

Plant/Fungi Total RNA Purification Kit

Norgen's Plant/Fungi Total RNA Purification Kit provides a rapid method for the isolation and purification of total RNA, including viral RNA, from a wide range of plant and filamentous fungal species. Total RNA can be purified from fresh or frozen plant tissues, plant cells or filamentous fungi samples using this kit. All sizes of RNA are purified, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA). The procedure is rapid and convenient, as it does not rely on the use of liquid nitrogen in order to homogenize the samples. Purification is based on spin column chromatography using Norgen's proprietary resin as the separation matrix. The RNA is preferentially purified from other cellular components, such as proteins, without the use of phenol or chloroform. The purified RNA is of the highest integrity, and can be used in a number of downstream applications including real time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays.



Kit Specifications			
Column Binding Capacity	50 µg	Size of RNA Purified	All sizes
Maximum Column Loading Volume	650 µL	Time to Complete 10 Purifications	30 minutes
Maximum Amount of Starting Material:		Average Yield*	
Plant Tissues	50 mg	Tobacco Leaves (50 mg)	60 µg
Plant Cells	1 x 10 ⁶ cells	Grape Leaves (50 mg)	35 µg
Fungi (wet weight)	50 mg	<i>Alternaria tenuissima</i> (50 mg)	11 µg

Plant/Fungi Total RNA Purification Kit Benefits

No liquid nitrogen required for homogenization	Liquid nitrogen is not required for homogenization of samples, making RNA purification rapid and convenient
Isolate RNA from a wide range of samples	Total RNA can be isolated from a wide range of plant and filamentous fungi samples.
Isolate a diversity of RNA species	All sizes of RNA are isolated, from large mRNA down to microRNA, without the use of phenol or chloroform.
Isolate total RNA, including viral RNA	RNA samples can be used for the detection of viral pathogens, as viral RNA is isolated with the total RNA.
High yield of RNA	High yields of purified RNA can be isolated with this kit
No phenol :chloroform extractions	Total RNA is isolated without the use of harmful chemicals such as phenol or chloroform. RNA is of the highest quality and can be used in a number of downstream applications

Plant/Fungi Total RNA Purification Kit

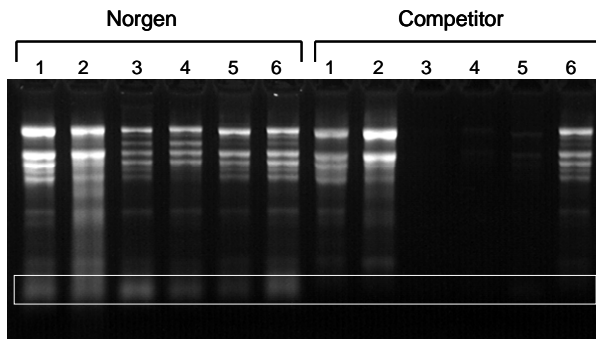


Figure 1. Isolation of High Quality RNA, even from Difficult Samples

RNA was isolated from 50 mg samples of apple (Lanes 1), peach (Lanes 2), grape (Lanes 3), pine needle (Lanes 4), strawberry (Lanes 5) and pear (Lanes 6) using Norgen's kit and a competitor's kit. Norgen's kit allowed for the isolation of high quality RNA from all the samples, including the difficult samples, while the competitor failed to isolate RNA from grape, pine needles and strawberry. Furthermore, only Norgen's kit was able to isolate the small RNA species (white box).

Plant/Fungi Total RNA Purification Kit Contents

1. Lysis Solution
2. Wash Solution
3. Elution Buffer
4. Mini spin columns
5. Collection tubes
6. Elution tubes
7. Product Insert

Shipping Conditions

The Plant/Fungi Total RNA Purification Kit is shipped at room temperature.

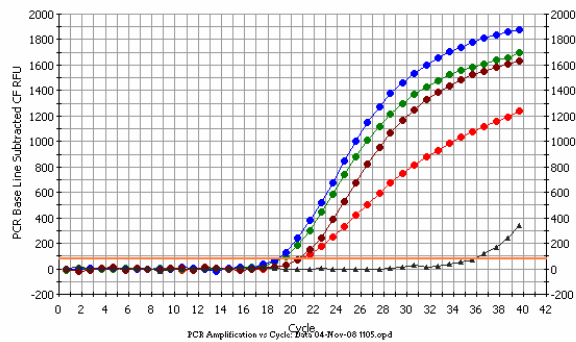


Figure 2. Detection of EF1-α using one step RT-qPCR from Challenging Plant Samples.

Total RNA was isolated from 50 mg samples of apple (red), peach (green), pine needle (blue) and grape leaves (burgundy) using Norgen's Plant/Fungi Total RNA Purification Kit. Three μ L of the eluted 50 μ L of RNA was used in an RT-qPCR reaction for the detection of EF1- α . EF1- α was detected from all samples, indicating that the RNA is of high quality and that the Plant/Fungi RNA Purification kit is highly sensitive for total RNA isolation.

Customer-Supplied Reagents and Equipment

- Benchtop microcentrifuge
- β -mercaptoethanol
- 96 - 100% ethanol
- 70% ethanol
- RNase-free DNase I (optional)
- Liquid nitrogen (optional)

Storage Conditions

All solutions should be kept tightly sealed and stored at room temperature. All the reagents should remain stable for at least 2 years in their unopened containers.

Cat #	Description	Quantity
25800	Plant/Fungi Total RNA Purification Kit	25 samples