CE IVDR

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AZUL PLANT RNA EXTRACTION KIT

RNA IN 60 MINS | GOOD YIELDS FOR USE IN PCR/SEQUENCING

PRODUCT BROCHURE

Cat No-RE104

ISO 13485 CERTIFIED

PRODUCT DESCRIPTION

AZUL Plant RNA Extraction Kit is an easy and efficient system for the isolation of total RNA from plant tissues like leaves, root, and stem, etc. This kit uses a silica-based spin column technology for isolating RNA from biological samples, thereby eliminating toxic phenol-chloroform extractions. The eluted RNA is suitable for all sensitive downstream applications such as qPCR and Next-Generation sequencing.

KIT COMPONENTS

Components	For 50 preps	For 25 preps
Extraction Buffer (EB)	35mL	18mL
Lysis Buffer(LB)	2mL	1mL
Binding buffer(BB)	30mL	15mL
Wash Buffer 1(WB1)	30mL	15mL
Wash Buffer 2(WB2)	25mL	13mL
Elution Buffer(ELB)	4mL	2mL
Spin Column	50 (Pouch pack)	25 (Pouch pack)

SPECIFICATIONS

Format	Spin column
Sample type	Plant tissues like leaves, root, stem
Equipment	Microcentrifuge
Processing time	<60 mins
Sample amount	≥ 500 mg
Type	Total RNA
Sample storage	Eluted RNA should be stored at ≤ -20°C
Yield	5 - 20 µg
Purity	A260/280 ≥ 2.0
Kit Storage	Room Temperature
Kit Validity	Viable for 1 year if stored at appropriate conditions

NOTE: *Check the Extraction Buffer, Binding Buffer and Lysis Buffer for any salt precipitation before every use. Re-dissolve any precipitate by warming the solution to 37°C, then cool it back to room temperature before use.*

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RNA EXTRACTION PROTOCOL

1. Collect and weigh 500 mg of plant tissue (leaves, stems, or roots) and place it in a pre-chilled mortar and pestle.
2. Add 625 µL of Extraction Buffer and grind thoroughly.
3. Transfer this tissue lysate into a clean 1.5 mL microfuge tube and add 25 µL Lysis Buffer. Mix briefly by vortexing for 30 seconds
4. Place the tube in a 65°C water bath for 15 minutes, with intermittent vortexing every 5 min.
5. Centrifuge the tube at 15,000 rpm for 15 minutes at RT. Transfer the clear supernatant to a new microfuge tube.
6. Add 600 µL Binding Buffer (BB) to this suspension and mix briefly by inverting the tube a few times. Place the tube at -20°C for 15 minutes.
7. Transfer the suspension to a spin column and centrifuge the tube at 15,000 rpm for 2 min at RT.
8. Discard the flow-through and place the purification column back into the collection tube. Repeat this step until complete lysate has been transferred into the column and centrifuged.
9. Wash the spin column with 600µL Wash Buffer 1 (WB1) at 15,000 rpm for 1 min and discard the flow through.
10. Add 500µL of Wash Buffer 2 (WB2) to the column and centrifuge at 15,000 rpm for 1 min to completely remove salts and impurities.
11. Keep the purification column in a clean, sterile 1.5 mL microfuge tube and add 30µL- 50µL of Elution Buffer or DNase/RNase-free water to the center of the column.
12. Centrifuge the column for 15,000 rpm for 2 min.
13. Discard the purification column and store the eluted RNA at -20°C or -80°C until use.

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FLOW DIAGRAM OF RNA EXTRACTION PROTOCOL

Weigh 500 mg of plant tissue

Homogenize thoroughly

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Add 625 µL Extraction Buffer

Transfer the lysate

Add 25 µL Lysis Buffer

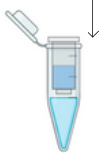
Incubate at 65°C for 15 mins

Centrifuge at 15,000 rpm for 15 mins

Transfer clear supernatant to new tube

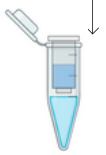
Add 600 µL Binding Buffer

Keep at -20°C for 15 mins



Mix well
Transfer lysate to Spin column

Centrifuge at 15,000 rpm for 2 mins



Add 600 µL wash buffer

Centrifuge at 15,000 rpm for 1 min

Repeat this step with Wash Buffer 2

Add 30-50 µL elution buffer

Centrifuge at 15,000 rpm for 2 mins

Eluted RNA

Store at -20°C or -80°C until use

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	SUGGESTED SOLUTIONS
Low RNA Yield	**Tissue input:** Too much input or incomplete lysis/homogenisation can cause cellular debris to clog or overload the column and leech salts into RNA eluate.	Use less input material or increase the volume of the Extraction Buffer and grind thoroughly.
	Incomplete Debris Removal or incomplete lysis	Increase the volume of Extraction Buffer to ensure complete homogenization. Be sure to centrifuge and pellet any cellular debris and transfer the supernatant while avoiding any pellet debris.
Low RNA Purity(A260/A280)	Improper sample handling results in ethanol or salt contamination	Make sure lysate and wash buffers have passed entirely through the matrix of the column. This may require centrifuging at a higher speed or longer time.
DNA Contamination	Too much tissue used	**To remove DNA:** Perform in-column DNase I treatment or perform DNase I treatment post-purification (not provided in the kit), then re-purify the treated sample.
RNA Degradation	Use of old tissue samples not stored at appropriate conditions	**To prevent RNA degradation:** Immediately collect and lyse fresh samples into a Lysis Buffer. Collect and store the fresh tissues in RNA WRAPR Solution to ensure stability & integrity of RNA and process later.

NOTE: *The use of DEPC treated tubes and tips for the isolation process is recommended. It is also recommended to wash the plant samples in DEPC water for better and improved RNA yields.*

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ORDERING INFO

CATALOG NO	PRODUCT	PREP
RE101	AZUL SARS- CoV-2 Kit RNA Extraction Kit	25/50 preps
RE102	AZUL Tissue RNA Extraction Kit	25/50 preps
RE103	AZUL Bacterial RNA Extraction Kit	25/50 preps
RE104	AZUL Plant RNA Extraction Kit	25/50 preps
RE105	AZUL Soil RNA Extraction Kit	25/50 preps
RE106	AZUL Animal Cell Culture RNA Extraction Kit	25/50 preps
RE107	AZUL Blood RNA Extraction Kit	25/50 preps
RE108	AZUL Stool RNA Extraction Kit	25/50 preps
RE109	AZUL Saliva RNA Extraction Kit	25/50 preps
RE113	AZUL Microbiome RNA Extraction Kit	25/50 preps
RE114	AZUL Fungal RNA Extraction Kit	25/50 preps
RE115	AZUL FFPE RNA Extraction Kit	25/50 preps

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FEEDBACK

How did this kit perform?

Did AZUL Extraction Kit fulfill expectations required for your research?
Let us know by filling out the feedback form here

Or scan the QR code:

CONTACT US

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