Liofilchem[®] ChromaticTM

Chromogenic culture media for microbial identification and for the screening of antimicrobial resistance mechanisms





Liofilchem[®] Chromatic[™] ESBL



Escherichia coli DSM 22311

Selective chromogenic medium for screening Gramnegative ESBL-producing bacteria.

ESBL (Extended Spectrum β -Lactamases) are enzymes that confer resistance to penicillins, extended-spectrum third generation cephalosporins (C3G) and monobactams. The ESBL-producing Enterobacteriaceae are responsible of severe hospital-acquired infections. The correct and early detection of ESBL-producing microorganisms is critical for addressing to the most appropriate antimicrobial therapy and avoiding the spread of infections. ChromaticTM ESBL medium contains a mixture of chromogenic compounds and antibiotics that allow the the growth of ESBL-producing bacteria while inhibit the other bacteria, including the ampC-positive. While the AmpC-positive bacteria can still be treated with certain betalactamase-stable antibiotics, the presence of an ESBL infection seriously limits treatment options because of the wide resistance acquired.

Packaging		ref.
Chromatic ESBL	20 plates	11622
Chromatic ESBL+AmpC	20 plates	11629
Chromatic ESBL	500 g	610629
Chromatic ESBL	100 g	620629
Chromatic ESBL supplement		81089
Chromatic ESBL+AmpC supplement		81090

Liofilchem[®] Chromatic[™] CRE



Screening medium for the detection of Carbapenem-Resistant Enterobacteriaceae.

Chromatic[™] CRE contains a mixture of carbapenems for screening a wide variety of carbapenem-resistance mechanisms and provides presumptive identification of *E. coli* and the *Klebsiella, Enterobacter, Serratia* and *Citrobacter* (KESC) group directly from clinical specimens. Carbapenems, successfully used to treat multi-resistant Gram-negative bacterial infections, including ESBL positive strains, are not efficacious against the Enterobacterriaceae resistant to carbapenems, thus generating a significant risk of hospital-acquired infections.

Packaging	ref.
20 plates	11619
500 g	611619
100 g	621619
Chromatic CRE supplement	81088



Liofilchem[®] Chromatic[™] OXA-48

Selective chromogenic medium for the screening of OXA-48 type Carbapenem-Resistant Enterobacteriaceae.

OXA-48 CRE are multi-resistant bacteria potentially responsible of hospital infections. The detection of OXA-48 CRE carriers by Chromatic[™] OXA-48 can prevent and help surveil those infections. Chromatic[™] OXA-48, with its own proprietary formulation, includes an antimicrobial agents and chromogenic substrata mixture that allows the selective growth of OXA-48 CRE and the identification of *Escherichia coli* (red color), *Klebsiella* spp. (Blue-violet), *Enterobacter* spp. (blue-green), *Citrobacter* spp. (blue with red halo).

Packaging	
20 plates	

ref. 11631

OXA-48 positive Enterobacter cloacae

Liofilchem[®] Chromatic[™] VRE



Chromogenic medium for screening vancomycinresistant enterococci.

Chromatic™ VRE contains a mixture of antibiotics including vancomycin for screening Vancomycin-resistant enterococci (VRE) and provides presumptive identification of Enterococcus faecium and Enterococcus faecalis directly from clinical specimens. VRE have recently been recognized as one of the most severe cause of nosocomial infections.

An intrinsic resistance (vanC, vanD, vanE, vanF etc) is found in E. gallinarum and E. casseliflavus/E. flavescens and shows low resistance to vancomycin. Instead, an acquired resistance of vancomycin in enterococci (vanA & vanB types) is mostly detected in E. faecium and E. faecalis.

The prompt detection of Vancomycin-resistance of E. faecium and E. faecalis is basic for avoiding the spread of this resistance to more virulent such as S. aureus.

Packaging	ref.
20 plates	11621



Liofilchem[®] Chromatic[™] MRSA

Selective chromogenic medium for isolating methicillin- resistant Staphylococcus aureus.

Methicillin resistant Staphylococcus aureus (MRSA) caused an A wide range of antimicrobial compounds, including the beta-lactam antibiotics, result unsuccessful for treating the methicillin resistant S. aureus.

Packaging	ref.
20 plates	10599
500 g	610615
100 g	620615
Chromatic MRSA supplement	81078



Staphylococcus aureus ATCC[®] 25923™*, Staphylococcus sciuri ATCC[®] 29062™*

Selective chromogenic medium for isolating Staphylococcus aureus.

Staphylococcus aureus is a one of the most commonly found bacteria. Staphylococcus aureus can be pyogenic and toxinogenic, it is a commensal human germ (half of the population hosts S. aureus). It is also often detected in in clinical specimens and food. Staphylococcus aureus today is a serious and diffused health problem.

Packaging	ref.
20 plates	11616
6 bottles x 100 mL	481160
500 g	610616
100 g	620616
Chromatic Staph aureus supplement	81085

Liofilchem[®] ChromaticTM Staph aureus

Liofilchem[®] Chromatic[™] MH



Chromogenic Muller Hinton for presumptive identification and susceptibility testing of various microorganisms from clinical specimens.

identification of microorganisms from urinary

Packaging

20 plates

500 g

100 g

6 bottles x 100 mL

In the Intensive Care Unit the mortality rates for VAP, sepsis, surgical site or intra-abdominal, catheter related infections are critically high. Direct M.I.C. on CSF, positive blood culture bottles and other specimens from critical patients and direct M.I.C. on bronchial aspirates from patients with VAP can contribute with timely and essential information to save the life of patients.

Packaging	ref.	
20 plates	11618	
500 g	611618	
100 g	621618	

ref.

11611

481130

610612

620612

Liofilchem[®] Chromatic[™] Detection Chromogenic medium for enumeration and



P. aeruginosa, E. coli, E. faecalis, K. pneumoniae, P. mirabilis, S. aureus

specimens and food. Chromatic™ Detection allows an easy and reliable differentiation of a wide range of species, complete in case of urine samples. The addition of various antibiotics to the Chromatic™ Detection medium is also useful for the detection of critical nosocomial and multiple resistant microorganisms.



Selective and differential chromogenic medium for isolating Group B streptococci (Streptococcus agalactiae).

Streptococcus agalactiae (GBS) is the main cause of infection in new born of industrialized countries. The risk of infection arises in pregnant women with a vaginal colonization by GBS.

Packaging	ref.
20 plates	11617
6 bottles x 100 mL	481180
500 g	610617
100 g	620617

Liofilchem[®] Chromatic[™] Strepto B

Liofilchem[®] Chromatic[™] Candida



Selective chromogenic medium for isolating and differentiating Candida species.

Candida species are often responsible of serious nosocomial and systemic fungal infections.

Candida species are usual commensal yeasts present in the human skin, gastro-intestinal tract and vagina, which can occasionally become opportunistic pathogens.

Packaging	ref.	
20 plates	11612	
6 bottles x 100 mL	481110	
500 g	610613	
100 g	620613	
20 plates 60 mm	163692	

C. albicans ATCC[®] 10231[™]*, C. tropicalis ATCC[®] 750[™]*, C. krusei ATCC[®] 6258[™]*



Liofilchem[®] Chromatic[™] Bacillus cereus

Selective chromogenic agar for isolating and differentiating Bacillus cereus from food samples.

Thanks to its ability to form spores, Bacillus cereus is an organism found in soil, vegetables, animal hair, water and sediments, therefore often associated to foodborne diseases such as vomit and diarrhea. Chromatic[™] Bacillus cereus Agar allows the growth of Bacillus cereus in blue/green colonies. Antibiotic compounds included in the medium inhibit the majority of Gram-negative organisms and many Gram-positive bacteria including Staphylococcus aureus, enterococci and most of bacilli other than Bacillus cereus.

Packaging	ref.
20 plates	11628



Liofilchem[®] Chromatic[™] Salmonella

Selective chromogenic medium for isolating and differentiating Salmonella spp.

Salmonella spp. is found in the environment and in cold- and warmblooded animals including humans. *Salmonella* spp. causes typhoid fever, paratyphoid fever, and foodborne illness. Salmonella infections are zoonotic and can be transferred between humans and nonhuman animals. Infections are also caused by ingestion of contaminated food and are particularly hazardous in older adults and those who are immunocompromised.

Packaging	ref.
20 plates	11614
6 bottles x 100 mL	481140
500 g	610611
100 g	620611
TWEEN 20 Supplement	80032

Salmonella enterica subsp. enterica serovar Typhimurium ATCC® 14028™*

Liofilchem[®] Chromatic[™] Coliform Agar ISO



Chromogenic medium for detection and enumeration of *E. coli* and coliform bacteria in water, according to ISO 9308-1.

ChromaticTM Coliform Agar ISO is the new culture medium for enumerating coliform bacteria and *E. coli* in water samples with low bacterial background flora to replace Lactose TTC agar in accordance to the ISO 9308-1 (effective on Sept 16th, 2014). ChromaticTM Coliform Agar ISO contains enzymes that allow the

Chromatic^{IM} Coliform Agar ISO contains enzymes that allow the simultaneous identification of several microorganisms in 24 hours, by defined colors of the colonies. Coliform bacteria and *E. coli* are potential pathogens found in samples with low background flora such as drinking water, disinfected pool water and finished water from drinking water treatment plants.

Packaging	ref.	
20 plates	11630	
6 bottles x 100 mL	481190	
500 g	610630	
100 g	620630	
20 plates 60 mm	163852	

Escherichia coli ATCC[®] 25922™*



Liofilchem[®] Chromatic[™] Coli Coliform

Selective chromogenic medium for *E. coli* and coliforms isolation and enumeration in foods and water.

The detection of *E. coli* and coliforms is one of the main criteria to define the quality of water and food.

Drinking water can be contaminated by *E. coli* following a period of intense rains, or because of an insufficient treatment. Coliforms, lactose fermenting Enterobacteriacae, are bacteria found in the intestinal flora of blooded animals, in soil and water. *Escherichia coli* and thermotolerant *Klebsiella* are commonly responsible of fecal contaminations, through animal waste.

Packaging	ref.
20 plates	11613
6 bottles x 100 mL	481120
500 g	610610
100 g	620610
20 plates 60 mm	163702

Liofilchem[®] Chromatic[™] E.coli O157



Selective chromogenic medium for detecting *E. coli* O157.

Escherichia coli O157:H7 causes severe foodborne illness, and is a member of a class of pathogenic *E. coli* known as verocytotoxin producing *E. coli* (VTEC).

Infection often leads to hemorrhagic diarrhea, and occasionally to kidney failure, especially in young children and elderly persons. Transmission is via the fecal-oral route, and most illness has been associated with eating undercooked, contaminated ground beef, swimming in or drinking contaminated water, and eating contaminated vegetables.

Packaging	ref.
20 plates	11610
500 g	610614
100 g	620614

Escherichia coli O157:H7 ATCC[®] 35150™*

Liofilchem[®] O.A. Listeria agar



Selective differential chromogenic medium for detecting and counting *Listeria monocytogenes* from food samples (ISO 11290).

Listeria monocytogenes is one of the most virulent foodborne pathogens, responsible for an increasing amount of deaths worldwide annually. Listeriosis is the major cause of death among foodborne bacterial pathogens.

Infections by *Listeria monocytogenes* can happen in any stages of food processing. *Listeria monocytogenes* can be found in the fecal matter, soil and waste waters.

Packaging	ref.
20 plates	10620
500 g	610601
100 g	620601
O.A. LISTERIA supplement	81074



Selective chromogenic medium for detecting and enumerating *E. coli* in food according to ISO 16649.

X-glucuronide, contained in the TBX agar formulation, is the chromogenic agent that allows the determination of the β -D-glucuronidase activity, which is a highly specific enzyme for *E. coli*. Gram-positive bacteria are inhibited by bile salts.

Packaging	ref.	
20 plates	10522	
6 bottles x 100 mL	432300	
500 g	610224	
100 g	620224	



Escherichia coli ATCC[®] 25922™*

Liofilchem[®] Chromatic[™] Vibrio

Chromogenic medium isolating and differentiating V. parahaemolyticus, V. vulnificus and V. cholerae.

V. cholerae, *V. parahaemolyticus* and *V. vulnificus* have the potential to be foodborne, and are most often associated with the consumption of raw, or undercooked, shellfish. *V. cholerae* is the cause of outbreaks and epidemics of cholera, *V. parahaemolyticus* is the species most frequently associated with foodborne disease in humans, V. vulnificus is an occasional cause of serious infections especially in case of wound contact in the marine environment that can cause primary septicaemia in vulnerable individuals with consequent high mortality rate.

Packaging	ref.	
20 plates	11633	
500 g	610633	
100 g	620633	

Liofilchem[®] Chromatic[™] Pseudomonas



Chromogenic medium for detection of *Pseudomonas* spp. from clinical specimens and environmental samples.

Pseudomonas are ubiquitous bacteria, able to grow at low temperature (psychrophilic strains) and consequently to contaminate foodstuff and beverages stored in the refrigerator. Pseudomonas strains can occasionally be isolated from the intestinal flora of humans or animals. P. aeruginosa has developed resistance to many antibiotics and is rated as one of the main causes of intensive care unit (ICU)-related pneumonia.

> Packaging 20 plates

ref. 11635



Liofilchem[®]

Zona Artigianale, 64026 Roseto degli Abruzzi (Te), Italy Tel.: +39 0858930745 Fax: +39 0858930330 www.liofilchem.it

Liofilchem®, the Liofilchem company logo and Chromatic are used, pending and/or registered trademarks belonging to Liofilchem s.r.l.



The ATCC Licensed Derivative Emblem, the ATCCC Licensed Derivative word mark, and the ATCC catalog marks are trademarks of ATCC. Liofilchem is licensed to use these trademarks and to sell products derived from ATCC cultures.



Liofilchem s.r.l. Roseto degli Abruzzi, Italy www.liofilchem.it



ref. 6551068 Rev. 9 - 01.07.2016 © Liofilchem 2016 printed in Italy

Liofilchem is ISO 9001 and ISO 13485 certified