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

Please familiarize yourself with the manual steps before proceeding - ***This protocol starts immediately after lysing the sample and starts at step 6 with the addition of Binding Mastermix***

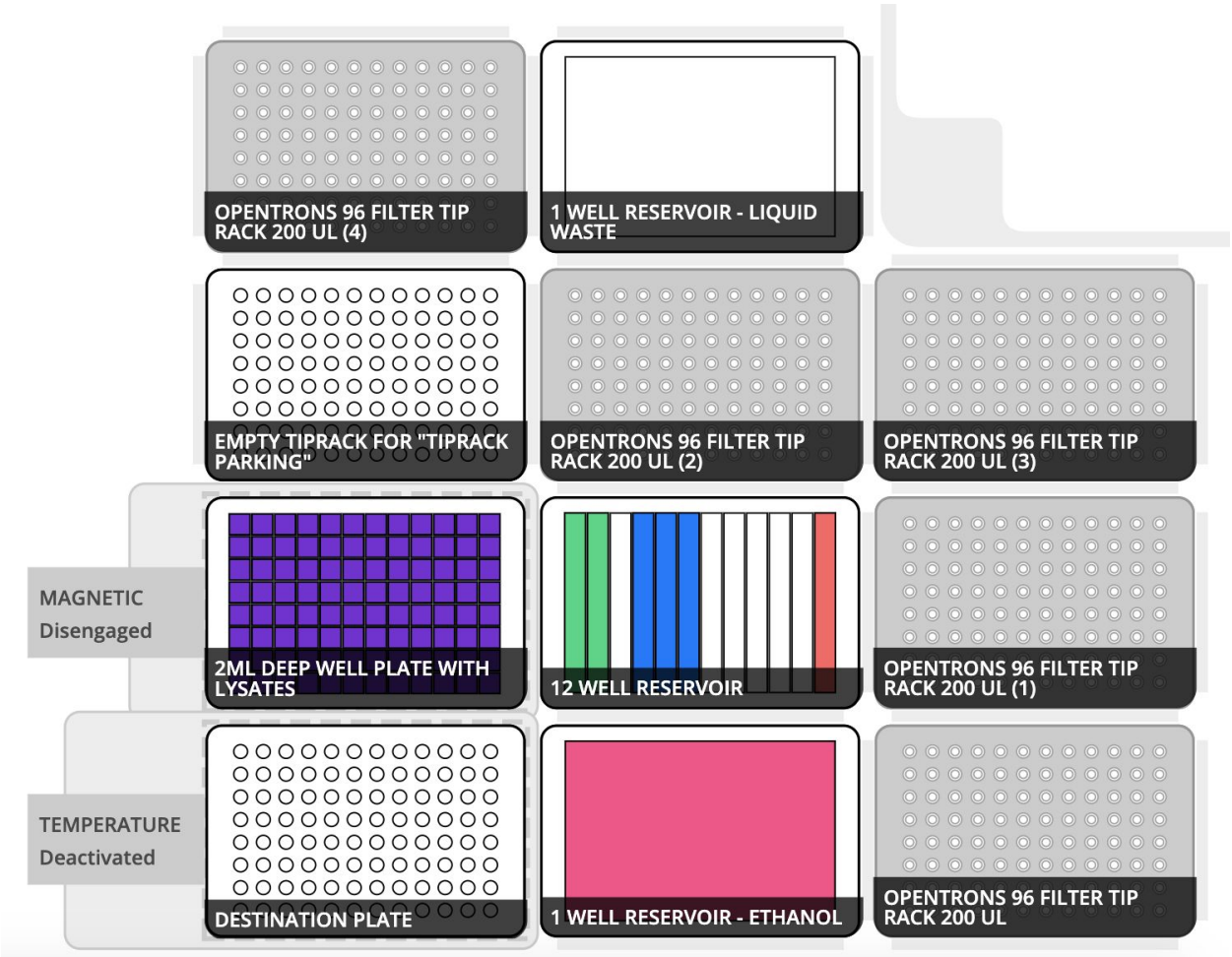
Code parameters:

- 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)

Pipettes:

- P300 multichannel on the left mount

Deck Layout:



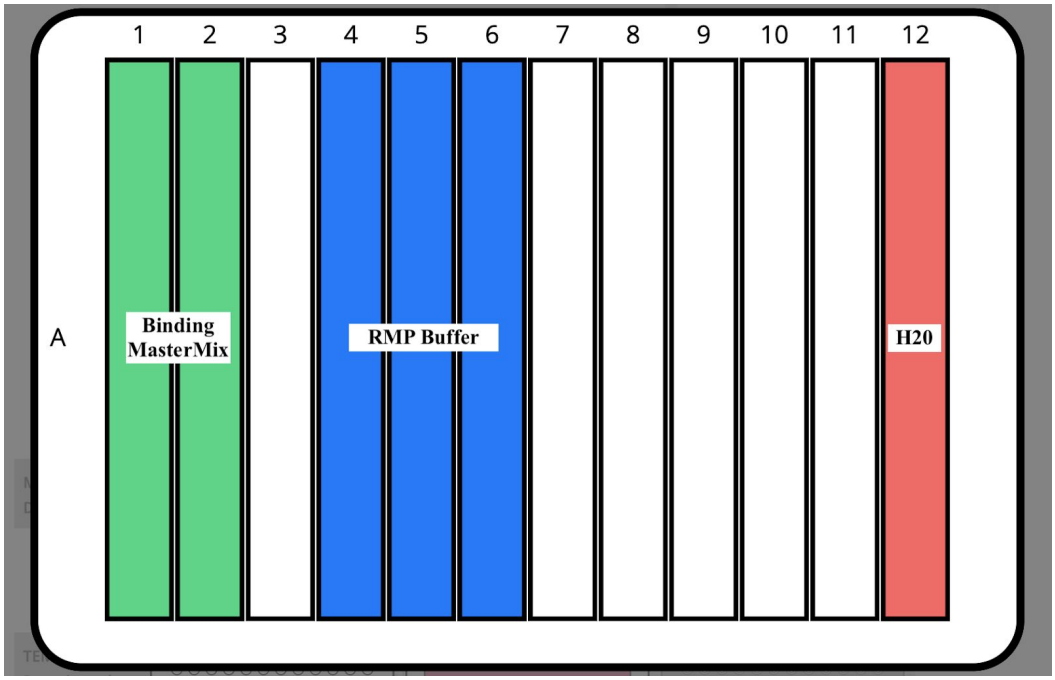
Labware and module requirements:

- 1 x magnetic module
- 1 x empty 200µl tip rack for “tiprack parking”
- 1 x temperature module
- 1 x 2mL deep well plate **[input with lysates]**
- 5 x 200µl filter tip racks
- 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 H20	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 H20 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
7. Load the empty 200 µl tip rack in slot 7 for “tiprack parking”

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.