Station B: MGIEasy Nucleic Acid Extraction Kit Setup Guide

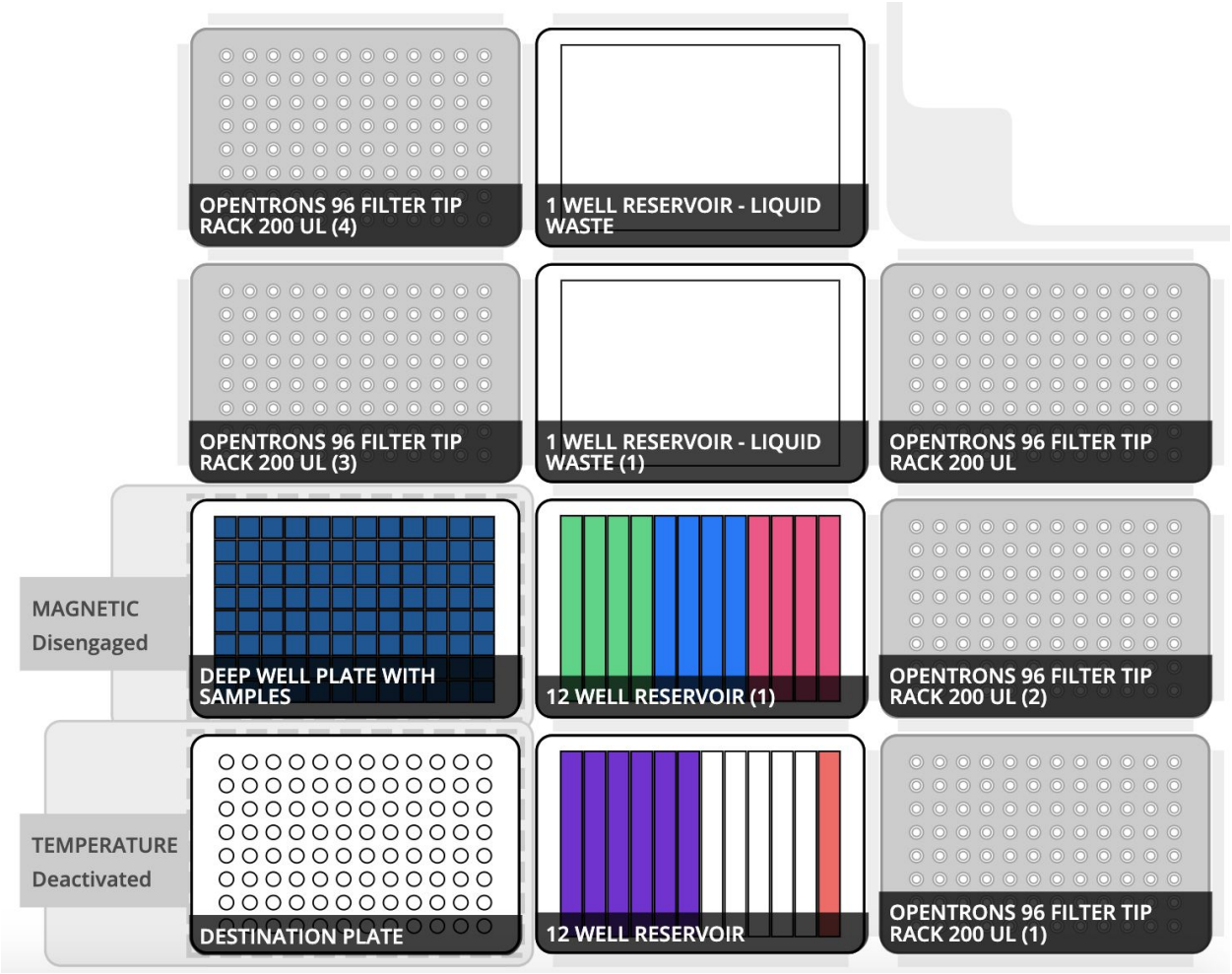
Code parameters:

- Change the sample number on line 11 (default is 8, max is 94)
- Change the elution volume on line 13 (default is 50µl)
- Change the starting volume on line 14 (default is 200µl)

Pipettes:

- P300 multichannel on the left mount

Deck layout:



Labware and module requirements:

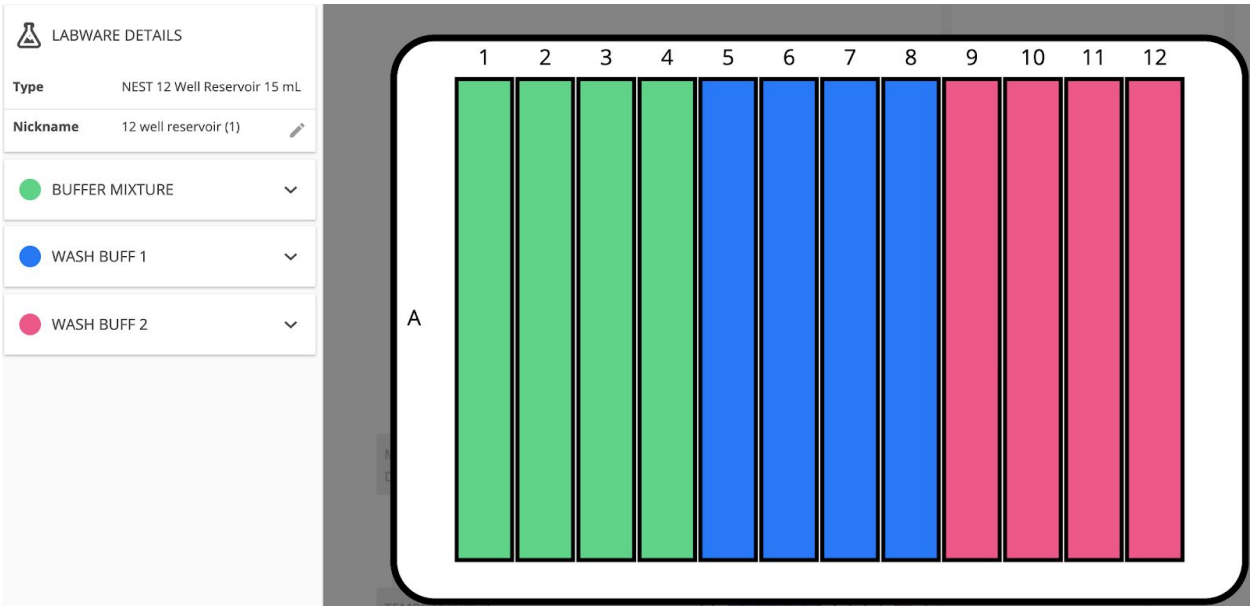
- 1 x magnetic module
- 1 x temperature module
- 1 x 2mL deep well plate **[input with lysates]**
- 10 x 200µl filter tip racks (5 x 200µl loaded on the deck at a time)

- 2 x 1 well reservoir **[2 x for liquid waste]**
- 2 x 12 well reservoir with reagents **[1 x for Buffer mixture, Wash buffer 1 and wash buffer 2. 1 x for Ethanol and 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 10% overage - the dead volume can be adjusted depending on the calibration of the pipette to the labware, but it is recommended to have an overage of at least 10%*

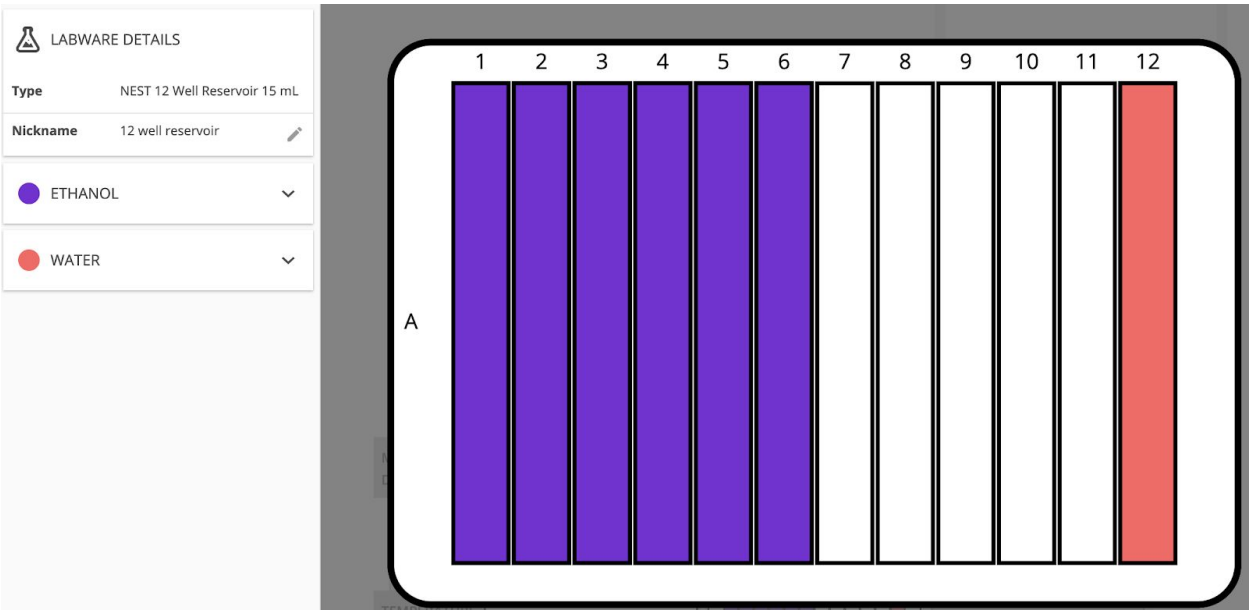
Reagents	**Volume per sample (µl)**	**Volume for 8 samples (µL)**	**Volume for 48 samples (mL)**	**Volume for 96 samples (mL)**
Buffer mixture	460	5,520	24	46
Wash buffer 1	500	6,000	26	50
Wash buffer 2	500	6,000	26	50
Absolute Ethanol	600	7,200	31	60
Water	50	600	2.6	5

Slot 5 - 12 well reservoir
Note: each well holds at most 3 columns or 24 sample wells worth of reagents (example: if you are running 24 samples, only fill well 1, well 5 and well 9)



Slot 2 - 12 well reservoir

Note: each ethanol well contains enough ethanol for 2 columns or 16 sample wells worth of reagents (example: if you are running 16 samples, only fill well 1)



Before you begin:

1. Pre-cool the Temperature Module in the Opentrons App to 4°C
2. Prepare the **Buffer mixture**

Reagent	**Volume per sample (µL)**	**Volume for 8 samples (µL)**	**Volume for 48 samples**	**Volume for 96 samples**
Buffer MLB	200	2,400	10.4mL	20mL
Absolute Ethanol	250	3,000	13mL	25mL
Proteinase K	15	180	780µL	1.5mL
Magnetic beads M	15	180	780µL	1.5mL
Enhancer Buffer	1	12	52µL	100µL

3. Add the Buffer mixture, Wash Buffer 1 and Wash buffer 2 to the 12 well reservoir in slot 5
4. Add absolute ethanol and water to the 12 well reservoir in slot 2
5. Place the deep well plate of lysates from Station A to 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-qPCR set up.