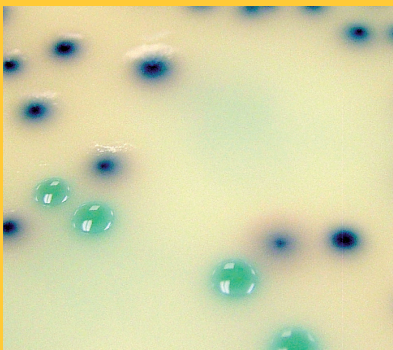


Brilliance™ ESBL



Brilliance™ ESBL Agar is a chromogenic screening plate for the detection of Extended Spectrum β -Lactamase-producing organisms. The medium provides presumptive identification of ESBL-producing *E. coli* and the *Klebsiella*, *Enterobacter*, *Serratia* and *Citrobacter* group (KESC), direct from clinical samples.

SAVES TIME

- Presumptive identification of ESBL-producing *E. coli* and the KESC group in just 24 hours, direct from sample

CONVENIENT AND EASY TO USE

- Quick and easy screening test, ready to use plates with a new semi-opaque background
- Clear differentiation of *E. coli* and KESC group colonies
- Direct inoculation from faecal sample, swab, isolate or suspension

SELECTIVE

- The inclusion of Cefpodoxime, a well recognised marker for ESBL mediated resistance, inhibits most non-ESBL Enterobacteriaceae
- Reduced incidence of false-positive results compared to traditional media, minimising confirmatory testing

COST-EFFECTIVE

- Early presumptive identification of ESBLs allows appropriate treatment and infection control procedures to be adopted earlier, improving treatment outcomes and the effectiveness of infection control measures.

Brilliance ESBL Agar has recently been selected by MOSAR, the FP6 EC funded project co-ordinated by the French Inserm, for use in a pioneering European ESBL prevalence study.

Oxoid *Brilliance* ESBL Agar

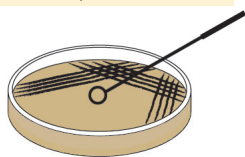
Oxoid *Brilliance* ESBL Agar contains Cefpodoxime, in combination with additional antibacterial agents, to inhibit non-ESBL Enterobacteriaceae and to suppress the growth of most AmpC organisms and other non-ESBL flora. The presence of an ESBL infection severely limits treatment options as the resistance mechanisms confer wider resistance than AmpCs, which may still be treated with certain β -lactamase-stable antibiotics. In addition to this, ESBL resistance genes are encoded on freely transmissible genetic elements, greatly increasing the risk of spread to other organisms.

Differentiation of the most prevalent ESBL-producing organisms is achieved through the inclusion of two chromogens that specifically target two enzymes. KESC group express galactosidase, resulting in green colonies. *E. coli* however, express galactosidase and glucuronidase producing easily-distinguished blue colonies (β -galactosidase negative *E. coli* will appear pink). *Proteus*, *Morganella* and *Providencia* do not utilise either chromogen, but are able to deaminate tryptophan, resulting in tan-coloured colonies with a brown halo.



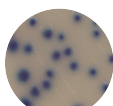
Screening Procedure

Inoculate *Brilliance* ESBL plate directly with pea sized bead or loopful of specimen.



Incubate plates at 37°C for 24 hours

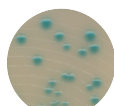
Growth



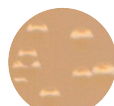
Blue or Pink
E. coli



Green
Klebsiella, *Enterobacter*, *Serratia* and *Citrobacter*



Brown halo
Proteus, *Morganella*, *Providencia*



Colourless
Salmonella, *Acinetobacter* or other*

*Bacteria with other resistance mechanisms may also produce colonies. Any such isolate may be clinically significant and should be investigated further.

No Growth

Negative plates should be re-incubated for an additional 24 hours

Performance

ESBLs are defined as transferable enzymes, able to hydrolyse third and fourth-generation cephalosporins but which may be inhibited by clavulanic acid. Unlike MRSA or VRE, the resistance mechanisms of ESBLs are not limited to one or even two species but rather a whole family of organisms, the Enterobacteriaceae.

Enterobacteriaceae have become one of the most important causes of nosocomial and community-acquired infections. The main therapeutic choices to treat such infections are β -lactam antibiotics (mainly broad spectrum penicillins and cephalosporins). However, ESBLs confer transmissible resistance to these compounds. The lack of treatment options combined with the transmissible nature of ESBL resistance mechanisms and the alarming rate at which they have spread, results in a significant threat to global public health.

Brilliance ESBL Agar was evaluated in-house using a selection of 123 well-characterised clinical isolates provided by Dr. Maurine A. Leverstein-van-Hall (Utrecht)¹, Prof. Youri Glupczynski (UCL-Mont Godinne)² and the Oxoid in-house culture collection. The panel included CTX-M, TEM, SHV and K1-hyper-producing strains. Results indicate K1-hyper-producing (non-ESBL) strains were inhibited while all representative ESBL strains grew.

	Sensitivity	Selectivity	PPV	NPV
<i>Brilliance</i> ESBL Agar	95%	94%	93%	94%

Based on growth or inhibition at 24 hours³

Oxoid *Brilliance* ESBL Agar is for *in vitro* diagnostic use only, by trained microbiologists. It must not be used beyond the stated expiry date, or if the product shows any sign of deterioration.

Identifications are presumptive and should be confirmed.

References: 1. Dr. Maurine A. Leverstein-van-Hall Clinical Microbiologist, University Medical Centre Utrecht (UMCU)/National Institute for Public Health and Environment (RIVM), Netherlands. 2. Professor Youri Glupczynski, University Clinic of the Catholic University of Louvain (UCL) Mont-Godinne, Belgium. 3. Data on file at Oxoid.

Oxoid <i>Brilliance</i> Agar Ready-Poured Plates	SIZE/FORMAT	ORDER CODE
<i>Brilliance</i> ESBL Agar	10 x 90mm plates	PO5302A

Other Products in the *Brilliance* Screening Range

<i>Brilliance</i> MRSA Agar	10 x 90mm plates	PO1162A
Chromogenic screening plate with results in just 18 hours and the highest PPV of any MRSA screening product		
<i>Brilliance</i> VRE Agar	10 x 90mm plates	PO1175A
Chromogenic screening plate with presumptive identification of <i>E. faecium</i> and <i>E. faecalis</i> in 18-24 hours		

The Oxoid product range offers the complete solution for all your ESBL screening and testing needs.

Culti-Loops™

Positive Control Strain <i>Klebsiella pneumoniae</i> (ESBL) ATCC® 700603™†	5 loops	CL3074
Negative Control Strain <i>E. coli</i> ATCC® 25922™†	5 loops	CL7050

Biochemical Identification

RapID™ One System	20 test panels	R8311006
RapID™ Inoculation Fluid	20 x 2ml	R8325106
RapID™ Spot Indole	15ml	R8309002
Rapid and convenient biochemical identification of Gram-negative bacilli in just 4 hours		
Microbact™ Oxidase Strips	50 tests	MB0266A
For the detection of oxidase positive bacteria		
Cefpodoxime Combination Disc Kit	250 tests	DD0029B
For the detection of ESBLs in Enterobacteriaceae which don't produce inducible AmpC enzymes		

Oxoid offer an extensive range of antimicrobial susceptibility testing products, including culture media, antimicrobial discs and M.I.C.Evaluator™ strips. For more information about these and other products in the Oxoid *Brilliance* range of chromogenic media, please visit www.oxoid.com



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DEDICATED TO MICROBIOLOGY

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