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RNA stability in SPECTRA

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protocol .

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Protocol for storage of RNA in SPECTRA.

Venkata Subramanian Ramesan, Bhushan Toley 2022. RNA stability in SPECTRA. **protocols.io**<https://protocols.io/view/rna-stability-in-spectra-b54vq8w6>

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Following things will be provided:

1. SPECTRA Tube containing centrifuge tubes
2. Swabs
3. Total 18 samples

Source the RNA

- 1 Obtain any RNA (*RNase P*, *SARS CoV-2*, etc.)
- 2 Quantify the RNA using a Nanodrop or RT-PCR. Convert to copy number using the following tool.

[RNA copy number calculator](#)

Apply RNA to the nylon flock


- 3 Add 10ul of 10^4 copies /ul RNA to the swab

Flocked Swab

Fisher Scientific 22-025-195


- 3.1 **Caution:** the swab is slightly hydrophobic, hence try to smear the 10ul drop over the nylon flock with a pipette tip

Load the swab into the SPECTRA

- 4 

Open the screw cap of the SPECTRA device and place it on a 50ml falcon stand (try to minimize exposure to air by keeping the device opened. Open the SPECTRA device just before loading the swab)

- 5 Put the swab into the centrifuge tube present inside the SPECTRA tube, and cut the plastic body just above the nylon flock head

- 6 

DO NOT CLOSE THE 1.5ml CENTRIFUGE TUBE (IMPORTANT)



- 7 Close the 50ml centrifuge tube by screwing it tight

- 8 Store the SPECTRA tube for different durations at room temperature (25°C)

A	B	C
Sample description	Storage Duration in hours	Sample code
VTM Control	0	
Dry swab in SPECTRA	24	RNA A-1, RNA A-2
Dry swab in SPECTRA	24hrs	RNA B-1, RNA-B2

(2 controls, and 3 test)

RT-PCR

- 9 Add  **300 µL** of nuclease-free water to  **1.5 mL** centrifuge tube and mix it vigorously using a vortexer for at least 5 seconds each.

Vortexer

VWR 97043-562

- 10 Spin-down the 1.5ml centrifuge tube (5 seconds)

- 11 Perform RT-PCR reaction for the RNA with suitable primers. Add ~15ul of the

7500 Real Time PCR System

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