

Direct Fungi DNA Isolation Kit

Norgen's Direct Fungi DNA Isolation kit provides a rapid method for the isolation and purification of total DNA from the fungi found on the surface of symptomatic plant samples. The major benefit of this kit is that it does not require the use of physical homogenization steps to isolate the fungal DNA, which are often time consuming and tedious procedures that are not suitable methods for use in the analysis of large numbers of samples. Furthermore, in the area of pathogen diagnosis, simple and convenient sample preparation steps are a critical factor in supporting high throughput analysis. Therefore, Norgen's Direct Fungi DNA Isolation Kit adopts a simple and rapid sample preparation procedure that does not rely on physical homogenization steps to isolate sufficient amounts of high quality fungal DNA that can be used in sensitive downstream detection methods.



Norgen's Direct Fungi DNA Isolation Kit is based on the use of spin-column chromatography employing Norgen's proprietary resin as the separation matrix. The kit yields sufficient fungal DNA to be used in a number of downstream applications including real time PCR, sequencing, Southern blotting and SNP analysis. The total procedure can be completed less than 60 minutes.

Kit Specifications			
Column Binding Capacity	15 µg	Maximum Amount of Starting Material:	
Time to Complete 10 Purifications	60 minutes	Plant Tissues	<1 gram total weight
Maximum Column Loading Volume	600 µL	Symptomatic Grapes or Berries	1-2 Berries (< 1 gram)

Direct Fungi DNA Isolation Kit Benefits

No liquid nitrogen or physical disruption methods required	Rapidly isolate fungal DNA from the surface of symptomatic plant samples without any physical disruption methods.
Rapid and simple processing	Rapid spin-column format and no physical disruption allows for the processing of multiple samples in 60 minutes.
High quality fungal DNA	The purified DNA is of the highest quality and can be used in a number of sensitive downstream applications, including PCR (Figures 1 and 2).
Purified DNA can be use in a number of downstream applications	Purified fungal DNA can be used in a number of downstream applications including real time PCR, sequencing, Southern blotting and SNP analysis.

Direct Fungi DNA Isolation Kit

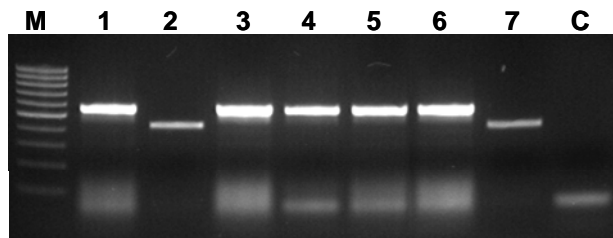


Figure 1. Isolation and Identification of Fungal Pathogens from Grapes

DNA was isolated from the surface of symptomatic grapes using the Direct Fungi DNA Isolation Kit. The DNA was subsequently used as the template in end-point PCR reactions using universal primers for the fungal ITS region. The PCR products are shown on the 1% agarose gel above. Through sequencing it was determined that DNA was successfully isolated and amplified from 7 different fungal species including *A. niger* (Lane 1), *C. cladosporiodes* (Lane 2), *B. cinerea* (Lane 3), *M. racemosus* (Lane 4), *A. tenuissima* (Lane 5), *Penecillium sp.* (Lane 5), *F. oxysporum* (Lane 6) and *R. oryzae* (Lane 7). Lane C is the non-template control and Lane M is Norgen's PCRSizer DNA Ladder.

Direct Fungi DNA Isolation Kit Contents

1. Resuspension Buffer
2. Lysis Solution
3. Wash Solution I
4. Wash Solution II
5. Elution Buffer
6. Mini Spin Columns
7. Collection Tubes
8. Elution Tubes
9. Product Insert

Shipping Conditions

The Direct Fungi DNA Isolation Kit is shipped at room temperature.

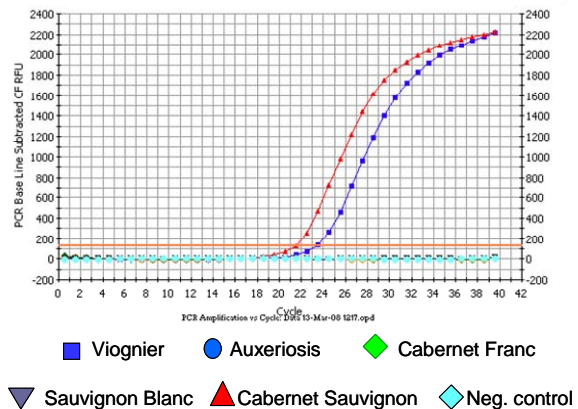


Figure 2. Screening for *Botrytis cinerea* Infection

Fungal DNA was isolated from the surface of 5 varieties of symptomatic grapes using the Direct Fungi DNA Isolation Kit. The DNA was then used in a qPCR reaction for the detection of *Botrytis cinerea* infection. From observing the graph above it can be seen that *Botrytis* infection can be found on both the Cabernet Sauvignon and the Voignier grapes.

Customer-Supplied Reagents and Equipment

- Benchtop microcentrifuge
- 2 mL microcentrifuge tubes
- 37°C and 65°C water bath or heating block
- 96-100% ethanol
- 70% ethanol
- Lyticase
- β-mercaptoethanol
- Sorbitol
- 0.9% NaCl

Storage Conditions

All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least 1 year in their unopened containers.

Cat #	Description	Quantity
25600	Direct Fungi DNA Isolation Kit	25 preps