

Station B: Omega Biotek Mag-Bind Viral RNA XPress Kit

This protocol starts immediately after lysing the sample and starts at step 6 with the addition of Binding Mastermix

Code parameters:

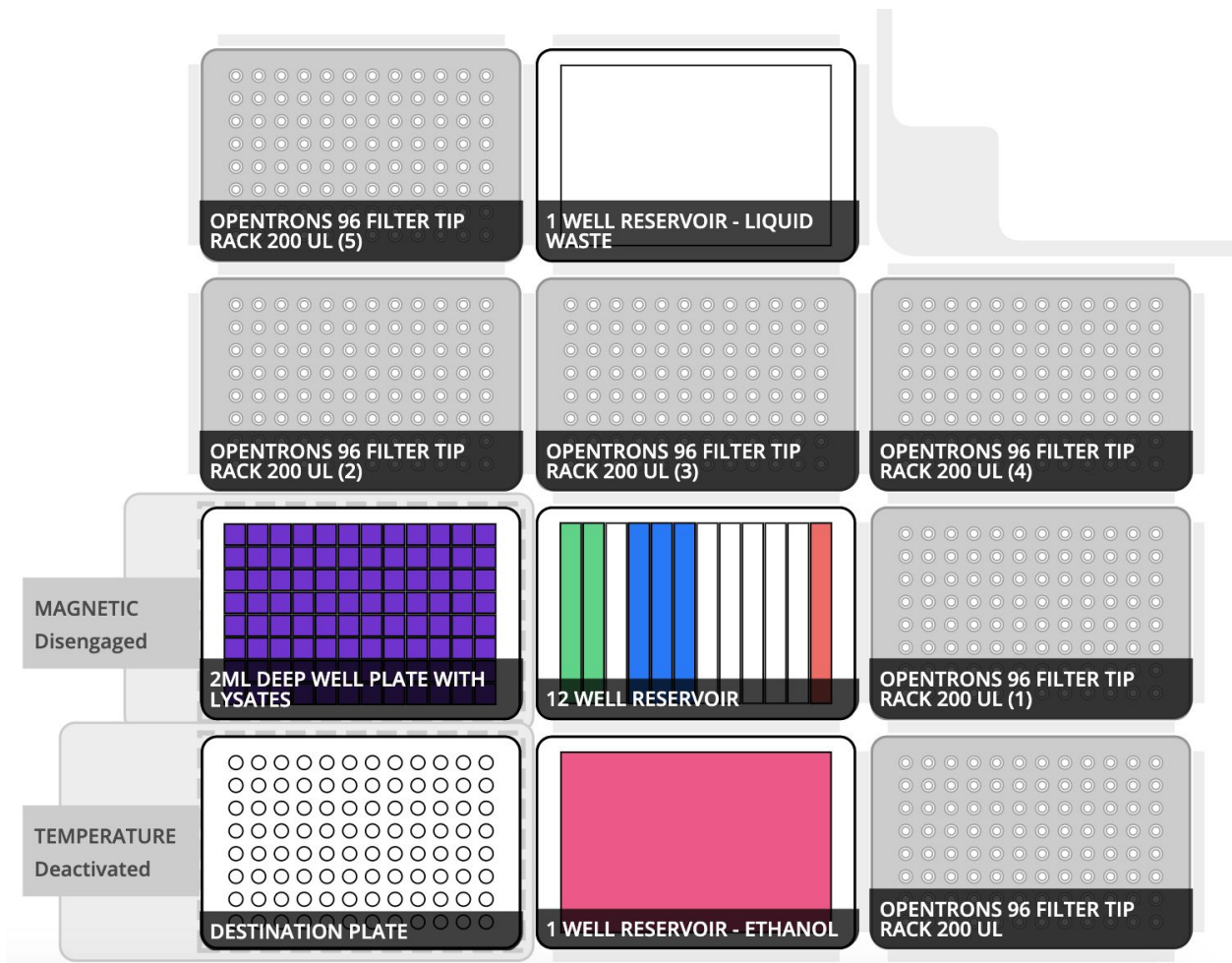
- Change the sample number on line 14 (default is 8, max is 96)
- Change the elution volume on line 15 (default is 50µl, max is 100µl)
- Change the sample starting volume on line 16 (default is 440µl)
- Tip rack tracking can be changed from False to True on line 17 (default is False)
- Make “tiprack parking” True or False on line 18* (default is True)

**if you selected True for “tiprack parking,” tips used for the same buffers with the same samples will be reused where 1 tiprack turns into a tiprack where used tips are “parked”. This method has low risk of contamination and is highly recommended to avoid pauses to reuse tips.*

Pipettes:

- P300 multichannel on the left mount

Deck Layout:



Labware and module requirements:

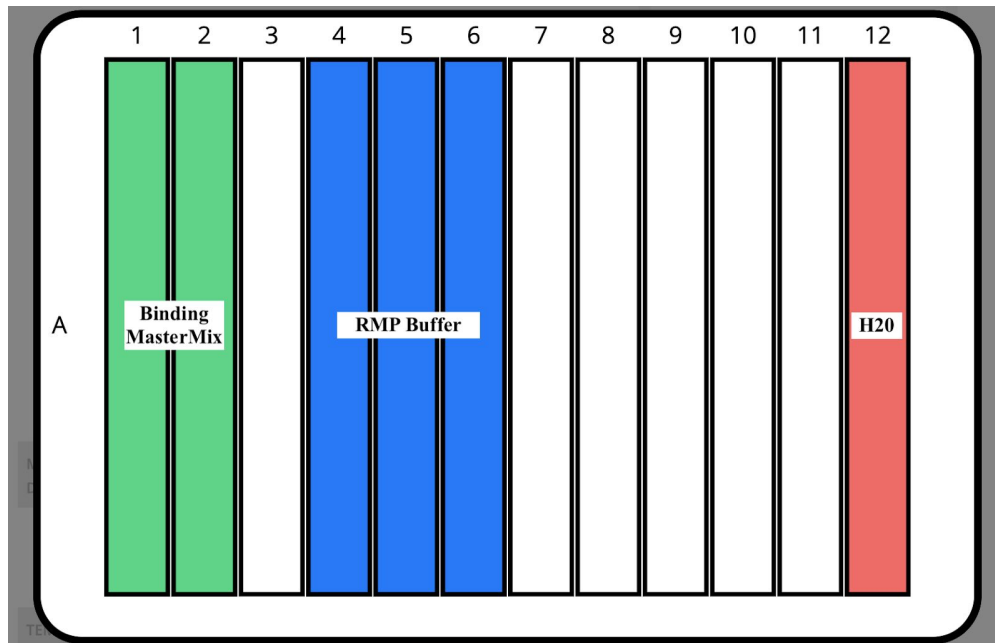
- 1 x magnetic module
- 1 x temperature module
- 1 x 2mL deep well plate **[input with lysates]**
- 6 x 200µl filter tip racks (10 x 200µl if you select false for tiprack parking)
- 2 x 1 well reservoir **[1 with 80% ethanol in slot 2, 1 loaded empty for the liquid waste in slot 11]**
- 1 x 12 well reservoir with reagents **[holds Binding MasterMix, RMP Buffer and Nuclease-Free Water]**
- 1 x 96 well aluminum block loaded on top of the temperature module in slot 1
- 1 x 96 well PCR plate **or** PCR strip tubes to match the number of samples **[output with eluates/extractions]**

Volume requirements:

Note: the below volumes account for a dead volume - the dead volume can be adjusted depending on the calibration of the pipette to the labware, but it's best to have a dead volume of at least 10%

Reagents	Volume per sample (µl)	Volume for 8 samples (µl)	Volume for 48 samples (mL)	Volume for 96 samples (mL)
Binding MasterMix	280	3,360	14.5	28
RMP Buffer	350	4,200	18.2	35
Freshly diluted 80% Ethanol	700	8,400	36.4	70
Nuclease Free H2O	50	600	2.6	5

Slot 5 - 12 well reservoir



Before you begin:

1. Pre-cool the Temperature Module in the Opentrons App to 4°C
2. Create the **Binding MasterMix**

Reagent	Volume for 96 samples (according to the manual)
100% Isopropanol	30 mL
Mag-Bind Particles CNR	210 µl

Note: the beads settle quickly so be sure to vortex the solution thoroughly before adding the mixture to the reservoir

3. Add the Binding Mastermix, RMP Buffer, and Nuclease Free H2O to the 12 well reservoir
4. Create the freshly diluted 80% ethanol and add it to the 1 well reservoir in slot 2
5. Place the deep well plate filled with lysates on top of the magnetic module in slot 4.
6. Add a 96 well aluminum block and the 96 well PCR plate or PCR strip tubes on top of the Temperature Module in slot 1

The final plate of eluates/extractions will be found on top of the temperature module in slot 1. Once the run is complete, please proceed to Station C for RT-PCR set up.