

# Plant/Fungi Total RNA Purification Kit

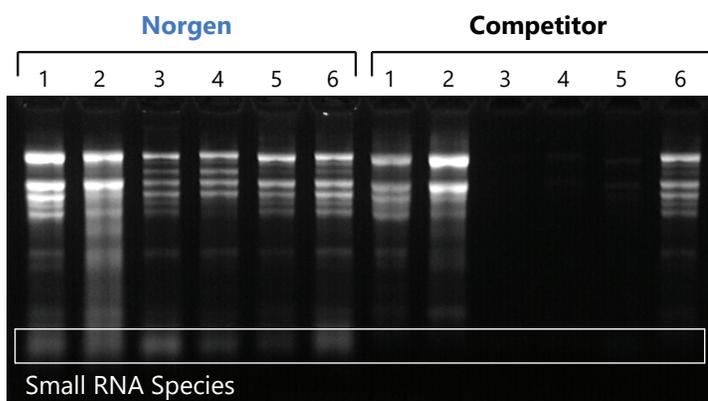


Rapid purification of total RNA (including microRNA) from plants and fungi



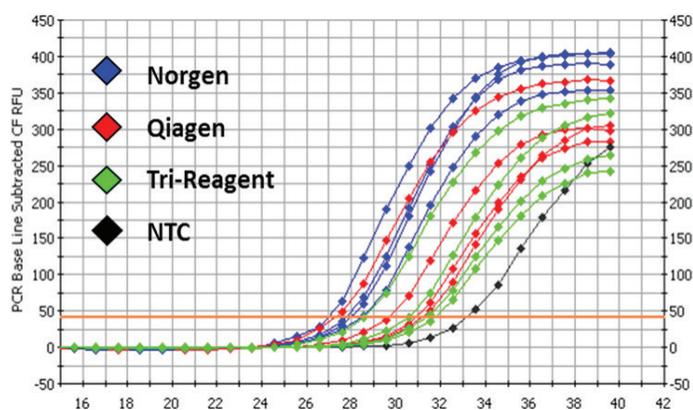
- ✓ Extract total RNA, including virus & viroid RNA
  - ✓ Robust lysis buffer is well-suited to even challenging samples such as pine needle, grape leaf, etc
  - ✓ Isolate total RNA (including microRNA) without phenol
  - ✓ Isolated RNA is of high quality, integrity and diversity
- Also available in 96-well format for high throughput applications

## Isolate Small RNA Species

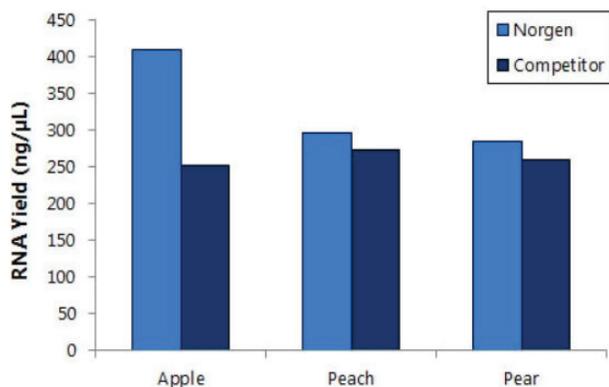


**Figure 1. Isolation of High Quality RNA, even from Difficult Samples.** Total RNA was isolated from 50 mg samples of apple (Lanes 1), peach (Lanes 2), grape (Lanes 3), pine needle (Lanes 4), strawberry (Lanes 5) and pear (Lanes 6) using Norgen's kit and a competitor's kit. Five microlitres of total RNA from the 50  $\mu$ L elution was loaded on 1X MOPS 1.0 % Formaldehyde-Agarose RNA gel for analysis. 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).

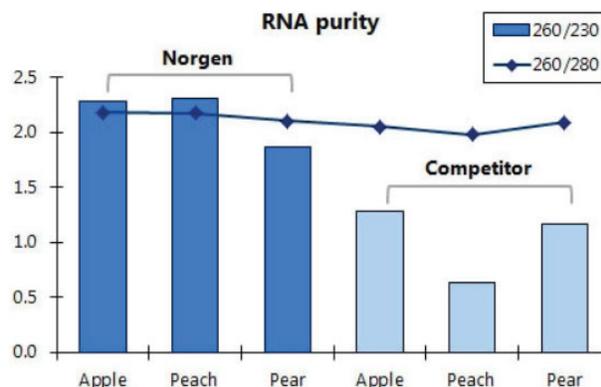
## Excellent Quality



**Figure 2. Detection of EF1- $\alpha$  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  $\mu$ L of the eluted 50  $\mu$ L of RNA was used in an RT-qPCR reaction for the detection of EF1- $\alpha$ . EF1- $\alpha$  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.



**Figure 3. High Yield of Plant RNA Samples isolated from Apple, Peach and Pear.** Total RNA was isolated using Norgen’s kit (Blue bars) and a competitor’s kit (Dark blue bars) from 50 mg of apple, peach and pear according to the provided manual. In each case the RNA was eluted into 50 µL. RNA yield was measured by spectrophotometer in triplicate, and the average concentration was used for data analysis. Norgen’s kit resulted in higher yields of total RNA, including miRNA. Total processing time was less with Norgen’s kit than competitor’s kit.



**Figure 4. High Purity of RNA Samples Isolated from Apple, Peach and Pear.** RNA was isolated from 50 mg samples of apple, peach and pear using Norgen’s Plant/Fungi RNA Purification Kit and a competitor’s kit. RNA purity was determined spectrophotometrically for the RNA isolated using Norgen’s kit (260/230 = dark blue bars) and the competitor’s kit (260/230 = light blue bars). Also shown is the 260/280 ratio for the samples. Norgen’s kit consistently isolated pure samples of Plant RNA with 260/230 ratios above 2.0, whereas the competitor’s kit had 260/230 ratios below 1.2 for the same samples.



## About this kit

Norgen’s Plant/Fungi Total RNA Purification Kit provides a rapid method for the isolation and purification of total RNA, including virus and viroid RNA, from a wide range of plants. 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, including microRNA (miRNA). The procedure is rapid and convenient.

The RNA is purified without the use of phenol or chloroform. The purified RNA is of the highest quality, 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.

Norgen’s Plant/Fungi Total RNA Purification Kit is also available in a 96-well format for high throughput applications. Purification with the 96-well plates can be performed using either a vacuum manifold or centrifugation.

## Ordering information

Description	Size	Cat. Number
Plant/Fungi Total RNA Purification Kit	50 preps	25800
Plant/Fungi Total RNA Purification Kit	100 preps	31350
Plant/Fungi Total RNA Purification Kit	250 preps	25850
Plant/Fungi Total RNA Purification 96-Well Kit	2 x 96-well plates	31900



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