

Aspergillus differentiation

- ▶▶ The genus *Aspergillus* encompasses more than 250 species based on morphology and is one of the largest genera of filamentous fungi causing human diseases. **Aspergillus species cause a wide spectrum of diseases in humans.** *Aspergillus* has emerged as one of the most common causes of infectious death in severely immunocompromised patients, with mortality rates up to 40%-50% in patients with acute leukemia and recipients of hematopoietic stem cells transplantation (HSCTs).
- ▶▶ There are clinical classifications of aspergillosis: **allergic** (extrinsic asthma, extrinsic allergic alveolitis, and allergic bronchopulmonary aspergillosis), **saprophytic colonizing** (pulmonary, extrapulmonary), and **invasive** (pulmonary and extrapulmonary). Most human infections arise through inhalation of fungal spores, which are present in indoor and outdoor environments.

Accordingly, isolation of *Aspergillus* spp. from cultures of the respiratory tract of asymptomatic patients with no evidence of invasive or allergic disease is common. Even though it is not always associated with infection, *Aspergillus* colonization is associated with a substantial increase in risk for development of invasive infection across a wide range of immunocompromised individuals.

- ▶▶ Biomarkers such as 1,3-β-d-glucan and galactomannan are also used. However, these have some limitations, showing low sensitivity in certain population groups, such as patients treated with antifungals. **Molecular diagnostic based on qPCR is proposed as a future alternative for the detection of this pathogen in a more sensitive and specific way.**



"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**.



Aspergillus differentiation

VIASURE Aspergillus differentiation Real Time PCR Detection Kit is a real time PCR assay designed for the qualitative detection and differentiation of DNA from *Aspergillus fumigatus*, *Aspergillus flavus* and/or *Aspergillus terreus*, from bronchoalveolar lavages (BAL), bronchoalveolar aspirates (BAS), and sputum clinical samples from individuals suspected of aspergillosis by their healthcare professional (HCP).

This test is intended for use as an aid in the diagnosis of aspergillosis caused by *Aspergillus fumigatus*, *Aspergillus flavus* and/or *Aspergillus terreus*, in combination with clinical and epidemiological risk factors.

DNA is extracted from clinical specimens, amplified using real time PCR, and detected using fluorescent reporter dye probes specific for *Aspergillus fumigatus*, *Aspergillus flavus* and *Aspergillus terreus*.

Analytical sensitivity

▶ **VIASURE Aspergillus differentiation Real Time PCR Detection Kit** has a detection limit of 4×10^{-3} CFU per reaction for *Aspergillus flavus*, 4×10^{-2} CFU per reaction for *Aspergillus fumigatus*, and 8×10^{-2} CFU per reaction for *Aspergillus terreus*, with a positive rate of $\geq 95\%$, on serum samples, and 8×10^{-2} CFU per reaction for *Aspergillus flavus*, 0.1 CFU per reaction for *Aspergillus fumigatus* and 4×10^{-2} CFU per reaction for *Aspergillus terreus*, with a positive rate of $\geq 95\%$, on BAL samples.

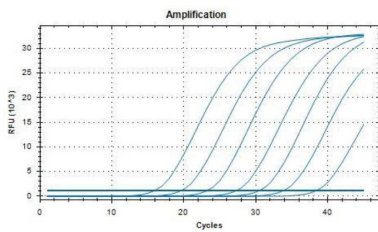


Figure 1.

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

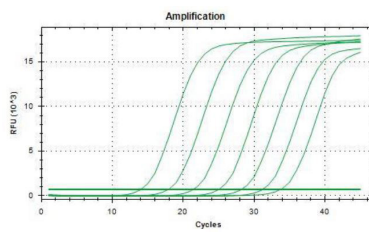


Figure 2.

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

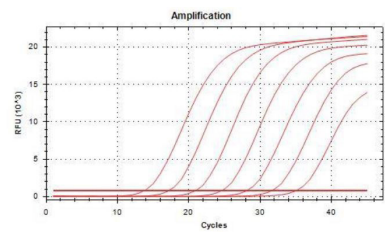


Figure 3.

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

Reference - VIASURE Aspergillus differentiation Real Time PCR Detection Kit -

6 x 8-well strips, low profile _____ VS-ASP106L
12 x 8-well strips, low profile _____ VS-ASP112L
96-well plate, low profile _____ VS-ASP113L
9 x 4-well strips, Rotor-Gene® _____ VS-ASP136
1 x 8-well strips, low profile _____ VS-ASP101L
2 x 4-well strips, Rotor-Gene® _____ VS-ASP101

6 x 8-well strips, high profile _____ VS-ASP106H
12 x 8-well strips, high profile _____ VS-ASP112H
96-well plate, high profile _____ VS-ASP113H
18 x 4-well strips, Rotor-Gene® _____ VS-ASP172
1 x 8-well strips, high profile _____ VS-ASP101H
4 tubes x 24 reactions _____ VS-ASP196T

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

CerTest
BIOTEC

CerTest Biotec, S.L.

Pol. Industrial Río Gállego II · Calle J, Nº1
50840, San Mateo de Gállego, Zaragoza (Spain)
Tel. (+34) 976 520 354 · viasure@certest.es
www.certest.es

VIASURE/ASP-0922EN