Station B: MagMAX Viral/Pathogen Nucleic Acid Isolation (v2)

Code parameters:

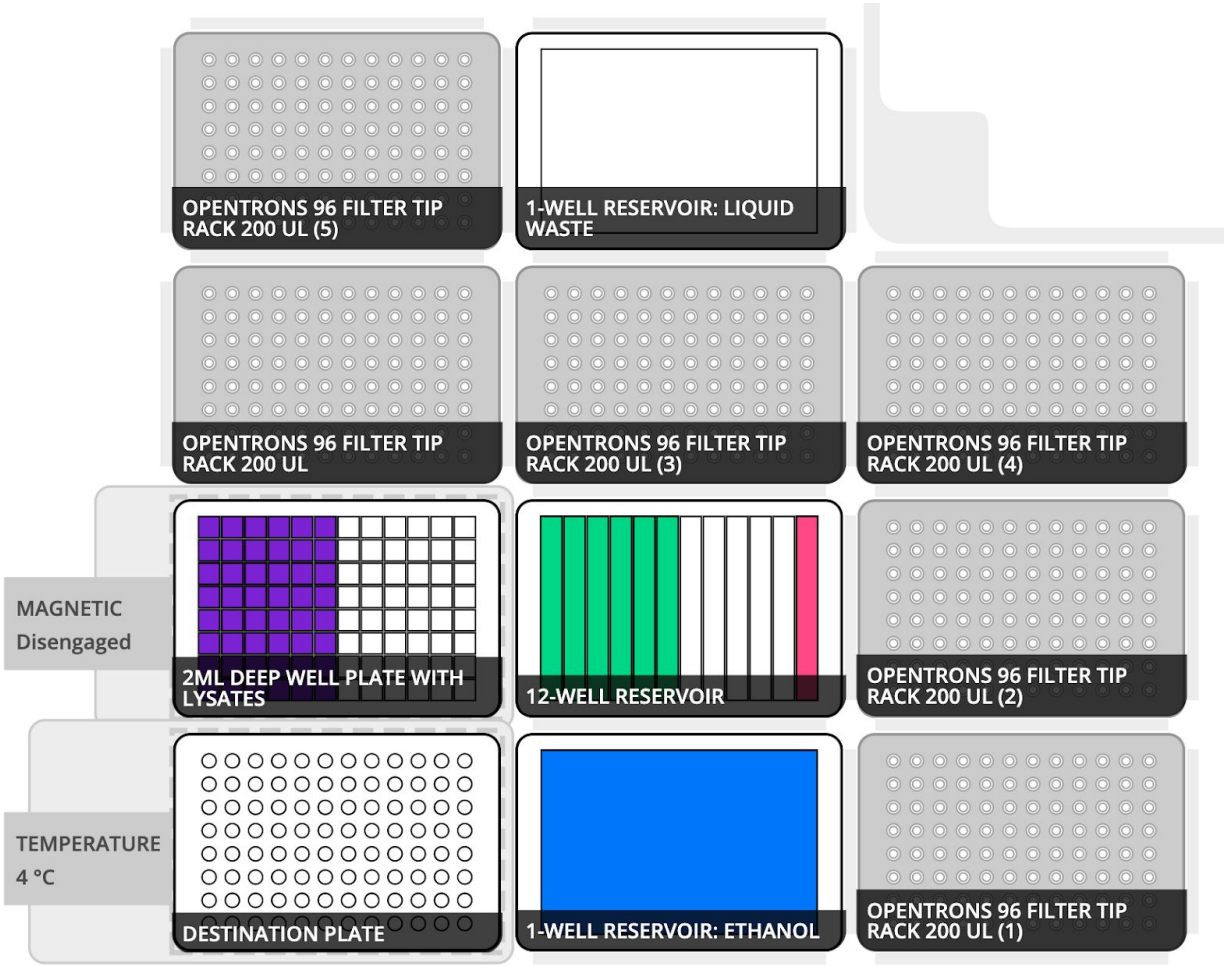
- Change the sample number on line 14 (default is 8, max is 94)
- Change the elution volume on line 15 (default is 50µl)
- Change the starting volume on line 16 (default is 9600µl)
- Change tiprack tracking to True or Fale on line 17 (default is False)
- Make “tiprack parking” True or False on line 18 (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 multi-channel on the left mount

Deck Layout (for 48 samples):



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 if you select False for "tiprack parking")
- 2 x 1-Well Reservoirs **[one for ethanol, one for liquid waste]**
- 1 x 12-Well Reservoir **[holds wash buffer 1]**
- 1 x 96-Well Aluminum Block
- 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 we've found it's best to have a dead volume of at least 10%*

Reagent	**Volume per sample (µL)**	**Volume for 8 samples (mL)**	**Volume for 48 samples (mL)**	**Volume for 96 samples (mL)**
Wash Buffer 1	1000	9	54	108
Ethanol (80%)	1000	9	54	108
Elution Solution	50	2	3	6

Before you begin:

1. Pre-cool Temperature Module in the Opentrons App to 4℃ (with 96-well aluminum block and empty PCR plate/PCR strips)
2. Add the Wash Buffer 1 and Elution (if room) to the 12-Well Reservoir and load in **slot 5**
    a. Note: If running more than 88 samples, all 12 wells of the reservoir will need to be filled with Wash Buffer 1. There is a built in pause after the ethanol wash in which the plate is moved off deck. Before resuming after the pause, replace the 12-well reservoir with one containing the elution solution in well 12.
3. Create the freshly diluted 80% ethanol and add it to the 1-Well Reservoir and load in **slot 2**
4. Place the deep well plate of lysates from Station A on top of the Magnetic Module in **slot 4**
5. Load the **empty** 200µL tip rack in slot 7 for "tiprack parking", is using.