

# Spin column-based Nucleic Acid Extraction kit for Plants

## ISOSPIN Plant DNA & RNA



Made in Japan

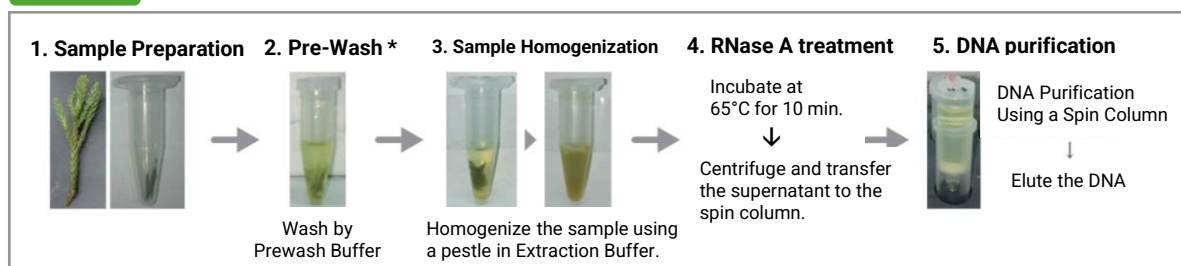
### Isolation of DNA from Plant Leaves ISOSPIN Plant DNA

#### ■ Features

- High quality DNA can be isolated even from viscous leaves (e.g., leaves of Rosaceae).
- Polyphenols and polysaccharides are efficiently removed.
- Isolation is performed without the use of chloroform or phenol.



#### Procedure



\*Optional step for viscous samples (skip this step when isolating from standard samples).

#### DNA Extraction from a High-Viscosity Sample

##### Sample & Kits

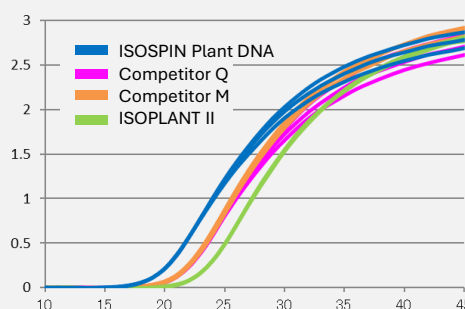
Sample : 20 mg of Cedar leaves  
Comparison Kit : ISOSPIN Plant DNA, ISOPLANT II (Our conventional kit).  
Competitor Q, Competitor M

##### Real-time PCR (qPCR)

Master Mix : GeneAce SYBR™ qPCR Mix α Low ROX (Code No. 316-07693)  
Template DNA : 1.25 ng  
Amplification region : 18S rRNA gene

##### <Result>

DNA extracted using the kit showed the lowest Ct value compared to the competitor kit and our conventional kit.  
In conclusion, the kit was able to extract highly pure DNA by effectively removing viscous substances that inhibit PCR.



Code No.	Product	Size	Price
312-08631	ISOSPIN Plant DNA	50 preps	Inquire

## NIPPON GENE CO., LTD.

2-7-18, Toiya-machi, Toyama 930-0834 Japan  
TEL: 076-451-6548 FAX: 076-451-6547  
URL: <https://www.nippongene.com/index.html>

## Isolation of RNA from Plant Leaves

# ISOSPIN Plant RNA

### ■ Features

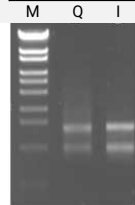
- High-quality RNA can be isolated even from plant samples rich in polysaccharides.
- Extract RNA suitable for RNA-seq applications.
- Completes the extraction process within 60 minutes.



### RNA extraction from Arabidopsis leaves

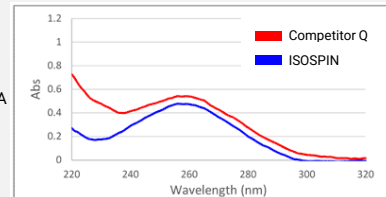
The quality of RNA extracted from Arabidopsis leaves was evaluated using RIN values (Bioanalyzer), agarose gel electrophoresis, and absorbance measurements.

Kits	A260/A280	A260/A230	Yield (µg /mg tissue)	RIN value
ISOSPIN Plant RNA	2.35	2.69	79	7.5
Competitor Q	1.95	1.13	72	7.8



Q: Competitor Q  
I: ISOSPIN Plant RNA  
M: Marker

100 ng RNA each  
1% Agaorse S



#### <Result>

High-quality RNA suitable for RNA-seq was obtained using ISOSPIN.

#### <Estimated RNA yield>

Sample	yield (µg /mg tissue)	Sample	yield (µg /mg tissue)	Sample	yield (µg /mg tissue)	Sample	yield (µg /mg tissue)
Phalaenopsis (Leaf)	15	Green onion (Leaf)	0.1	Arabidopsis (Sprout)	0.1	Cabbage (Sprout)	1.4
Orange (Juice vesicle)	10	Tomato (Pulp)	10	Oryza sativa (Sprout)	0.2	Cabbage (Leaf)	0.1
Kiwi (Pulp)	50	Tomato (Seed)	40	Spinach (Leaf)	0.5	Bamboo (Leaf)	0.3
Kiwi (Seed)	80	Tea (Leaf)	0.4	Broccoli (Sprout)	1.0	Tulip (Bulb)	0.2
Potato (Tuber)	0.1	Chrysanthemum (Leaf)	0.2	Cabbage (Seed)	1.3	Strawberry (Pulp)	15

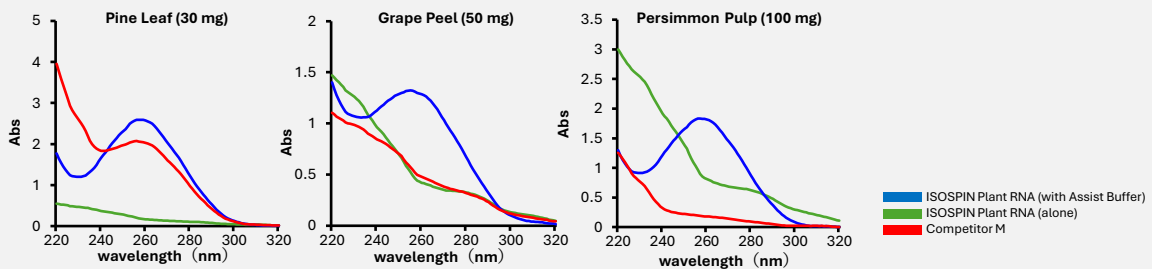
## Isolation of RNA from Hard-to-Extract Plant Samples (Optional dedicated reagent set)

# ISOSPIN Plant RNA (with Assist Buffer)

- ### ■ Features
- Assist Buffer is a solution for plants that are difficult to extract RNA.
  - Simply add Assist Buffer 1 and 2 provided in PT Extraction buffer.

### RNA Extraction from Hard-to-Extract Samples

RNA was extracted from difficult-to-extract samples using "ISOSPIN Plant RNA (with Assist Buffer)" and "ISOSPIN Plant RNA (alone)". The extracted RNA was measured by absorbance.



<Result> ISOSPIN Plant RNA (with Assist Buffer) enabled efficient RNA extraction from samples that are difficult to extract using ISOSPIN Plant RNA alone.

#### <Estimated RNA yield>

Sample	yield (µg /mg tissue)	Sample	yield (µg /mg tissue)	Sample	yield (µg /mg tissue)
Pine (Needle)	0.1	Orange (Peel)	80	Banana (Pulp)	15
Rose (Leaf)	50	Persimmon (Pulp)	30	Phalaenopsis (Leaf)	20
Rose (Petal)	80	Grape (Pulp)	10	Cyclamen (Leaf)	0.1
Camellia (Leaf)	70	Grape (Peel)	50	Strawberry (Leaf) *	0.1

\*Extraction from strawberry leaves requires optimization of the amount of Assist buffer used.

For more information, please contact us. We also welcome inquiries regarding extractions from other, non-listed samples.

Code No.	Product	Package Size	List price
310-08171	ISOSPIN Plant RNA	50 preps	Inquire
315-08501	Assist Buffer for ISOSPIN Plant RNA	50 preps*	Inquire
311-09061	ISOSPIN Plant RNA (with Assist Buffer)	1 set (50 preps)**	Inquire

\*It needs to be used in combination with the ISOSPIN Plant RNA(310-08171).

\*\*It is a packaged product that combines ISOSPIN Plant RNA(310-08171) and Assist Buffer (315-08501).