**Preparation of 1X Barcode Plates for CyTOF**

1. Thaw 5mL DMSO vial (Sigma D2650-5X5ML - 4°C fridge) on lab bench (RT).
2. Prepare 1X BC plates:
   1. Obtain 20 – 0.2mL 96-well PCR plates (Fisherbrand cat. 14230237).
   2. Label front of each plate with “1X Pd BC Plate” and the date.
   3. Obtain 20 aluminum plate seals (Thermo 232698).
   4. Label each plate seal with “1X Pd BC Plate” and the date.
   5. Draw a boundary around the wells that will be occupied on each plate using a lab marker (see diagram below).
3. Take two 10X barcode plates out of the -80°C freezer and thaw on lab bench.
4. Once DMSO has thawed, open DMSO ampule and empty DMSO into a 50mL reagent reservoir.
5. Add 108µL DMSO to each well of each 10X barcode plate using a multichannel pipettor and pipette up and down 5X to mix (120µL final volume in each well).
6. Transfer 12µL of the diluted reagent from each 10X plate to ten 1X plates using a multichannel pipettor, making sure to follow the same pattern (see below).
7. Seal each plate with a Thermo plate seal and store each set of 10 plates at -80°C in a 1 gallon ziploc bag with drierite (desiccant).
8. Dispose of empty 10X plates in biohazard bin and dispose of empty DMSO ampule and cap in sharps container.

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|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| A |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  | 102 104 105 | 102 104 106 | 102 104 108 | 102 104 110 | 102 105 106 |  |  |  |  |
| D |  |  |  | 102 105 108 | 102 105 110 | 102 106 108 | 102 106 110 | 102 108 110 |  |  |  |  |
| E |  |  |  | 104 105 106 | 104 105 108 | 104 105 110 | 104 106 108 | 104 106 110 |  |  |  |  |
| F |  |  |  | 104 108 110 | 105 106 108 | 105 106 110 | 105 108 110 | 106 108 110 |  |  |  |  |
| G |  |  |  |  |  |  |  |  |  |  |  |  |
| H |  |  |  |  |  |  |  |  |  |  |  |  |