

1 / 23

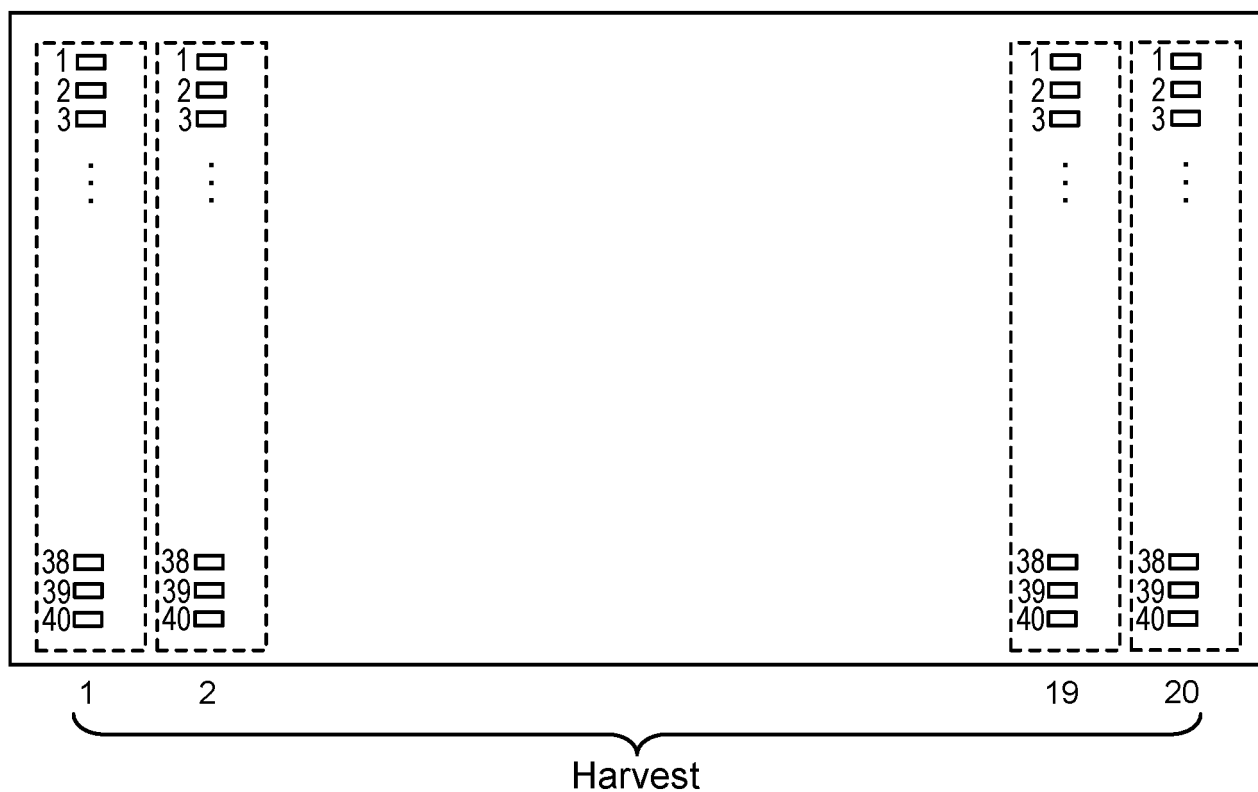


FIG. 1A

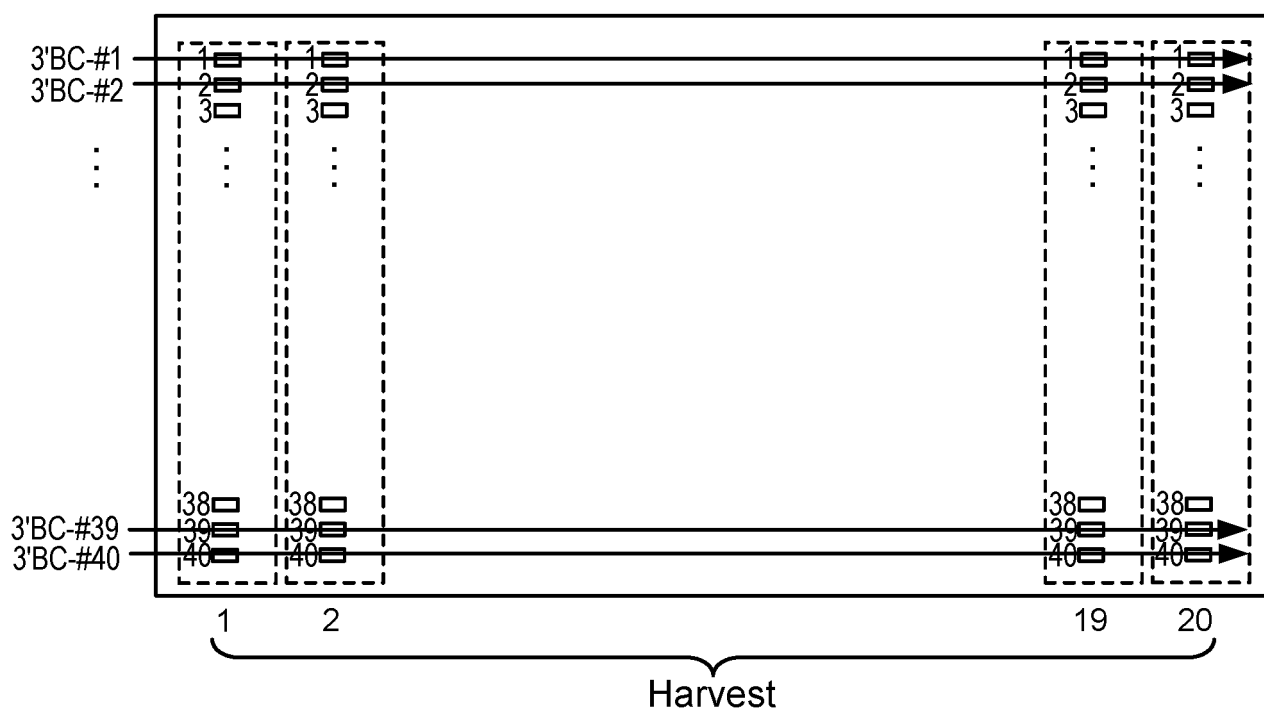


FIG. 1B

2 / 23

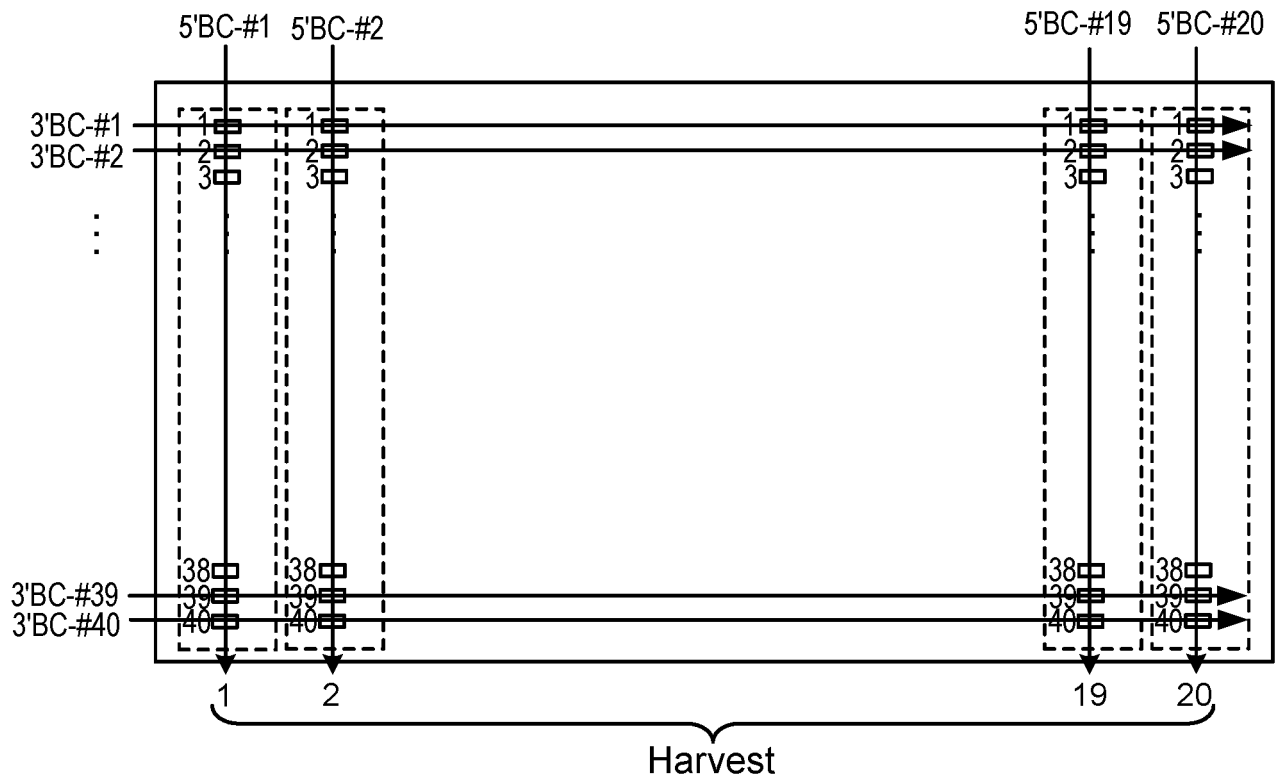


FIG. 1C

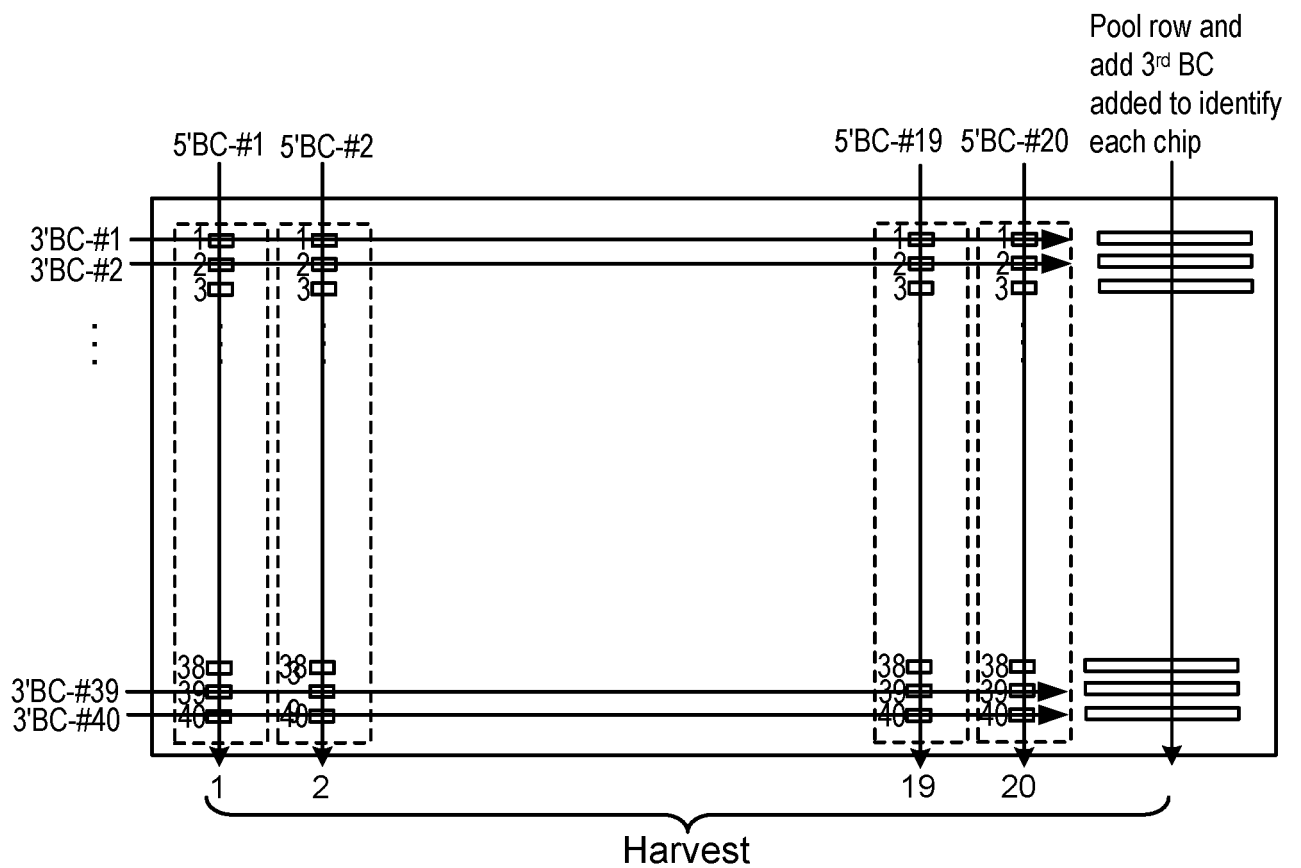
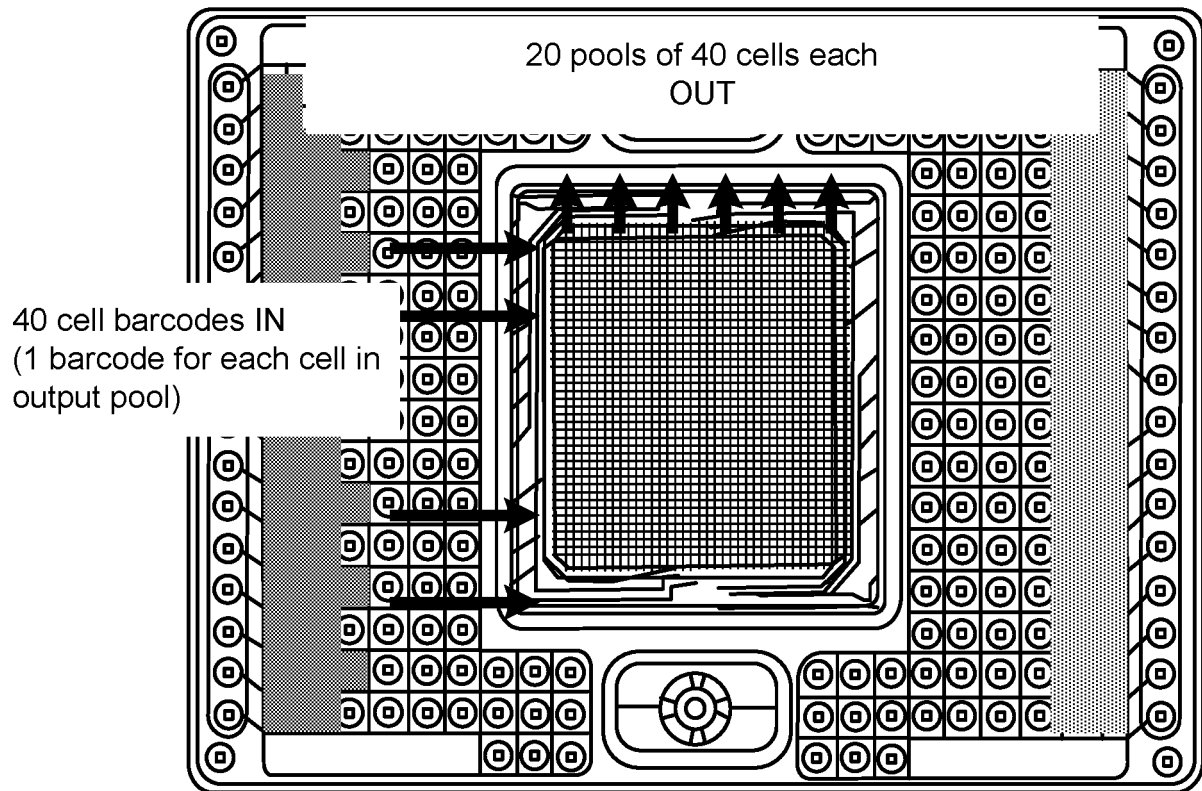
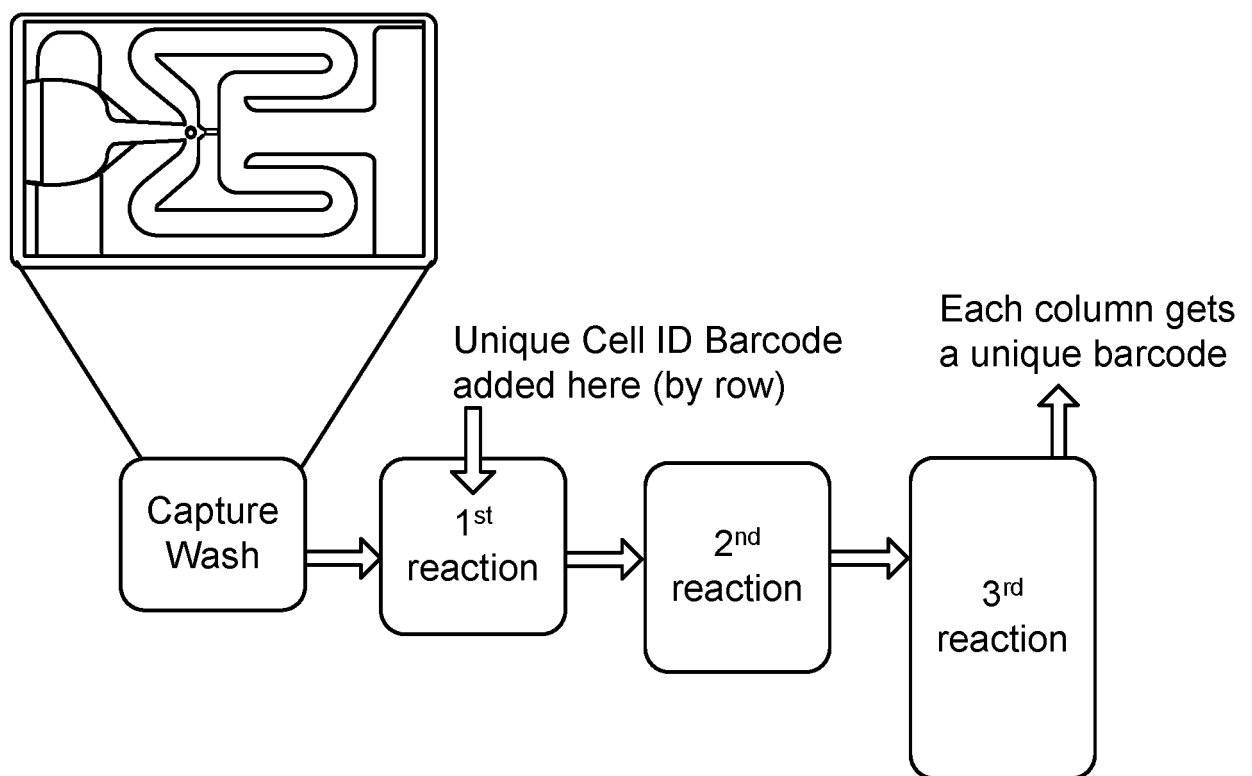


FIG. 1D

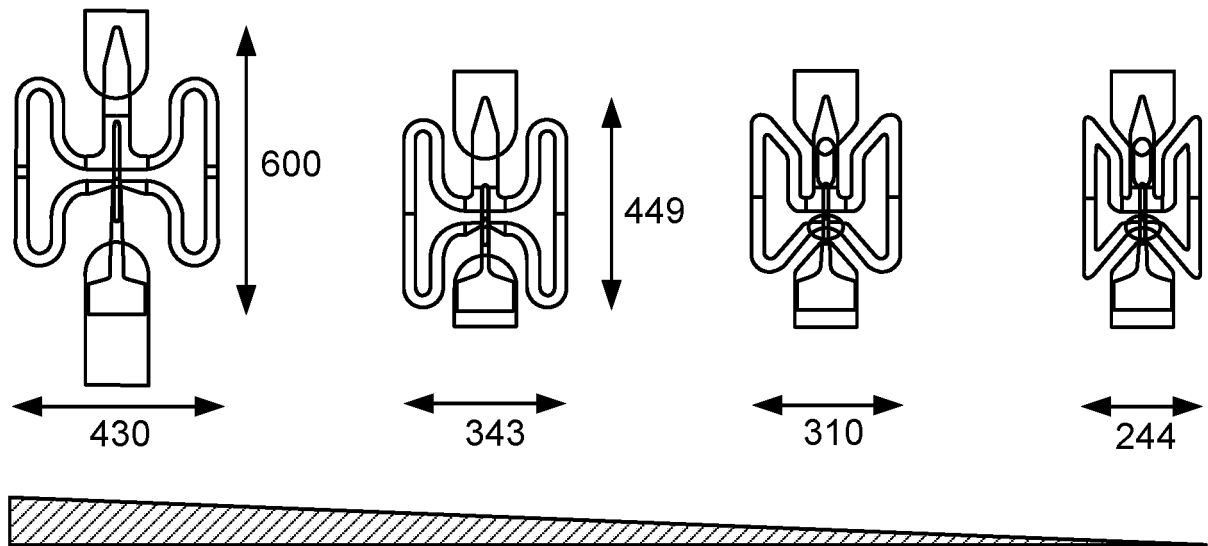
3 / 23

40 ROWS, each cell gets a unique barcode x 20 units (columns) get
a unit BC

**FIG. 2**

**FIG. 3**

v5.7 HL capture



Dimensions

FIG. 4A

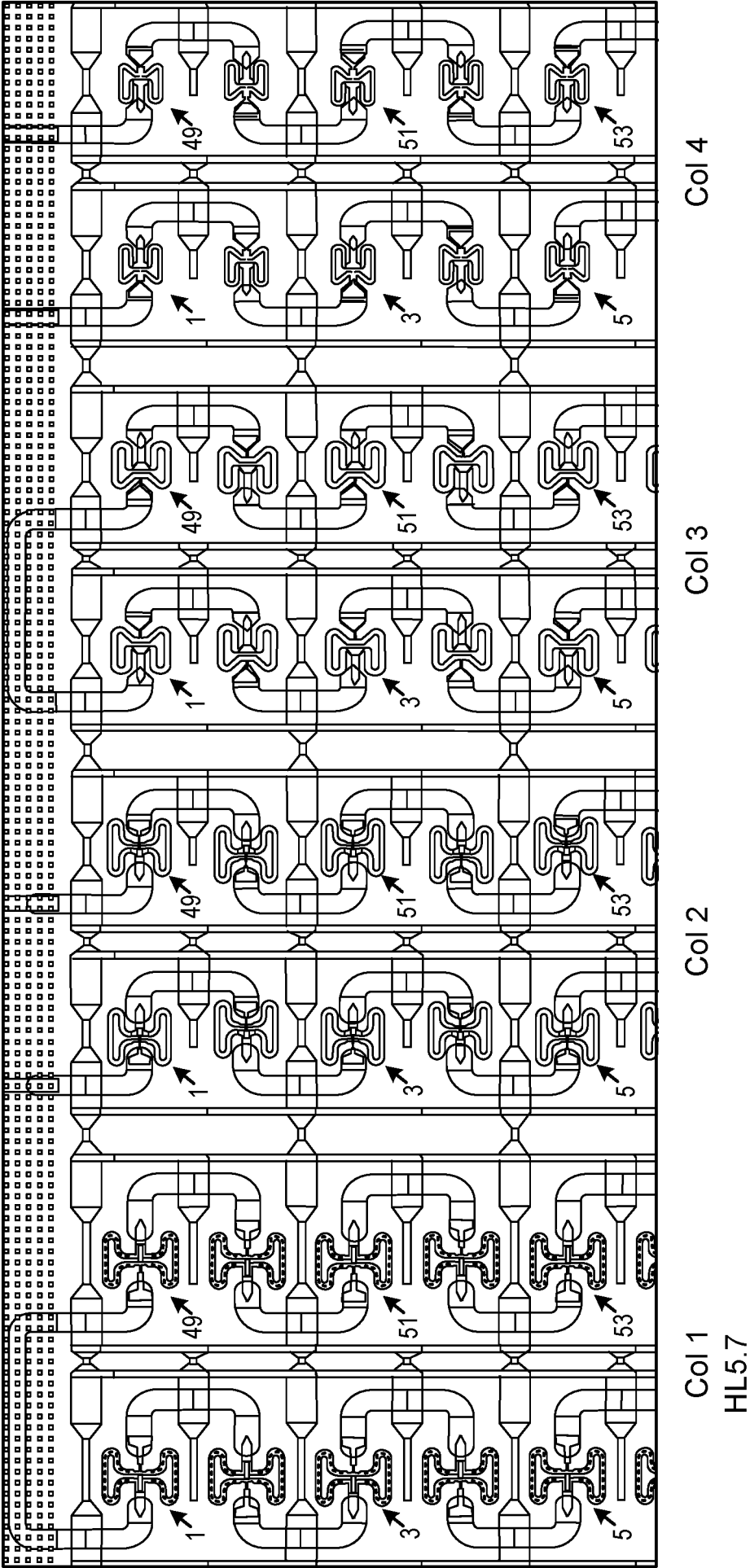
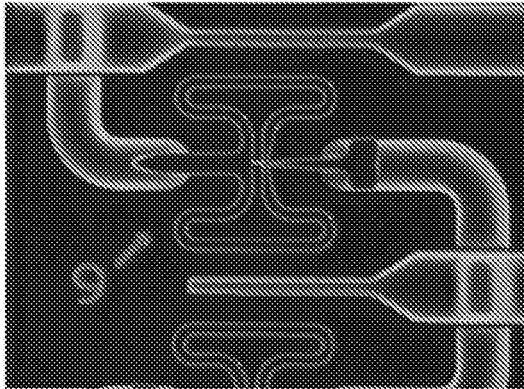


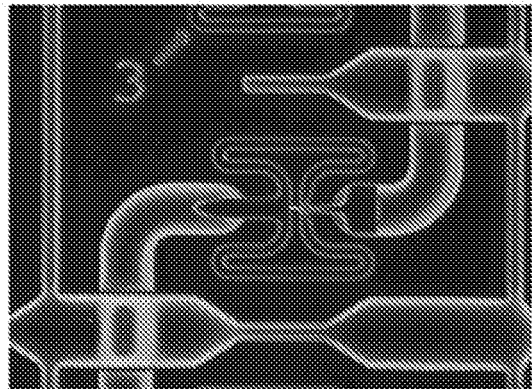
FIG. 4B

7 / 23

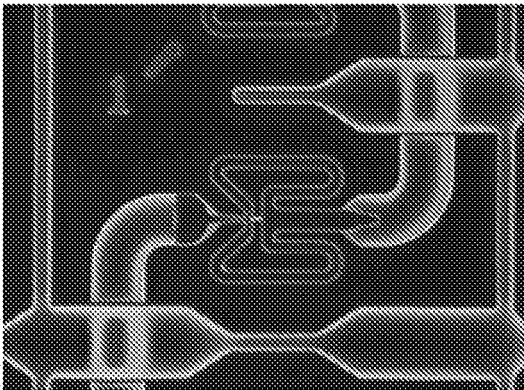
Col 1



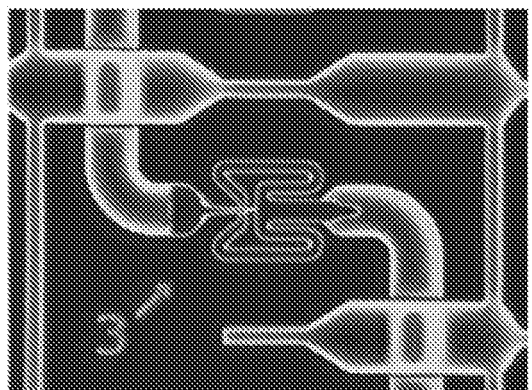
Col 2



Col 3



Col 4

**FIG. 4C**

	Empty	Single	Double	Triple	Multiple	Occupancy %
Col 1	22	68	6	0	0	71
Col 2	23	68	4	1	0	71
Col 3	13	72	8	1	2	75

	Empty	Single	Double	Triple	Multiple	Occupancy %
Col 1	43	52	1	0	0	54
Col 2	34	59	2	1	0	61
Col 3	8	85	0	2	1	89
Col 4	8	82	3	2	1	85

FIG. 4D

1K cell project
Capture test chip v1.

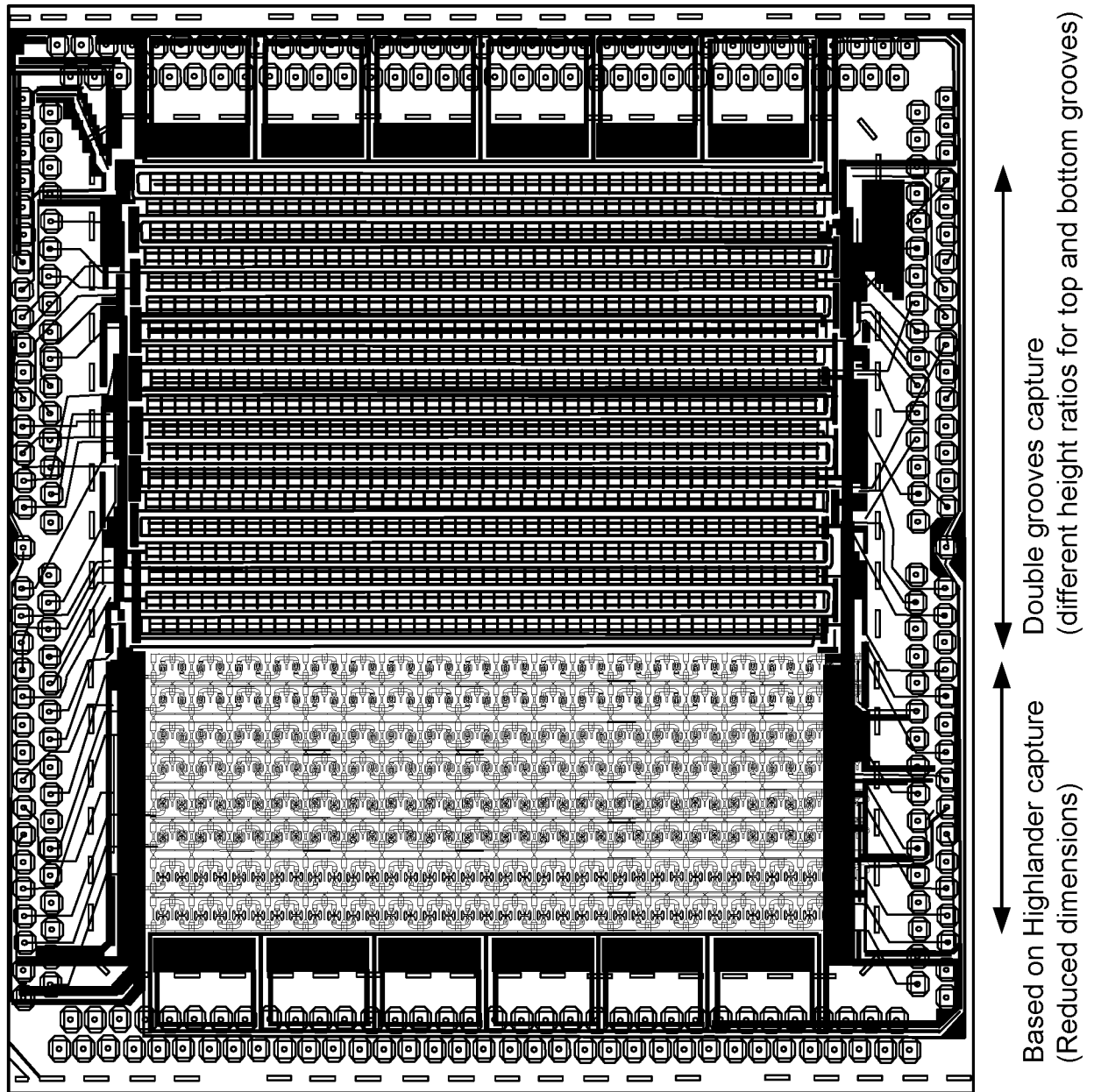


FIG. 4E

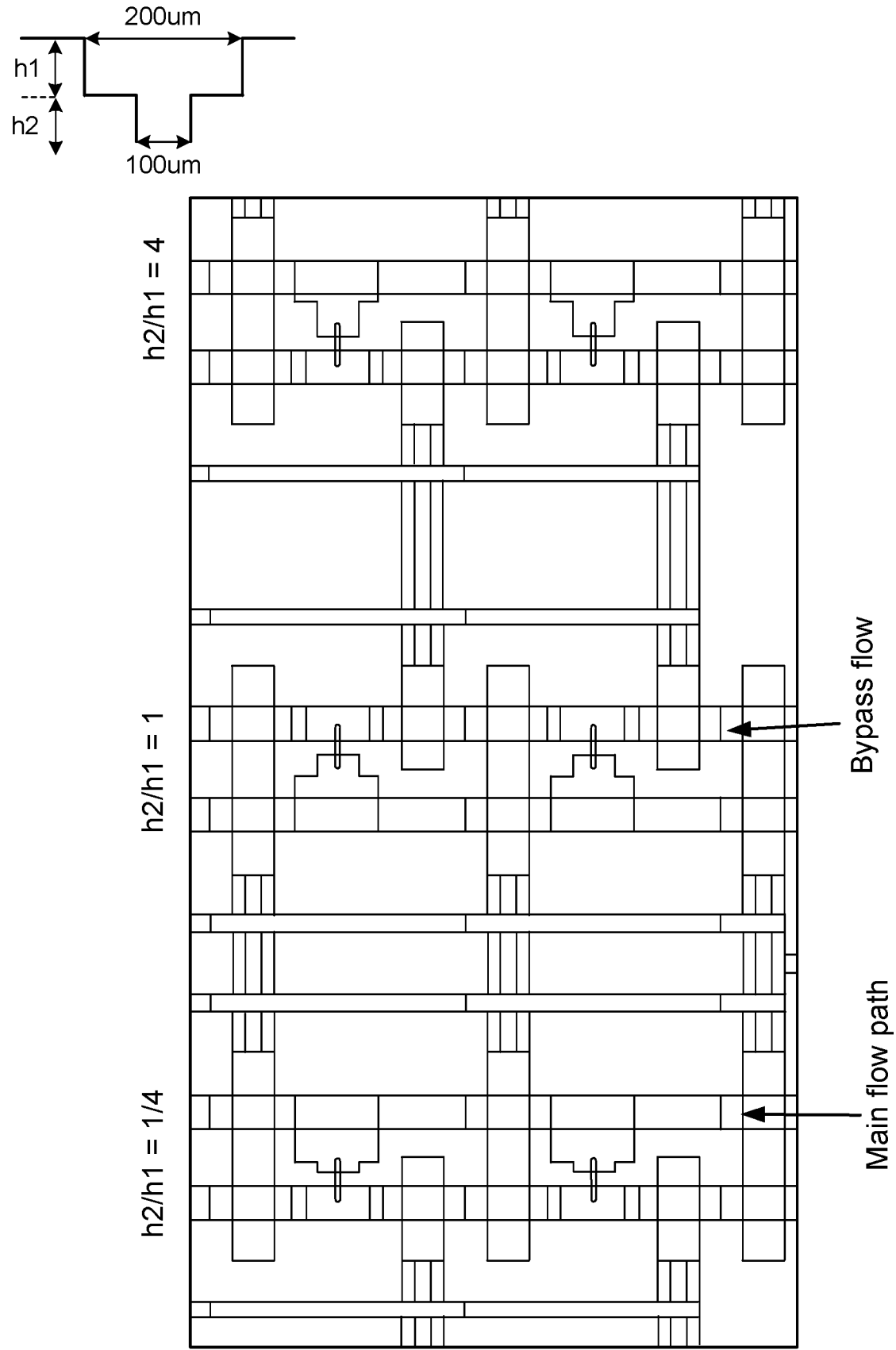


FIG. 5

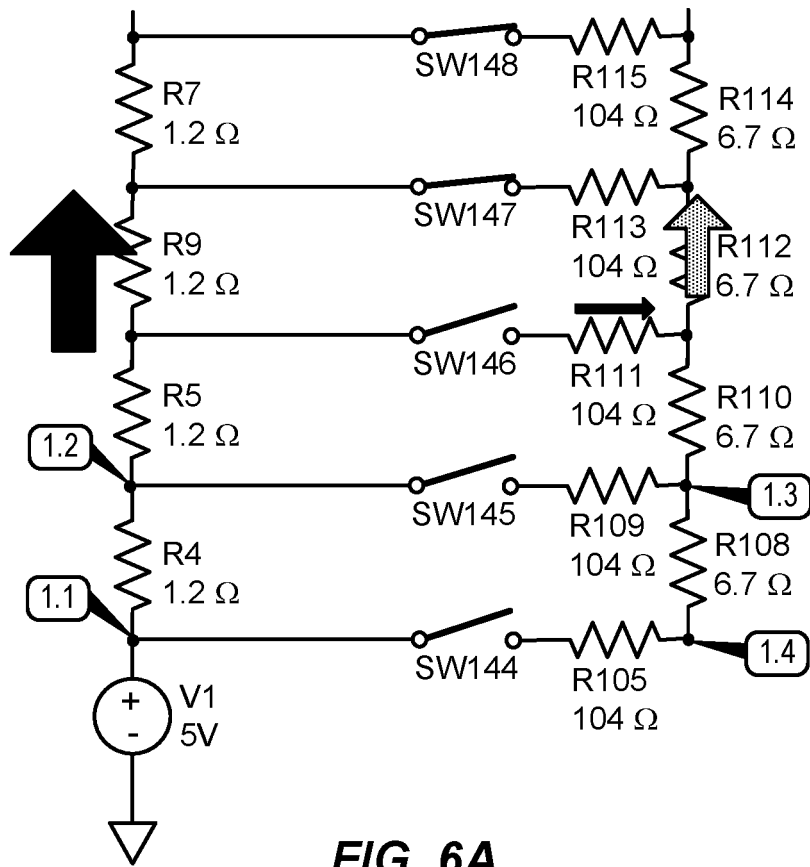


FIG. 6A

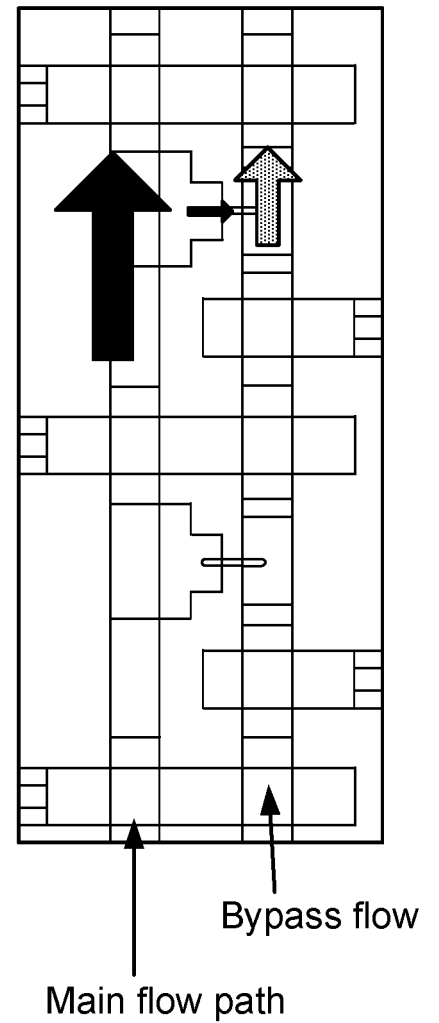
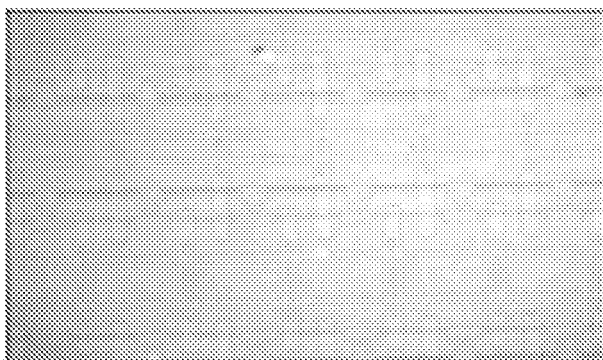
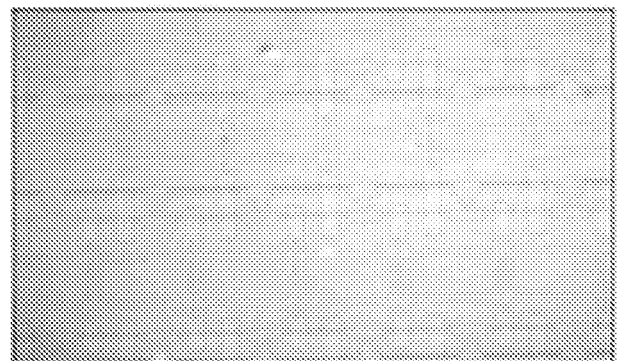


FIG. 6B



Col10_1x speed

FIG. 6C



Col10_0.5x speed

FIG. 6D

FIG. 7A

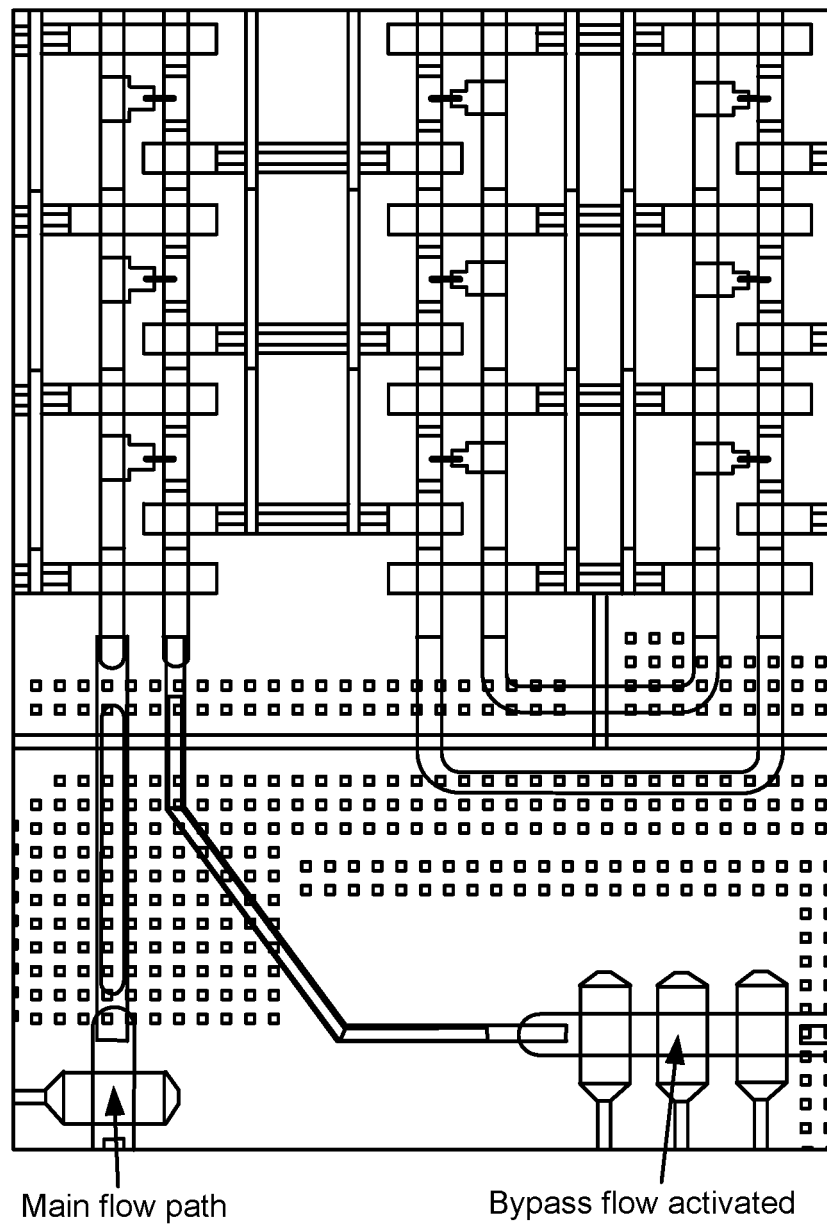
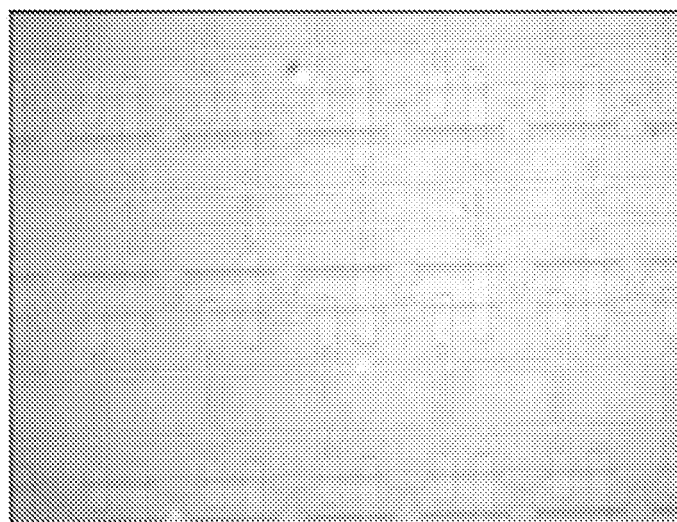
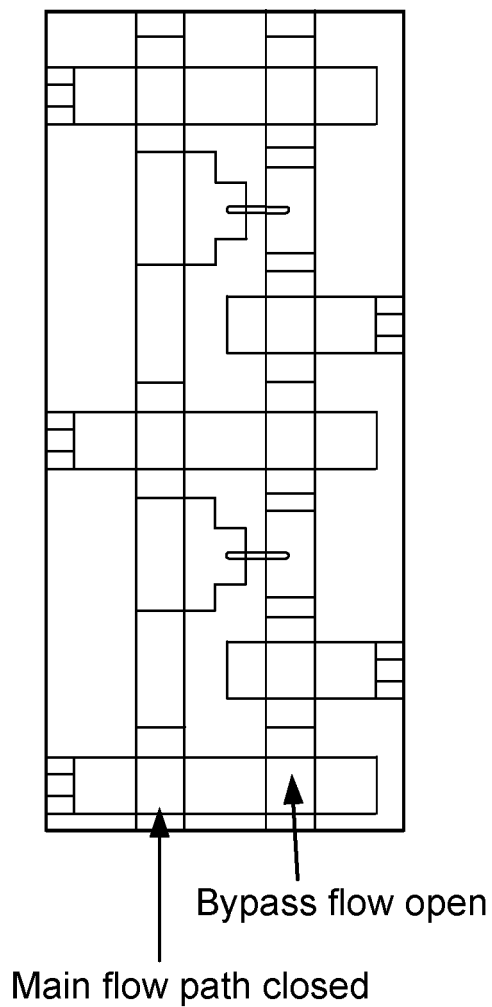
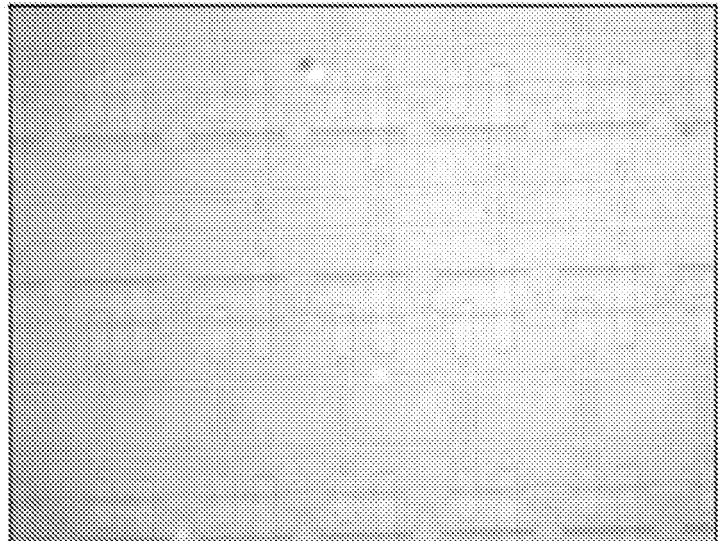


FIG. 7B



peristaltic pump activated (1Hz)

12 / 23

**FIG. 8A**

Main flow output closed

FIG. 8B

	Empty	Single	Double	Triple	Multiple	Capture %
Col 5	75	13	6	2	0	14
Col 6	68	15	8	4	1	16
Col 7	67	18	8	1	2	19
Col 8	72	11	7	4	2	11
Col 9	50	27	10	6	3	28
Col 10	46	32	7	8	3	33
Col 11	47	30	7	8	4	31

FIG. 8C

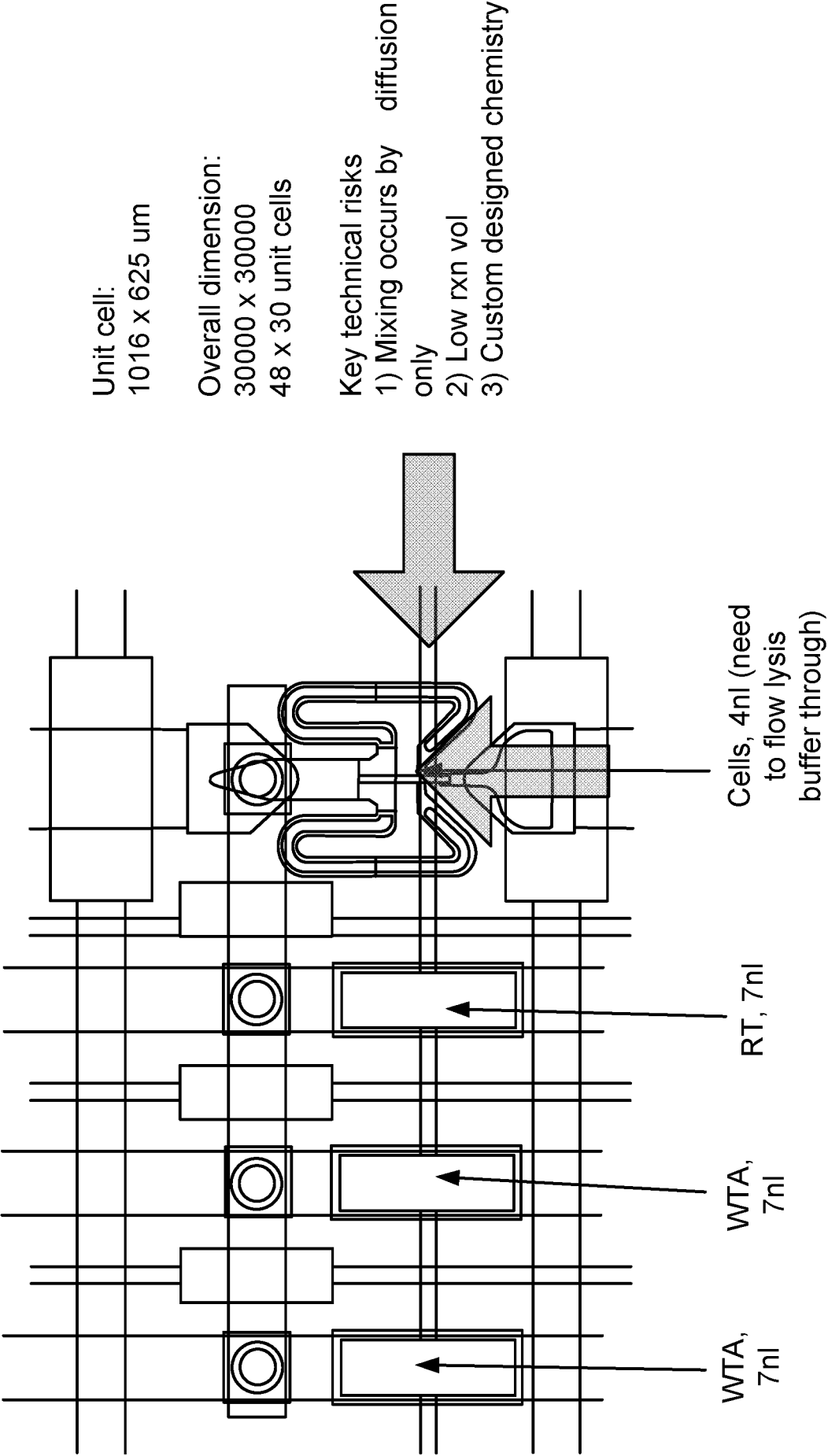


FIG. 9

Unit cell:
1016 x 625 μm

Overall dimension:
30000 x 30000
48 x 30 unit cells

Key technical risks
1) Mixing occurs by diffusion only
2) Low rxn vol
3) Custom designed chemistry

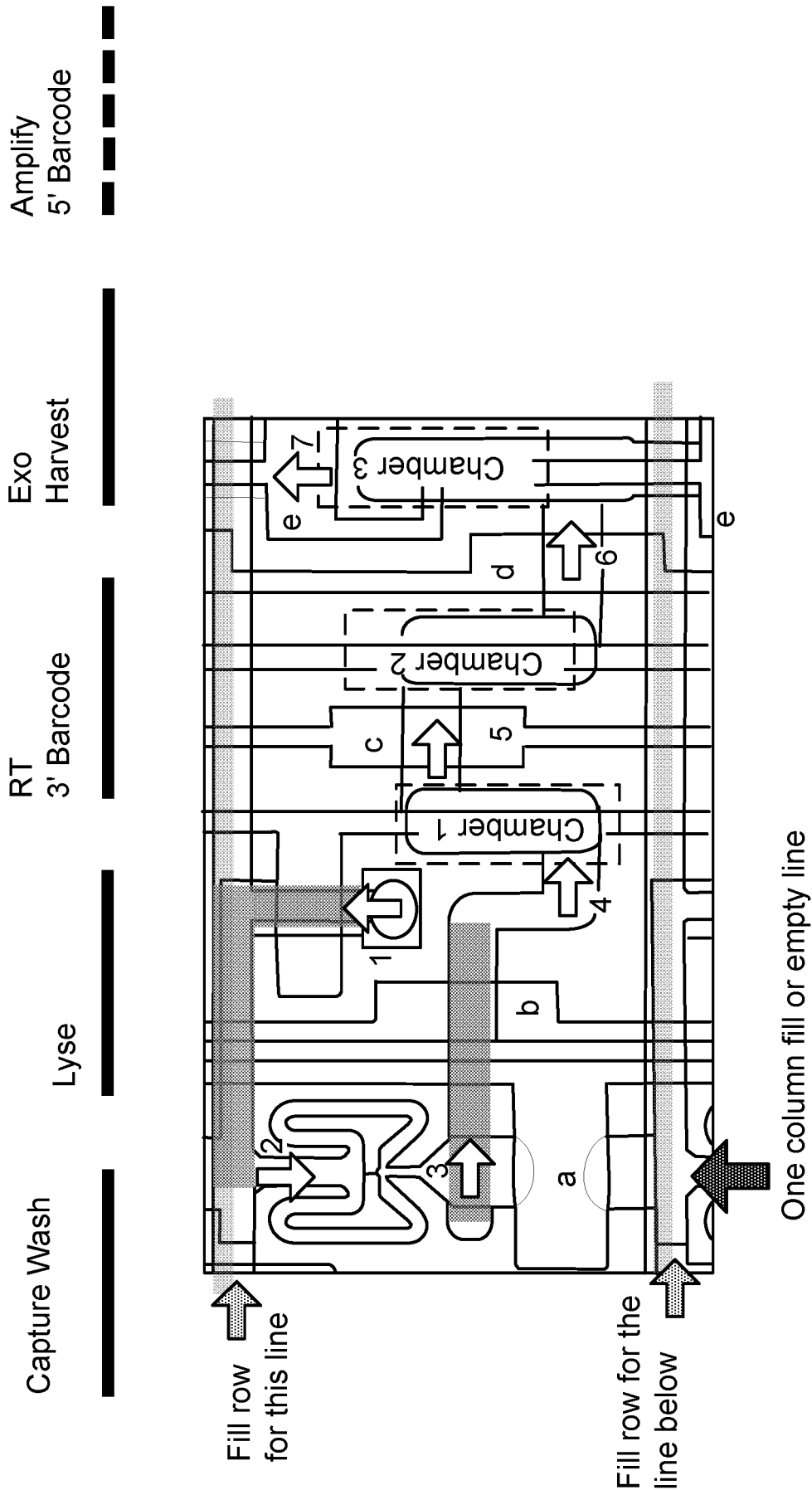


FIG. 11

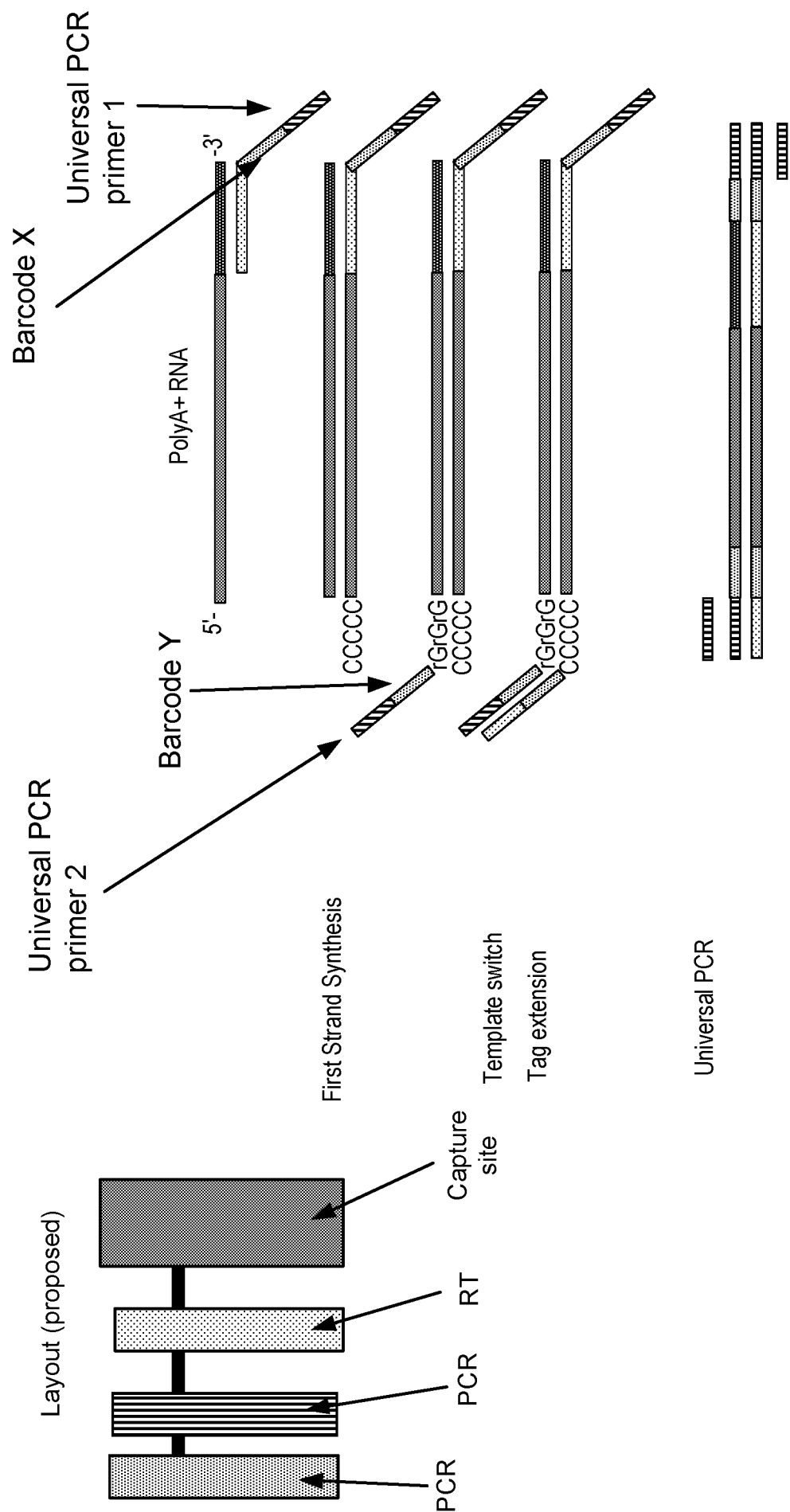
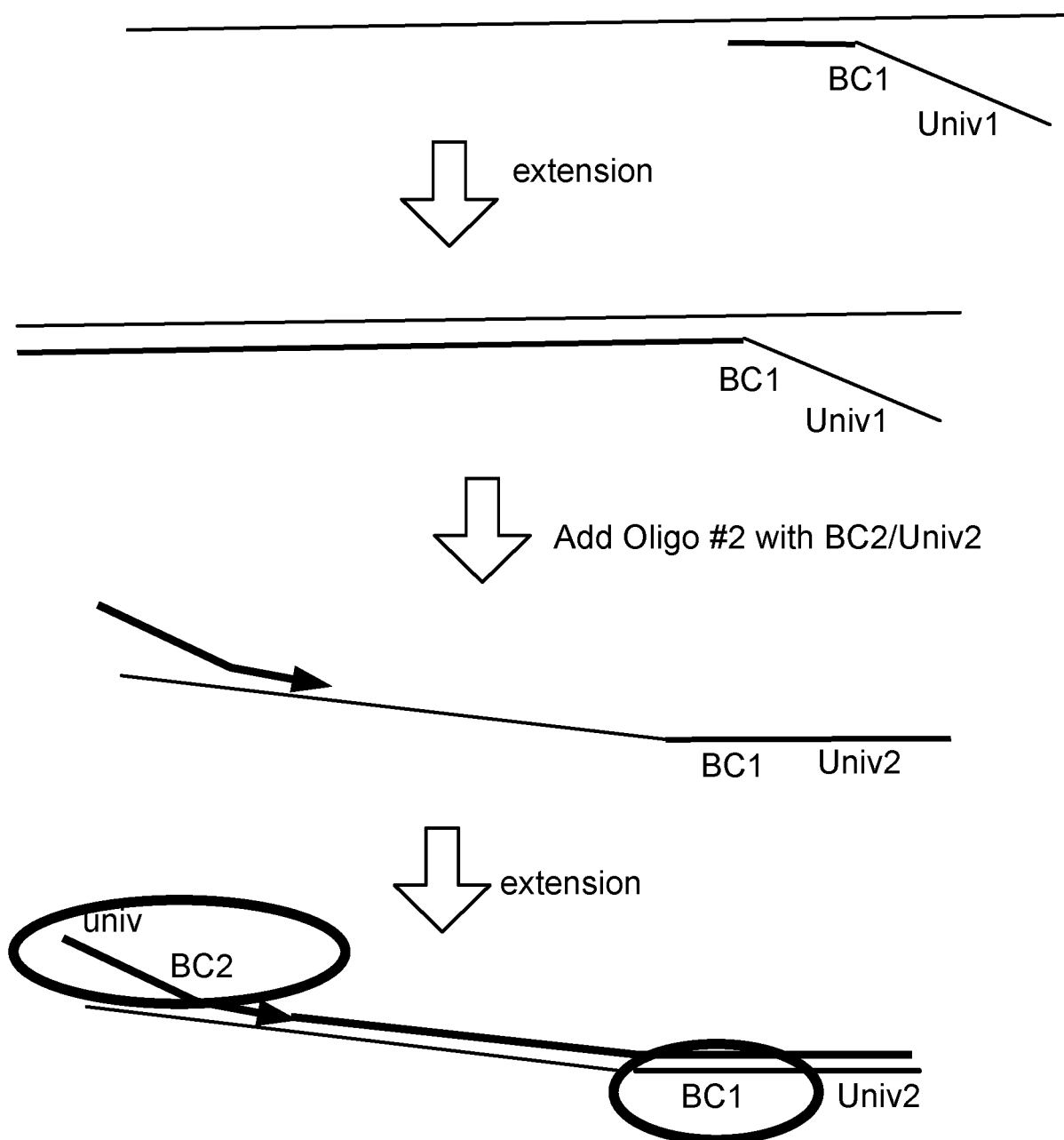


FIG. 12

17 / 23

Multiplex by 2 primers

**FIG. 13**

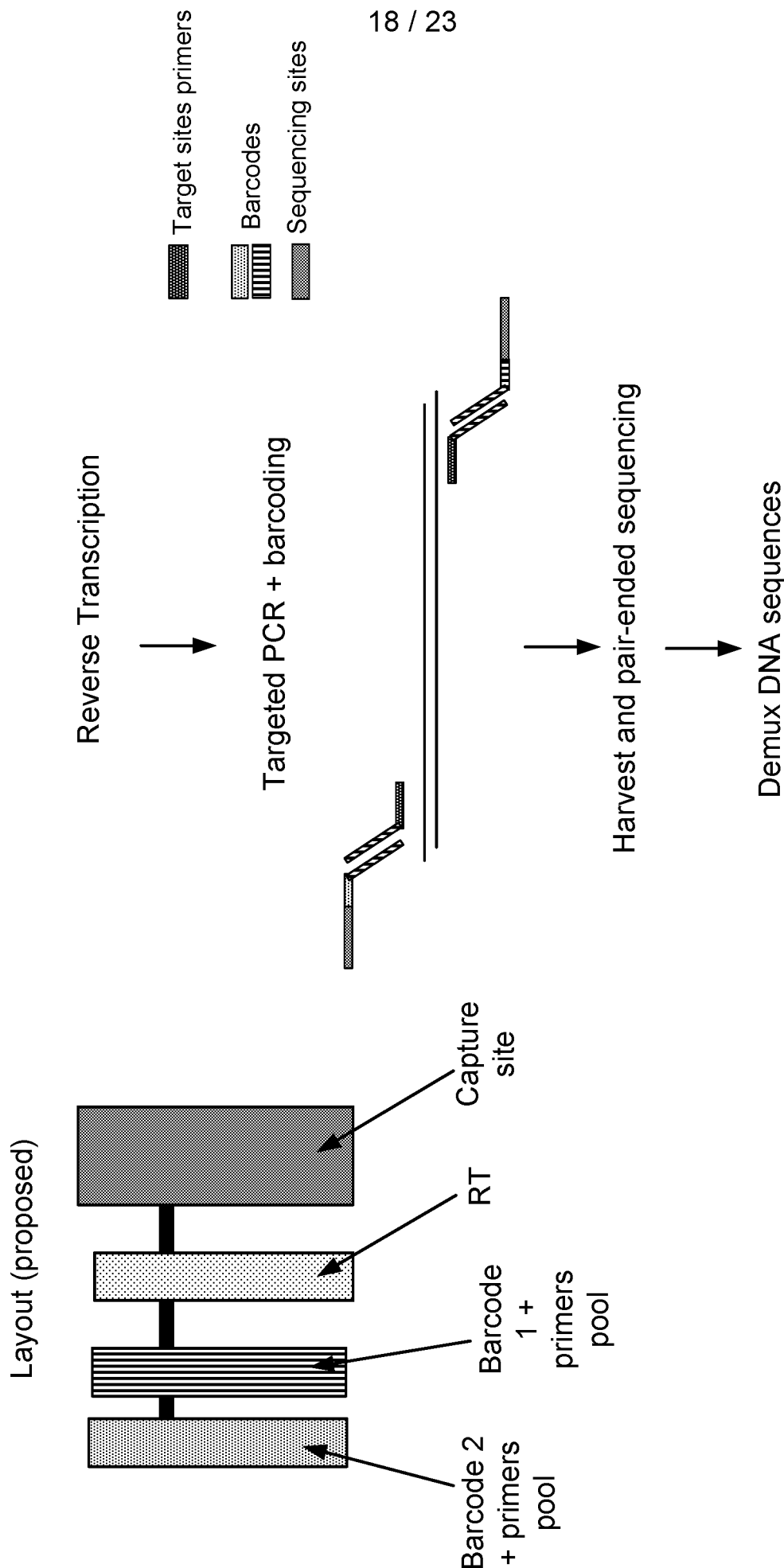
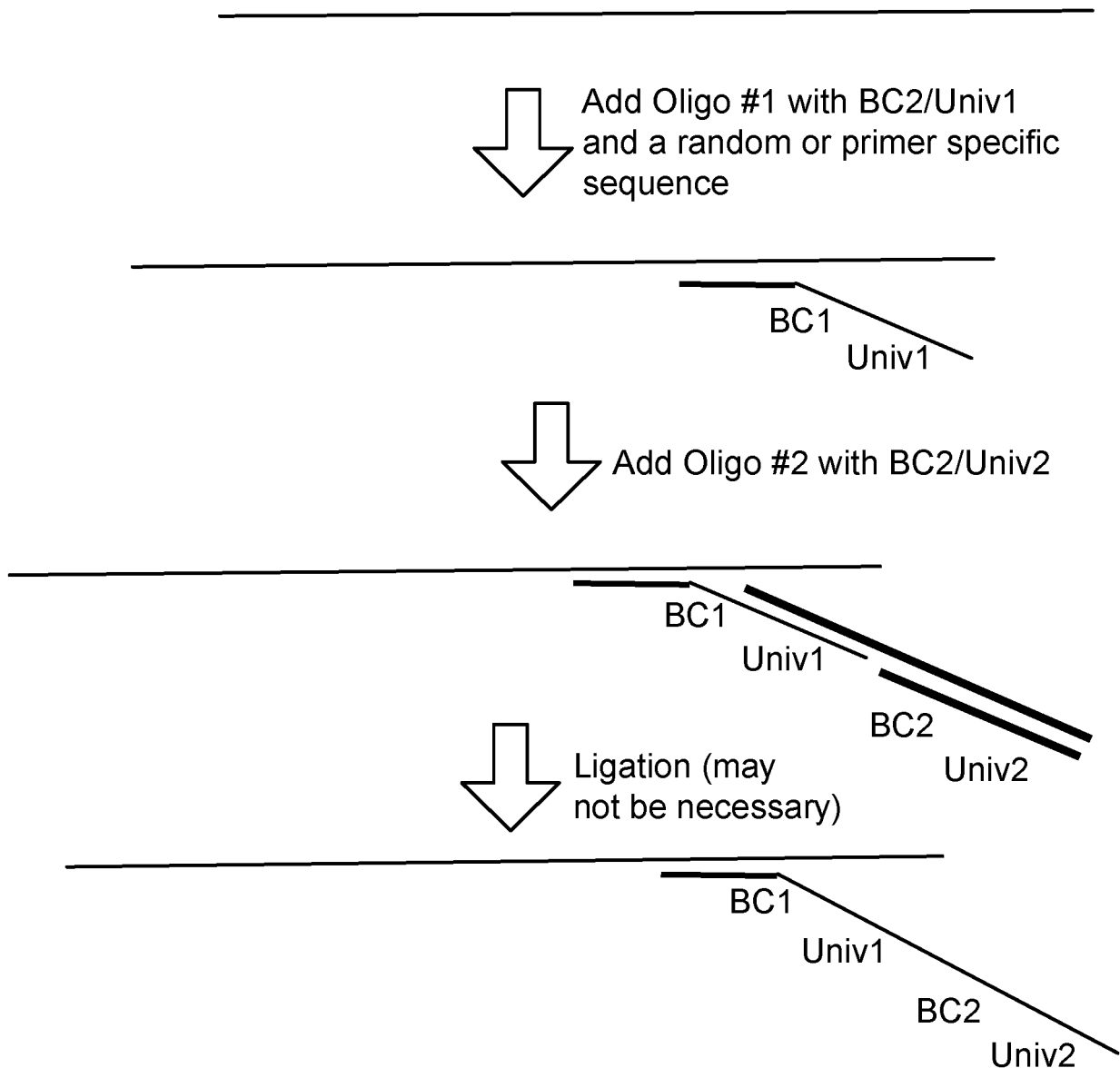


FIG. 14

19 / 23

Multiplex by ligation

**FIG. 15**

Multiplex with multiple antibodies and PLA or PEA

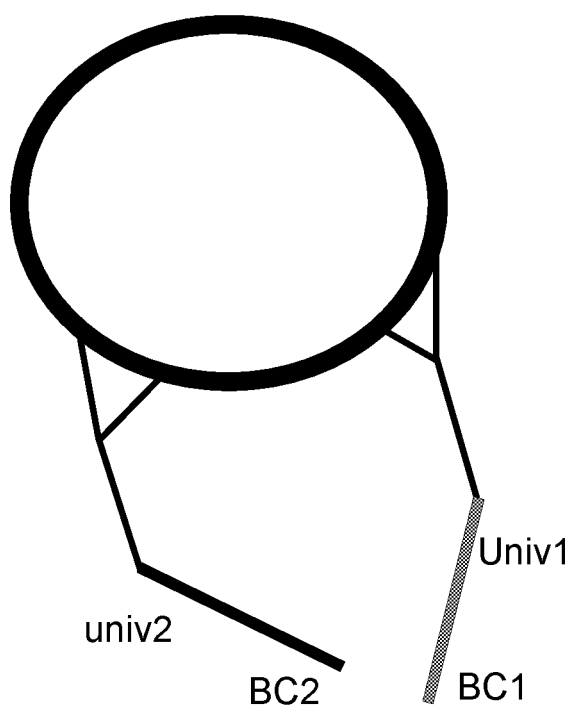
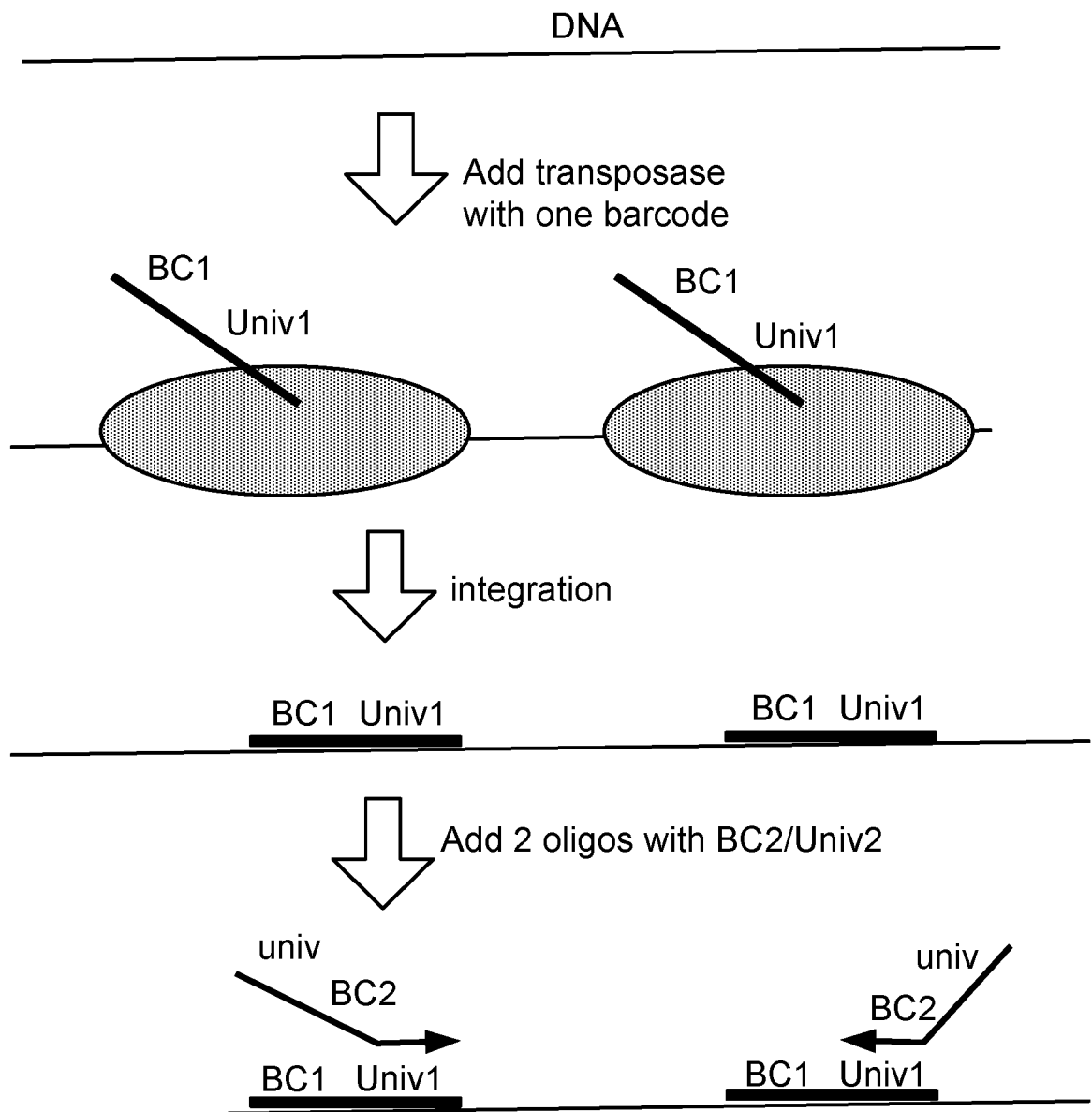


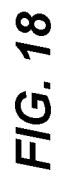
FIG. 16

21 / 23

Multiplex by an enzyme reaction (like transposase) and another primer

**FIG. 17**

Mapped reads per barcode



Mapping from debarcoding – all reads using single cells in Tianmen800

Average read per chamber by column (ERCs in all chambers)

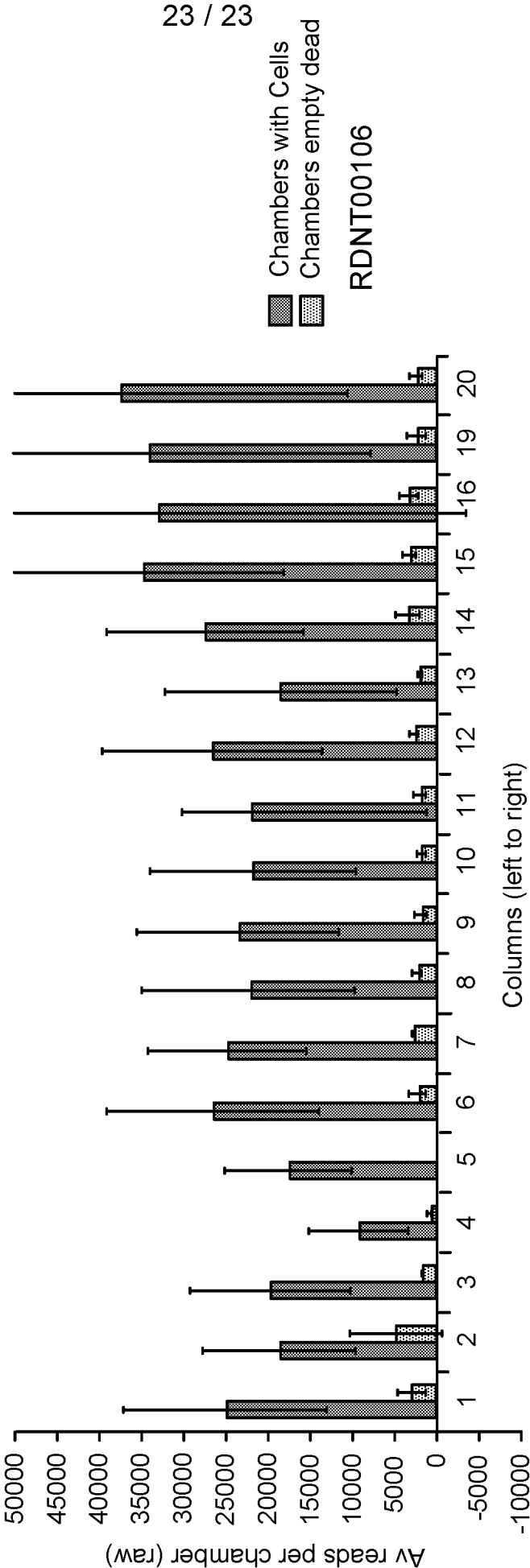


FIG. 19