

## FFPE RNA Purification Kit

Norgen's FFPE RNA Purification Kit provides a rapid method for the isolation and purification of total RNA (including microRNA) from formalin-fixed paraffin-embedded (FFPE) tissue samples. Using formalin to fix tissues leads to crosslinking of the RNA and proteins, and the process of embedding the tissue samples can also lead to fragmentation of the RNA over time. Norgen's FFPE RNA Purification Kit provides conditions that allow for the partial reversing of the formalin modifications, resulting in a high quality and yield of RNA. The kit is able to purify all sizes of RNA, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA), depending on the age of the FFPE tissue as fragmentation of the RNA is known to occur over time.



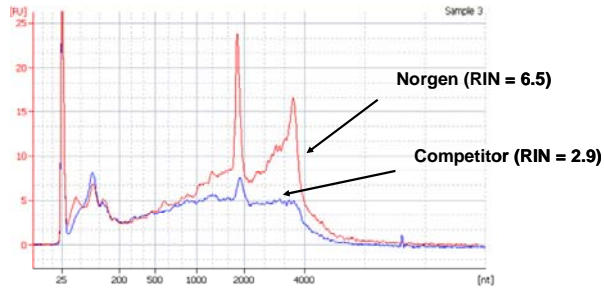
With Norgen's FFPE RNA Purification Kit, the purification is based on spin column chromatography using Norgen's proprietary resin as the separation matrix. The RNA is preferentially purified from other cellular components without the use of phenol or chloroform. The purified RNA is of the highest integrity, and can be used in a number of downstream applications including qRT-PCR, reverse transcription PCR, primer extension, expression array assays, and microarray analyses.

Kit Specifications			
Column Binding Capacity	50 µg	Maximum Amount of Staring Material:	
Maximum Column Loading Volume	600 µL	Paraffin Slices	5 slices 20 µm thick
Size of RNA Purified	All sizes	Unsectioned Block	25 mg

### FFPE RNA Purification Kit Benefits

High quality and integrity of the isolated RNA	The purified total RNA is of the highest quality and integrity, and can be used in any sensitive downstream applications (Figure 1).
Isolate a diversity of RNA species	All RNA species can be isolated, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA).
High yields	Norgen's FFPE RNA Purification Kit allows for the purification of high yields of total RNA (Figure 2).
No phenol:chloroform extractions	Total RNA is isolated from FFPE tissue samples without the use of harmful chemicals such as phenol or chloroform.
Rapid procedure	Isolate total RNA from FFPE tissue sections using a rapid spin column format.

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**Figure 1. High Quality and Yield of Total RNA**

Total RNA was isolated from equal amounts of an FFPE tissue sample using Norgen's FFPE RNA Purification Kit and a leading competitors kit. The purified RNA was then resolved on an Agilent BioAnalyzer. As it can be seen, Norgen not only isolated higher yields of total RNA, but the RNA was also of a higher quality as evidenced by the higher RIN values obtained with Norgen's RNA.

### FFPE RNA Purification Kit Contents

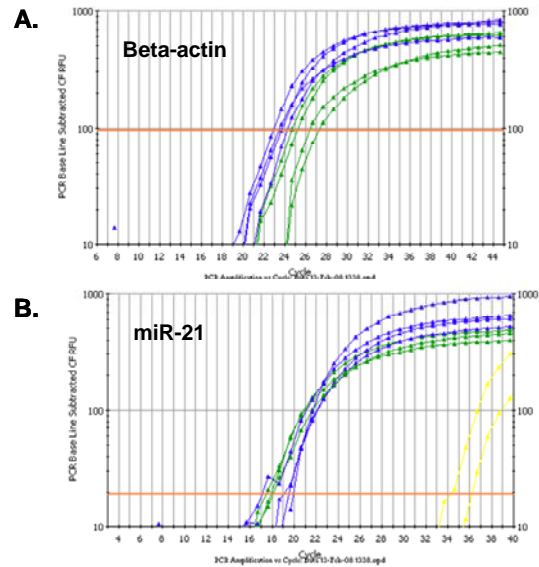
1. Digestion Buffer
2. Binding Solution
3. Enzyme Incubation Buffer
4. Wash Solution
5. RNA Elution Buffer
6. Proteinase K
7. DNase I
8. Spin Columns
9. Collection Tubes
10. Elution Tubes
11. Product Insert

### Customer-Supplied Reagents and Equipment

- Benchtop microcentrifuge
- 95-100% ethanol
- Xylene, histological grade
- $\beta$ -mercaptoethanol (optional)

### Shipping Conditions

The FFPE RNA Purification Kit is shipped at room temperature.



**Figure 2. High Yield of a Diversity of RNA Species**

Total RNA was isolated from equal amounts of an FFPE tissue sample using Norgen's FFPE RNA Purification Kit and a leading competitors kit. The purified RNA was then used as the template in a RT-qPCR for detecting the beta-actin gene (Panel A) and for detecting miR-21 (Panel B). In both graphs the blue lines correspond to Norgen isolated-RNA and the green lines correspond to competitor-isolated RNA. As it can be seen, Norgen's kit isolated higher yields of RNA in both cases, as indicated by the higher  $C_T$  values of the blue lines. Also, Norgen's kit successfully isolated not only large RNA (Panel A) but also microRNA (Panel B), indicating the diversity of RNA species isolated.

### Storage Conditions

All solutions should be kept tightly sealed and stored at room temperature. The DNase I should be stored at  $-20^{\circ}\text{C}$  upon arrival. The Proteinase K should be stored in aliquots at  $-20^{\circ}\text{C}$  upon reconstitution. These reagents should remain stable for at least 2 years in their unopened containers.

Cat #	Description	Quantity
25300	FFPE RNA Purification Kit	50 preps