Smart Notes

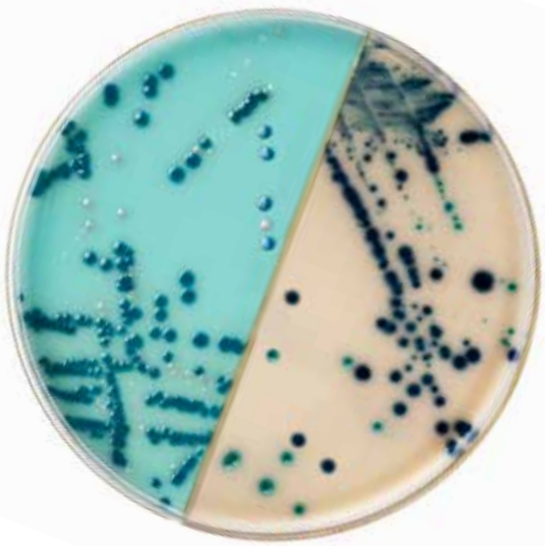
Secure detection of CRE, *A. baumannii*, *P. aeruginosa* plus OXA-48

Prepared Media

Q&A

Is one plate able to detect important* resistant Gram-negative organisms?

Yes. The new Thermo Scientific™ *Brilliance*™ ESBL/*Brilliance* CRE bi-plate detects carbapenem resistant *Enterobacteriaceae* as well as *A. baumannii* and *P. aeruginosa*. Gram-negative organisms possessing the plasmid-borne OXA-48 carbapenemase are becoming increasingly prevalent in Europe and are notoriously difficult to detect. Most screening media are limited to the detection of the OXA-48 resistance mechanism, or carbapenem-resistance with variable detection of OXA-48, or detection of ESBL-producing *Enterobacteriaceae.* The *Brilliance* ESBL/*Brilliance* CRE bi-plate enables detection of ESBL-producing *Enterobacteriaceae*, some CRE-producing strains, and *P. aeruginosa* on the *Brilliance* ESBL medium. CRE-producing *Enterobacteriaceae*, *P. aeruginosa* and *A. baumannii* are detected on the *Brilliance* CRE medium. Some OXA-48 producing strains that are unable to grow on the *Brilliance* CRE medium alone will be detected on the *Brilliance* ESBL medium, thus increasing the chance of detection when compared with other commercially available carbapenemase screening media.



* Carbapememase resistant and ESBL producing *Enterobacteriaceae*; other carbapenemase resistant organism such as *P.aeruginosa*, Acinetobacter complex etc.

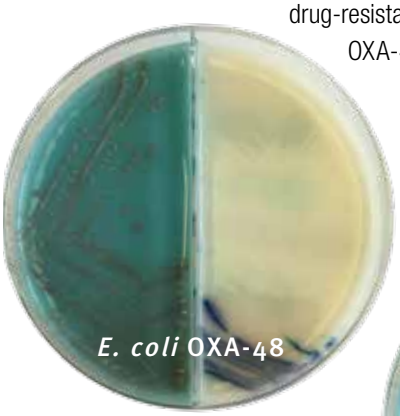
Thermo SCIENTIFIC

why

One 90mm prepared medium for the detection of multi-drug resistant *Enterobacteriaceae* (including OXA-48 strains), *P. aeruginosa* and *A. baumannii*

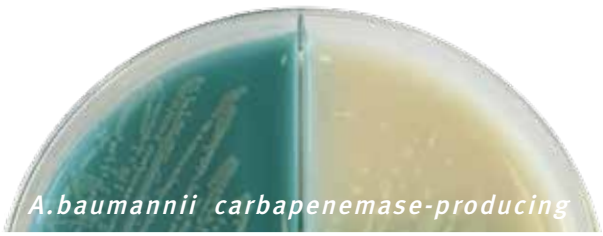
Do OXA-48 producing strains either grow only on the *Brilliance* ESBL medium or only on the *Brilliance* CRE medium?

OXA-48 strains have been shown to have variable resistance patterns to different classes of antibiotics contained in the media. Some are sensitive to the concentration of antibiotics contained in the *Brilliance* CRE medium, while others are sensitive to the combination of antibiotics contained in the *Brilliance* ESBL medium. Simultaneous use of both these media increases the chances of detecting clinically significant, drug-resistant, Gram-negative organisms, including OXA-48 strains.



Is the bi-plate able to detect carbapenemase-producing *Acinetobacter baumannii* /ABC complex?

Yes, *Acinetobacter* spp. produce white or transparent colonies on both the *Brilliance* CRE and the *Brilliance* ESBL media. Whilst these colonies may be difficult to see on the *Brilliance* ESBL medium, the colonies are more visible on the green background of the *Brilliance* CRE plate.



Is the bi-plate able to detect resistant *P. aeruginosa* isolates?

Yes, both media in the bi-plate are able to support the growth of resistant *P. aeruginosa*. These isolates produce brown colonies on both media due to their natural pigmentation.

Summary

When used for screening for the presence of multi-drug resistant Gram-negative organisms, the *Brilliance* CRE/*Brilliance* ESBL bi-plate allows clinically relevant species to be detected on a single 90 mm plate.

For further information please visit thermoscientific.com/microbiology

thermoscientific.com

Thermo SCIENTIFIC
A Thermo Fisher Scientific Brand

Contact information

International
+44 (0) 1256 841144
microbiology@thermofisher.com

LT2177A