



"Ready & Easy-to-use" kits.
Lyophilised product



Transport and storage at room temperature.
Shelf-life: 24 months



Validated according to ISO 13485
and CE marked

Enterobacter, *A. baumannii* & *E. coli*

- ▶ **Enterobacter spp.** are rod-shaped, gram-negative bacteria from Enterobacteriaceae family. Twenty-two species belong to Enterobacter genus and they are described in the environment and have been reported as opportunistic pathogens in plants, animals, and humans. *E. cloacae* is the most frequent nosocomial pathogen among Enterobacter species, being able to cause urinary tract infections, bacteremia or lower respiratory tract infections and wound infections. The pathogenicity/virulence of this bacterium remains unclear. In contrast, its resistance against antibacterial agents has been extensively studied. Frequently, the acquisition of *Enterobacter spp.* concerned multidrug-resistant (MDR) strains.
- ▶ **Acinetobacter baumannii** is a Gram-negative, multidrug-resistant (MDR) pathogen associated with severe infections, most typically nosocomial pneumonia and bloodstream infections in critically ill patients. Moreover, *A. baumannii* has become an increasingly relevant human pathogen due to the rise in the number of infections that causes and the emergence of multidrug-resistant strains. *A. baumannii* has developed a broad spectrum of antimicrobial resistance, associated with a higher mortality rate among infected patients compared with other non-baumannii species.
- ▶ **Escherichia coli** is a microorganism responsible for human and animal infections, whose genetic variability allows it to grow in diverse ecological niches. **It is recognized as one of the most frequent bacterial cause of infections, food-borne diarrheal disease, and extraintestinal infections.** Pathogenic variants of *E. coli* (pathovars or pathotypes) cause much morbidity and mortality worldwide, because they have low infectious doses and are transmitted through ubiquitous mediums, including food and water. Although not formally recognized as part of the ESKAPE group of pathogens, AMR *E. coli* is identified as a major cause of bloodstream and urinary tract infection (UTI) in both community and health care settings globally.

VIASURE Enterobacter, *A. baumannii* & *E. coli* Real Time PCR Detection Kit is designed for the qualitative detection and differentiation of DNA from *Enterobacter*, *A. baumannii* and/or *E. coli*, from blood culture and swabs samples. After DNA isolation, the identification of *Enterobacter*, *A. baumannii* and *E. coli* is performed by the amplification of a conserved region of the Xx and Omp genes of *Enterobacter*, bap gene of *A. baumannii*, and the 16S rRNA gene of *E. coli*, using specific primers and a fluorescent-labelled probes.

Enterobacter, A. baumannii & E. coli

VIASURE Enterobacter, A. baumannii & E. coli Real Time PCR Detection Kit is a real time PCR assay designed for the qualitative detection and differentiation of DNA from species of *Enterobacter*, *Acinetobacter baumannii* and/or *Escherichia coli*, from blood culture and swabs samples, bronchoalveolar aspirates (BAS), bronchoalveolar lavages (BAL) and sputum specimens.

This test is intended to be used as an aid in the diagnosis of *Enterobacter*, *A. baumannii* and/or *E. coli* infection, in combination with clinical and epidemiological risk factors. DNA is extracted from clinical samples, amplified using real time PCR, and detected using fluorescent reporter dye probes specific for *Enterobacter*, *A. baumannii* and *E. coli*.

VIASURE Enterobacter, A. baumannii & E. coli Real Time PCR Detection Kit contains in each well all the components necessary for real time PCR assay (specific primers/probes, dNTPs, buffer and polymerase) in a stabilized format, as well as an internal control to verify the correct functioning of the amplification mix.

► Analytical sensitivity

VIASURE Enterobacter, A. baumannii & E. coli Real Time PCR Detection Kit showed a detection limit of 2×10^{-3} CFU/ μ L for *E. cloacae* subsp. *cloacae*, 2×10^{-3} CFU/ μ L for *A. baumannii*, and 5×10^{-3} CFU/ μ L for *E. coli*. (Figures 1, 2 and 3)

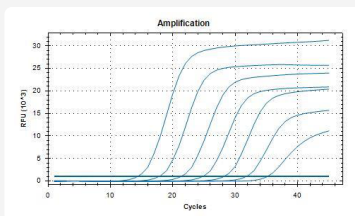


Figure 1.

Dilution series of *Enterobacter* (10^7 - 10^1 copies/rxn) template run on the CFX96™ Real-Time PCR Detection System (Bio-Rad) (channel FAM).

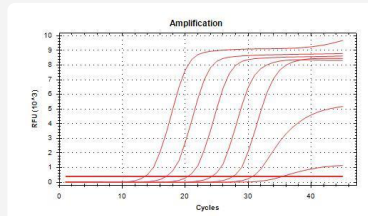


Figure 2.

Dilution series of *A. baumannii* (10^7 - 10^1 copies/rxn) template run on the CFX96™ Real-Time PCR Detection System (Bio-Rad) (channel ROX).

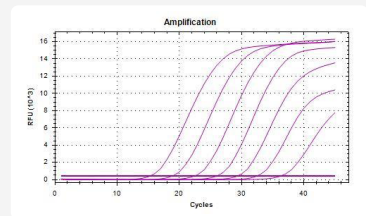


Figure 3.

Dilution series of *E. coli* (10^7 - 10^1 copies/rxn) template run on the CFX96™ Real-Time PCR Detection System (Bio-Rad) (channel Cy5).

► References - VIASURE Enterobacter, A. baumannii & E. coli Real Time PCR Detection Kit

6 x 8-well strips, low profile	VS-EAC106L	6 x 8-well strips, high profile	VS-EAC106H
12 x 8-well strips, low profile	VS-EAC112L	12 x 8-well strips, high profile	VS-EAC112H
96-well plate, low profile	VS-EAC113L	96-well plate, high profile	VS-EAC113H
1 x 8-well strips, low profile	VS-EAC101L	1 x 8-well strips, high profile	VS-EAC101H
4 tubes x 24 reactions	VS-EAC196T	2 x 4-well strips, Rotor-Gene®	VS-EAC101
9 x 4-well strips, Rotor-Gene®	VS-EAC136	18 x 4-well strips, Rotor-Gene®	VS-EAC172

For more information and use procedure, read the instructions for use included in this product.