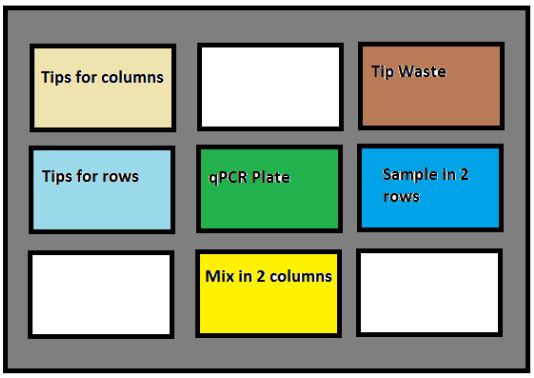
# qPCR Workflow

**Configuration**

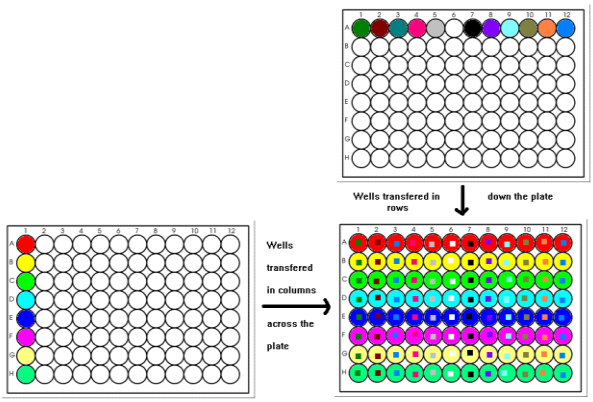
Bravo
96ST Head with 70 ul tips
3 x alignment pads (qPCR plate and 2 tip boxes)
1 x SRT pad (waste box)

**Layout**




**WorkFlow**

Using the Bravo with a 96 head will allow pipetting with 12 tips in a row and 8 tips in a column. A PCR plate can be setup using this methodology. Below shows how it would be done for a 96 well plate.




The spacing of the tips allows us to perform this work at the higher density of 384 wells. With 2 rows of samples and 2 columns of master mix we would be able to pipette each sample into 1 column of the 384 well PCR plate and each MasterMix into 1 row of the 384 well PCR plate.

Typically, we would suggest pipetting the mix first using 8 tips in a column with multidispense technique (large aspirate followed by dispensing 8 wells at 5.5ul, repeated 3 times for each column of samples) at the bottom of the well. Prompt the user to centrifuge the plate to make sure all the master mix is at the bottom of the well. Then pipette the sample using 12 tips in a row with a

multidispense technique (large aspirate followed by dispensing 8 wells at 4.5 ul, repeated 2 times per sample row) high up the well. Follow by sealing and centrifuging.

Tip usage would be 1 tips per sample and 1 tip per mix (24 + 16 = 40). Experience has shown there that cross contamination from well to well using the multi-dispense technique is negligible, however, we can change tips each dispense if necessary.

**Comments**

We have used this methodology successfully at densities of 96, 384 and 1536 using the Bravo at volumes down to 1 ul total volume (using 10 ul tips). The 10 ul total volume should not pose a challenge.

Other number s of samples and master mixes would be possible. Patterns and sample numbers that allow the Bravo to use a row or column of tips will produce the best performance.

Timing will be dependent on the speeds of liquid handling, tip changes and ability to multidispense. However, the workflow described above would take 8-10 minutes not including centrifuging.