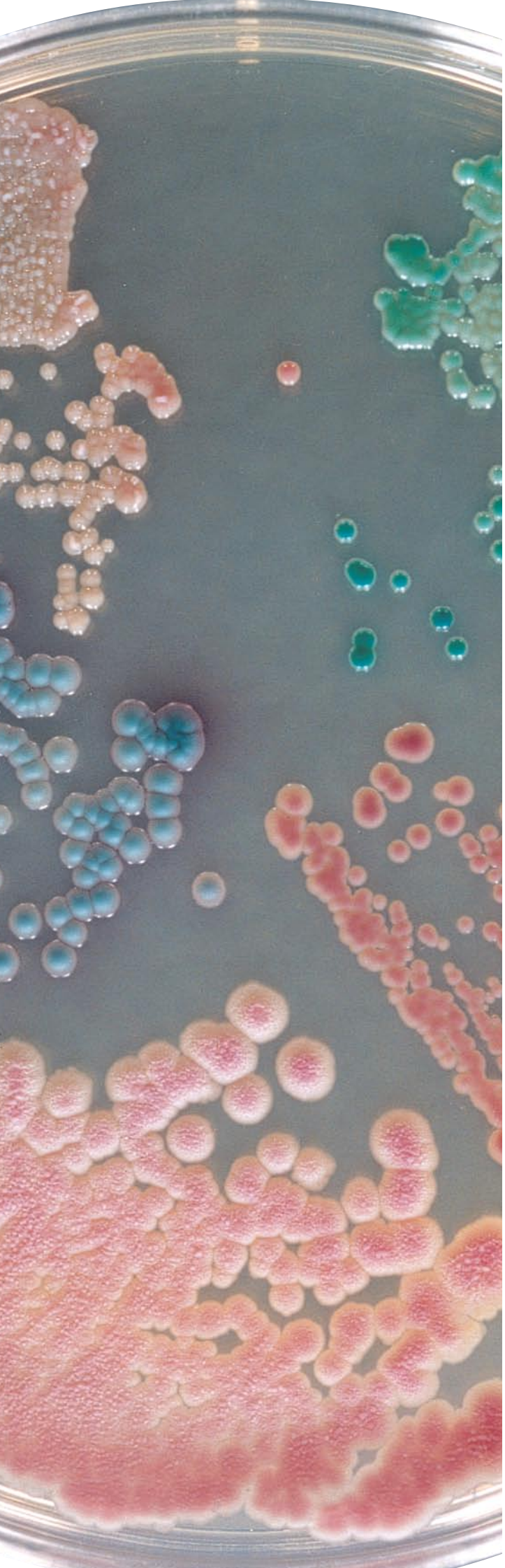


Scharlab
THE LAB SOURCING GROUP

Chromogenic Media

CHROMagar™

Scharlau

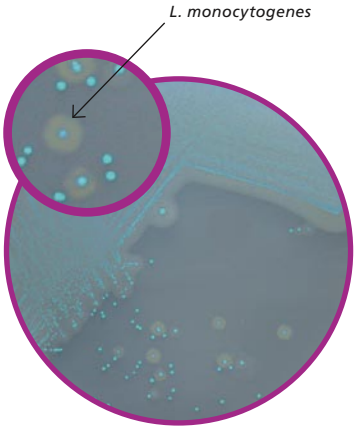
CHROMagar™ Chromogenic Media

Scharlab S.L. distributes now the CHROMagar™ Chromogenic Media

CHROMagar™ is pioneer in the field of chromogenic media for the detection of pathogenic microorganisms. Its founder, Dr. Rambach and his co-workers have been developing chromogenic culture media, which have acquired world wide recognition. He developed the first *E. coli* chromogenic detection medium in 1979. Several years later, he invented the Rambach™ Agar for *Salmonella* detection, now distributed world wide.

Why should you start using CHROMagar™?

- Reliable detection in less time
- Simple simultaneous isolation and differentiation of pathogens thanks to the discernible colours
- No need to perform the complex and expensive detection protocols aswith traditional media
- Well defined colours of the colonies avoiding colour diffusion of traditional media
- Faster results allow quicker release of manufactured products
- Short analytical times mean lower labour costs
- Chromogenic detection leads to reliable results
- No need to change standard working procedures



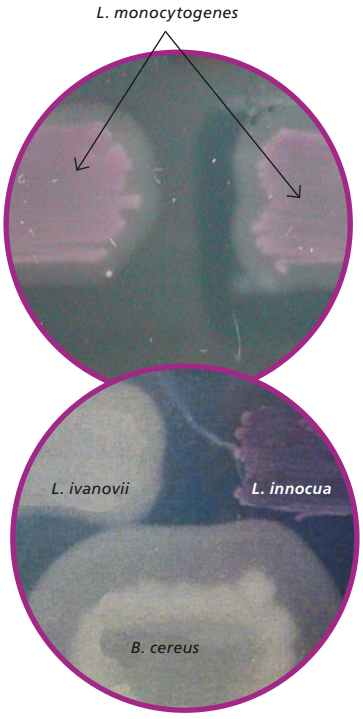
CHROMagar™ Listeria

Listeria monocytogenes. *Listeria monocytogenes* is a pathogenic bacteria which can cause serious food poisoning. Since *L. monocytogenes* and *L. innocua* exhibit similar biochemical properties, they cannot be differentiated with traditional media (Palcam, Oxford). With **CHROMagar™ Listeria**, *L. monocytogenes* colonies adopt a specific blue colour surrounded by a white opaque halo.

00000LM852	**5 litres***
064-PA0081	**20 plates 90mm** (Colorex®)

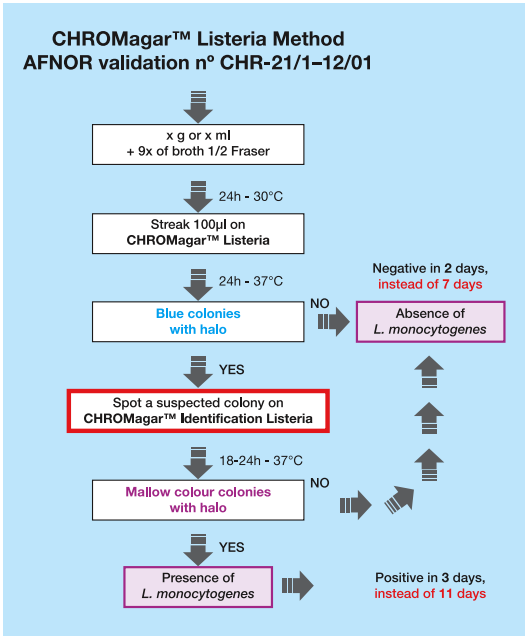
Microorganism	Colony colour	Sensitivity
L. monocytogenes	Blue with white halo	100% (1)
L. innocua	Blue	
Other	Blue, colourless or inhibited	

→ (1) AFNOR validation study, Coignard M. 2001. Ref CHR-21/1-12/01



CHROMagar™ Identification *Listeria*

Culture medium for a simpler confirmatory test for suspected colonies of *L. monocytogenes,* avoiding many time consuming identification tests (pure culture in TSAYE, cabalase, GRAM stain, haemolysis, CAMP test, motility, dextrose, rhamnose, xylose).



00000LK970	**250 ml***

A **CHROMagar™ Listeria method** allows detection of negative samples in only 2 days. This method requires only a single half Fraser enrichment step and has been validated by the AFNOR (French Bureau of Standards) organisation.

✚ Culture medium used in clinical applications Culture medium used in industrial applications

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NOTE$_1$: Colorex® is the trademark for CHROMagar™ prepared media.

NOTE$_2$: CHROMagar™ and Rambach™ are Dr. A. Rambach trademarks.

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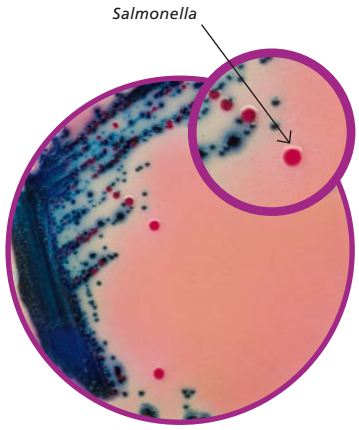
Salmonella

Traditional media for detection of *Salmonella* have a very poor specificity. The workload of unnecessary examinations of suspect colonies is so high that real positive *Salmonella* colonies might often be missed in routine testing. **Rambach™ Agar** or **CHROMagar™ Salmonella** will eliminate most false positives. Since **Rambach™ Agar** and **CHROMagar™ Salmonella** have very high specificity: fewer samples are positive and have to be checked and there is no more need to investigate 10 different suspect colonies per sample.

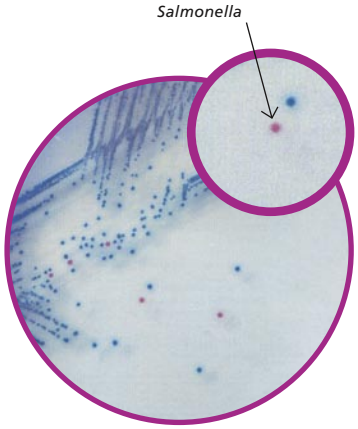


Rambach™ Agar (Salmonella)

00000RR701	**4 x 1 litre***
00000RR703	**25 litres***
064-PA0082	**20 plates 90mm** (Colorex®)

Microorganism	Colony colour	Sensitivity
Salmonella	Red	93,9% [2]
E. coli, Citrobacter, Coliforms	Blue	–
P. mirabilis	Colourless and inhibited	–

→ [2] Gruenewald R et. al. 1991. J. Clin. Microbiol. 29: 2354-2356.



CHROMagar™ Salmonella

00000SA132	**5 litres***
00000SA133	**25 litres***

Microorganism	Colony colour	Sensitivity	Specificity
Salmonella	Mallow colour	100% [3]	89%
E. coli, Citrobacter, Coliforms	Blue	–	–
P. mirabilis	Colourless and inhibited	–	–

→ [3] Gaillot O. Et al. 1999. J. Clin. Microbiol. 37: 762-765.

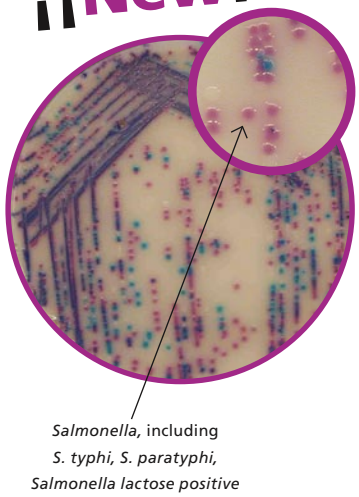
CHROMagar™ Salmonella Plus

¡¡New!!

The recent revision of ISO 6579 for *Salmonella* testing is a result of the growing incidence of Lactose positive *Salmonella spp.* isolated from cases of food poisoning. Traditionally *Salmonella* are considered to be non-lactose fermenting organisms - however a small but important number of this highly diverse group is capable of lactose fermentation and may be incorrectly identified or missed altogether by conventional Salmonella selective media. Indeed, in classical agars like XLD, MacConkey or Hektoen, the *Salmonella* lactose positive will have almost the same appearance as the most common coliforms, with a high risk of being missed altogether.

CHROMagar™ Salmonella Plus agar has been introduced to meet the requirements of ISO 6579 and provides clear, easily visible identification of *Salmonella spp.* including lactose positive *Salmonella, S. typhi* and *S. paratyphi.* It applies to all types of food and feed marketed for human and animal consumption, as well as environmental samples taken from food production and handling areas.

Another feature of this new medium is its nice colour contrast due to the fact that *E. coli* are colourless. *E. coli,* which are usually present in abundance in the samples tested for *Salmonella,* are no more a concern of potentially hiding suspect colonies.



00000SA162	**5 litres***
064-PA0083	**20 plates 90mm** (Colorex®)

Microorganism	Colony colour	Sensitivity & Specificity
Salmonella spp. including *S. typhi* and *S. paratyphi*	Mallow colour	99% [4]
Salmonella lactose positive	Mallow colour	–
E. coli	Colourless	–
Other coliforms	Turquoise blue	–

→ [4] de Beaumont C., Breuil J., Dedicova, D. Tran Q. 2006. Poster presentado durante el meeting ECCMID.

✚ Culture medium used in clinical applications Culture medium used in industrial applications

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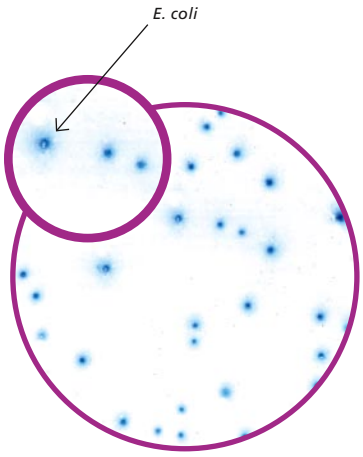


Coliforms and *E. coli*

E. coli bacteria is a fecal contamination indicator. The standard limits in food are approximately 50 *E.coli* bacteria per gram, therefore, it is important to detect and enumerate them correctly. Traditional methods for detecting *E. coli* are extremely tedious and usually require a heavy workload since many suspect colonies have to be tested.

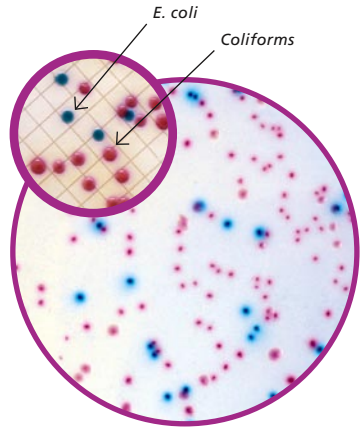
CHROMagar™ E. coli

CHROMagar™ E. coli is a culture medium which directly marks *E. coli* colonies in blue colour thus making the detection and enumeration of this important hygiene indicator very simple[5].

00000EC168	**5 litres***
00000EC169	**25 litres***

Microorganism	Colony colour
E. coli	Blue
Other gram negative	Colourless
Gram positive	Inhibited

→ [5] Alonso et al. 1996. J. Microbiol. Methods 25: 309-315



CHROMagar™ ECC

CHROMagar™ ECC will additionally show the other coliforms as red colonies. This is another useful indicator of questionable hygiene conditions[6].

00000EF322	**5 litres***
00000EF323	**25 litres***

CHROMagar™ Liquid ECC

CHROMagar™ Liquid ECC is used as a broth for the pad technique for the detection of *E.coli* and coliforms in water samples[10]. The inoculated filtration membrane is put on top of a pad presoaked with **CHROMagar™ Liquid ECC**.

00000EL382	**5 litres***

Microorganism	Colony colour	Sensitivity
E. coli	Blue	95% [7]
Coliforms	Mallow colour	94% [7]
Proteus	Colourless	–
Gram positive	Inhibited	–

→ [6] Alonso et al. 1999. Applied & Env. Microbiol. 65: 3746-3749

→ [7] Ho et al. 1997. Water Sci. Tech. 35: 409-413.

CHROMagar™ O157

The conventional medium for detection of *E. coli* O157, Sorbitol Mac Conkey Agar, has a poor specificity therefore creating a lot of false positives (*Proteus*, *E. hermanii*, etc.). Sorbitol Mac Conkey Agar is also difficult to read since the pathogen gives colourless colonies among red colonies.
CHROMagar™ O157 is a chromogenic medium with easier detection of *E. coli* O157 as mallow colour colonies between blue and colourless colonies. Selectivity can be increased by adding potassium tellurite to our medium.

00000EE222	**5 litres***
00000EE223	**25 litres***
064-PA0080	**20 plates 90mm** (Colorex®)

Microorganism	Colony colour	Sensitivity & Specificity
E. coli O157	Mallow colour	98% [8]
E. coli spp.	Blue	–
Other	Blue, colourless, inhibited	–

→ [8] Bettelheim K.A. 1998. J. Clin. Microbiol. 85: 425-428.

✚ Culture medium used in clinical applications Culture medium used in industrial applications

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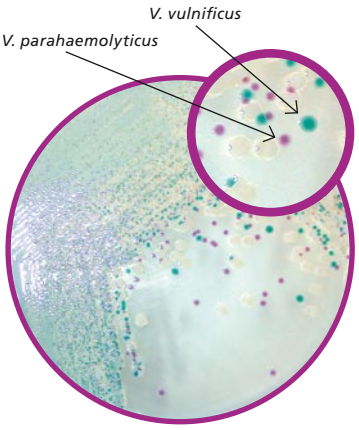
CHROMagar™ Vibrio

V. parahaemolyticus, *V. vulnificus* & *V. cholerae* are pathogenic bacteria which can cause serious seafood poisoning. For the detection of those bacteria, traditional methods (TCBS) are time consuming, require heavy workload and are not very sensitive.
On the contrary, **CHROMagar™ Vibrio** medium helps to easily differentiate *V. parahaemolyticus*, *V. vulnificus* & *V. cholerae*, from other *Vibrio* directly during the isolation step by colony colour with a sensitivity higher than conventional methods[9].



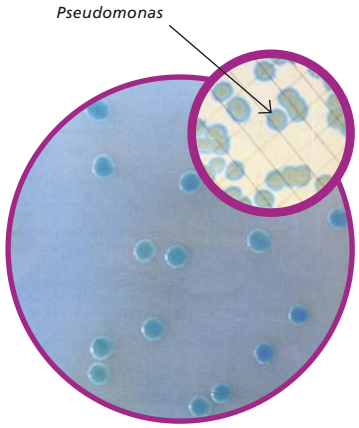
00000VB912 **5 litres***

Microorganism	Colony colour
V. parahaemolyticus	Mallow colour
V. vulnificus and V. cholera	Blue
V. alginolyticus	Colourless

→ [9] Hara-Kudo et al. 2001. Applied & Env. Microbiol. 67: 5819-5823.

CHROMagar™ Pseudomonas

For the simultaneous detection and enumeration of Pseudomonas aeruginosa with markedly different colouring (blue colonies).
One can use the membrane filtration method for detection from 100 ml of water, with the inoculated membrane placed on the agar plate.

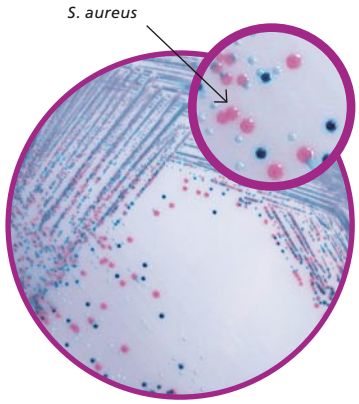


00000PS822 **5 litres***

Microorganism	Colony colour
Some pseudomonas including *P. aeruginosa*	Blue-green
Other	Generally colourless or inhibited

CHROMagar™ Staph aureus ✚

Staphylococcus aureus is a major pathogenic bacterium found in clinical field and in food industry. Nosocomial infections due to *S. aureus* create an increasing number of problems, which is why it is becoming more and more important to detect *S. aureus*.
Mannitol fermentation based traditional media lead to many false positive and false negative results. **CHROMagar™ Staph aureus** has unrivalled sensitivity and specificity for detecting *S. aureus* after 24 hours. This makes unnecessary catalase and latex agglutination tests on non-*S. aureus* strains.



00000TA672 **5 litres***
00000TA653 **25 litres***

Microorganism	Colony colour	Sensitivity	Specificity
Staphylococcus aureus	Rose to mallow colour	95,5% [10]	99,4% [10]
Other	Blue, colourless, etc	–	–

→ [10] Gailot et al. 2000. J. Clin. Microbiol. 38: 1587-1591.

✚ **Culture medium used in clinical applications** **Culture medium used in industrial applications**

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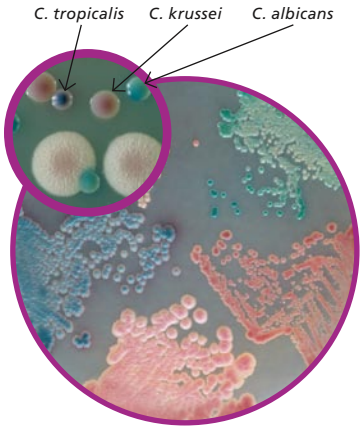
NOTE₂: CHROMagar™ and Rambach™ are Dr. A. Rambach trademarks.

CHROMagar™ Chromogenic Media



CHROMagar™ Candida ✚

Yeasts are increasingly important pathogens, particularly for immuno-depressed people such as the elderly, AIDS victims, etc. **CHROMagar™ Candida** will not only allow the growth and detection of yeasts (like the traditional Sabouraud Agar) but will also instantly allow you to differentiate various *Candida* species solely by the colour of the colony. **CHROMagar™ Candida** allows a powerful and easy detection of mixed yeast cultures and in some cases it can detect antifungal resistant strains present in the samples even as a minor population.

00000CA222	**5 litres***
00000CA223	**25 litres***
064-PA0076	**20 plates 90mm** (Colorex®)

Microorganism	Colony colour	Sensitivity & Specificity
Candida albicans	Green	> 99% [11]
Candida tropicalis	Metallic blue	> 99% [11]
Candida krusei	Pink velvet	> 99% [11]

➔ [11] Odds F.C. and Bearnaets R. 1994. J. Clin. Microbiol. 32: 1923-1929

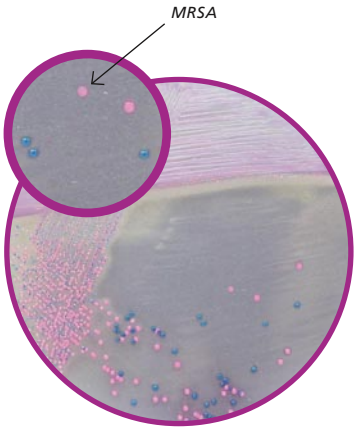
CHROMagar™ Orientation ✚

The major target of this medium is the detection of urinary tract pathogens with *E. coli* as red colonies, *Klebsiella* as metallic blue colonies, *P. mirabilis* as clear with brown halo colonies etc. However, **CHROMagar™ Orientation** has a broader application as a general nutrient agar for the isolation of various microorganisms. For instance, **CHROMagar™ Orientation** can be used to differentiate various microorganisms in other infected areas; e.g. scars. **CHROMagar™ Orientation** is useful when supplemented with various antibiotics in detecting increasingly important nosocomial and multiple resistant microorganisms.

00000RT412	**5 litres***
00000RT413	**25 litres***

Microorganism	Colony colour	Sensitivity
E. coli	Red	93,3% [12]
Klebsiella, Citrobacter	Metallic blue	–
Enterococcus	Turquoise blue	–
Proteus mirabilis	Clear + brown halo	–
Staphylococcus saprophyticus	Pink opaque	–
Staphylococcus aureus	Colourless opaque	–
Candida	Creamy	–

➔ [12] Merlino J. et Aal. 1996. J. Clin. Microbiol. 34: 1788-1793



CHROMagar™ MRSA ✚

In recent years, an increasing number of hospitals have been infected by Methicillin Resistant *Staphylococcus aureus* (MRSA). Unfortunately, current media continue to produce unreliable results in the detection of MRSA, especially with the increasingly frequent low-level resistant MRSA.
CHROMagar™ MRSA, a revolutionary product that is proving to be a major breakthrough in detecting hospital patients carrying and spreading MRSA. Having a sensitivity and a specificity of close to one hundred percent (100%), **CHROMagar™ MRSA** easily detects MRSA including low level resistant strains as mallow colour colonies after 24 hours of incubation.

00000MR502	**5 litres***
00000MR513	**25 litres***

Microorganism	Colony colour	Sensitivity	Specificity
MRSA	Rose to mallow colour	100% [13]	100% [13]
MSSA	Inhibited	100% [13]	100% [13]

➔ [13] Taguchi et al. 2004. J. Jap. Ass. Infec. Dis. Jan. 54-58 // Diederen et al. 2005. J. Clin. Microbiol. 43: 1925-1927

✚ Culture medium used in clinical applications Culture medium used in industrial applications

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Scharlau Microbiological culture media

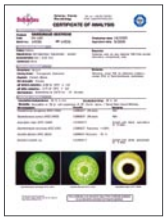
Scharlau manufactures two separate lines of culture media, dehydrated and prepared media; also stains in solution, reagents, supplements and rapid confirmation tests.

Dehydrated culture media

Scharlau Chemie S.A. manufactures dehydrated culture media for microbiology. Available in 100 and 500 g bottles and 5, 10 and 25 kg bulks. Each bottle comes packed in individual bag under vacuum with a copy of a COA (certificate of analysis). The bottle has a tamper-proof cap without aluminium foil inside. This perfectly tight-closing cap insures extra long shelf life even under adverse conditions.

New packaging PAC-O-VAC®

PAC-O-VAC® is the novel airtight packing from Scharlau that provides an extraordinary protection to microbiology culture media.
Vacuum, followed by replacement of residual air with nitrogen, guarantees that our products are protected from contamination by moisture, dust particles or microorganisms. This assures optimum storage conditions and prevent the products from altering their organoleptic or physical properties.



New certificate

New certificate including picture of typical growth.

Additives and supplements in vial

New sterilized presentation: fast, easy and less risk of contamination. Click, shake and dispense.

Prepared culture media

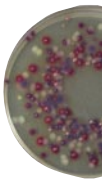
Selection of the most common media in different presentations.

90mm Petri plates 90mm. Also available in irradiated form.
55mm filtration plates. Prepared plates of solid medium for the membrane filtration technique. Packed in blister.
Rodac plates for surfaces control. Packaging into blisters inside clean room to avoid contamination and dehydration.
Agars in flasks. Long shelf life in different volumes for remelting.
Broths in flasks. Enrichment media and diluents. Sterility control.
Agars in tubes for remelting. For mass inoculation technique.
Broths in tubes. Differents volumes depending on working protocol.

Scharlau Chromogenic Media

Colinstant

Chromogenic selective and differential medium for direct identification of *Escherichia coli* and coliforms present in water and food. Suitable for membrane filtration method.



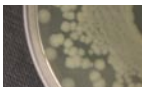
Principle

Based on the detection of two enzyme activities:
ß-D-Glucuronidase (ß gluc)
ß-D-Galactosidase (ß gal)
Improved formula with better inhibition of the Gram positive accompanying flora, using bile salts instead of "Tergitol".
After incubation at 37°C for 24 hours, *E. coli* colonies appear in blue colour and the balance coliforms in salmon colour. The remaining enterobacteria do no present any coloration.


E. coli


Coliforms:
Citrobacter freundii


Coliforms:
Klebsiella pneumoniae


Other Enterobacteria:
Salmonella enterica


Other Enterobacteria X-Glu (+):
Shigella sonnei

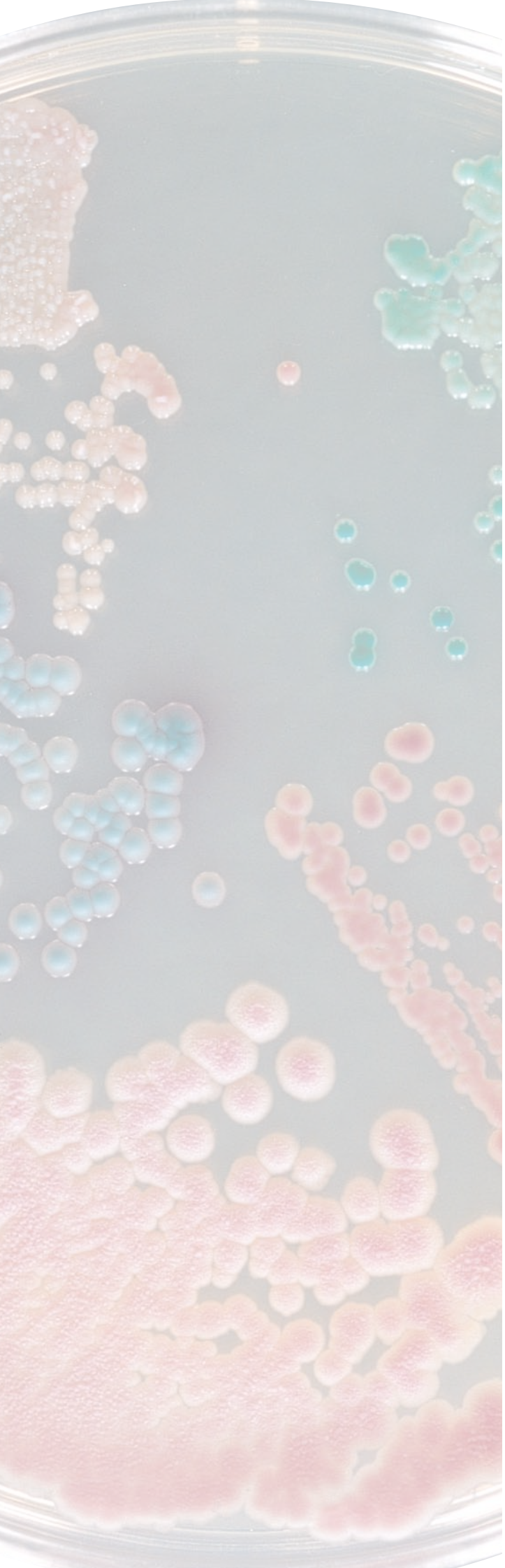
Tryptone Bile X-ß-D-Glucuronide Agar (TBX)

Chromogenic selective and differential medium for enumeration and direct detection of *E. coli* ß-glucuronidase positive in water and food. According ISO 16649-1 and 16649-2. Can be used mass inoculation method or membrane filtration method.

Principle

Based on the detection of one enzyme activity:
ß-D-Glucuronidase (ß-gluc)
Inhibition of accompanying flora using bile salts and high temperature incubation.
After incubation at 44°C for 18-24 hours, *E. coli* colonies ß-glucuronidase positives appear in green-blue colour.

Colinstant Chromogenic Medium					
01-618-500	01-618-100	–	–	064-PA6015	064-PF6015
TBX Agar					
01-619-500	01-619-100	064-BA0945	–	064-PA0945	



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