

Supporting information

Table S1 A bubble analysis was done on 46752 drops from subwell 1 sets (subwell sets found in the top subwell of the SD-2 plates used in C3) and 28032 drops from subwell 2 sets of plates set up using the Phoenix dispensing robot. The bubble pattern is shown below – the top section of the table shows the absolute count of drops with bubbles, and for the top subwell (the same information as a percentage is shown as in the section below).

Subwell set 1	1	2	3	4	5	6	7	8	9	10	11	12
A	51 (11%)	49 (10%)	54 (12%)	35 (7%)	13 (3%)	22 (5%)	4 (1%)	9 (2%)	10 (2%)	13 (3%)	12 (3%)	11 (2%)
B	12 (3%)	12 (3%)	8 (2%)	9 (2%)	7 (1%)	12 (3%)	7 (1%)	6 (1%)	8 (2%)	11 (2%)	5 (1%)	8 (2%)
C	12 (3%)	8 (2%)	7 (1%)	5 (1%)	4 (1%)	8 (2%)	6 (1%)	4 (1%)	7 (1%)	6 (1%)	4 (1%)	11 (2%)
D	6 (1%)	4 (1%)	2 (0%)	4 (1%)	6 (1%)	6 (1%)	1 (0%)	2 (0%)	3 (1%)	3 (1%)	4 (1%)	7 (1%)
E	6 (1%)	6 (1%)	6 (1%)	6 (1%)	1 (0%)	3 (1%)	3 (1%)	2 (0%)	2 (0%)	5 (1%)	1 (0%)	7 (1%)
F	1 (0%)	1 (0%)	5 (1%)	7 (1%)	9 (2%)	3 (1%)	6 (1%)	8 (2%)	4 (1%)	1 (0%)	2 (0%)	2 (0%)
G	3 (1%)	2 (0%)	4 (1%)	7 (1%)	5 (1%)	2 (0%)	2 (0%)	1 (0%)	1 (0%)	4 (1%)	4 (1%)	6 (1%)
H	2 (0%)	3 (1%)	2 (0%)	5 (1%)	4 (1%)	6 (1%)	2 (0%)	0 (0%)	5 (1%)	11 (2%)	10 (2%)	7 (1%)
Subwell set 2	1	2	3	4	5	6	7	8	9	10	11	12
A	34 (12%)	41 (15%)	25 (9%)	25 (9%)	10 (4%)	6 (2%)	8 (3%)	9 (3%)	7 (2%)	7 (2%)	2 (1%)	9 (3%)
B	5 (2%)	4 (1%)	2 (1%)	5 (2%)	2 (1%)	3 (1%)	5 (2%)	4 (1%)	9 (3%)	2 (1%)	3 (1%)	2 (1%)
C	6 (2%)	4 (1%)	7 (2%)	1 (0%)	1 (0%)	2 (1%)	2 (1%)	2 (1%)	3 (1%)	8 (3%)	4 (1%)	5 (2%)

D	5 (2%)	5 (2%)	4 (1%)	5 (2%)	0 (0%)	6 (2%)	2 (1%)	4 (1%)	4 (1%)	2 (1%)	4 (1%)	4 (1%)
E	3 (1%)	3 (1%)	3 (1%)	7 (2%)	4 (1%)	5 (2%)	7 (2%)	4 (2%)	2 (1%)	3 (1%)	3 (1%)	5 (2%)
F	3 (1%)	3 (1%)	7 (2%)	4 (1%)	3 (1%)	1 (0%)	3 (1%)	8 (3%)	3 (1%)	5 (2%)	1 (0%)	2 (1%)
G	6 (2%)	0 (0%)	2 (1%)	3 (1%)	2 (1%)	1 (0%)	3 (1%)	4 (1%)	2 (1%)	3 (1%)	2 (1%)	4 (1%)
H	1 (0%)	2 (1%)	4 (1%)	2 (1%)	4 (1%)	6 (2%)	5 (2%)	4 (1%)	3 (1%)	1 (0%)	9 (3%)	6 (2%)

Table S2 A similar analysis was performed for 4608 drops from subwell 1 sets dispensed by the Mosquito. The Mosquito plates showed a much more even spread of bubble formation than did the Phoenix plates – over 0.1% of droplets in well A1 (both subwells) showed bubbles in the Phoenix plates, even though the overall rate of drops with bubbles was lower for the Phoenix (0.015 % or 0.018 % for subwells 1 and 2 respectively) than the Mosquito (0.03 %)

Mosquito	1	2	3	4	5	6	7	8	9	10	11	12
A	2 (4%)	2 (4%)	1 (2%)	0 (0%)	1 (2%)	0 (0%)	1 (2%)	1 (2%)	0 (0%)	1 (2%)	2 (4%)	2 (4%)
B	3 (7%)	2 (4%)	0 (0%)	1 (2%)	1 (2%)	0 (0%)	2 (4%)	0 (0%)	1 (2%)	0 (0%)	2 (4%)	1 (2%)
C	2 (4%)	0 (0%)	1 (2%)	1 (2%)	3 (7%)	1 (2%)	0 (0%)	1 (2%)	2 (4%)	1 (2%)	2 (4%)	0 (0%)
D	2 (4%)	1 (2%)	1 (2%)	3 (7%)	1 (2%)	2 (4%)	3 (7%)	2 (4%)	2 (4%)	0 (0%)	3 (7%)	1 (2%)
E	0 (0%)	2 (4%)	1 (2%)	0 (0%)	1 (2%)	1 (2%)	2 (4%)	0 (0%)	3 (7%)	1 (2%)	1 (2%)	2 (4%)
F	1 (2%)	0 (0%)	3 (7%)	3 (7%)	1 (2%)	1 (2%)	2 (4%)	4 (9%)	1 (2%)	1 (2%)	2 (4%)	1 (2%)
G	2 (4%)	1 (2%)	4 (9%)	4 (9%)	3 (7%)	0 (0%)	4 (9%)	2 (4%)	1 (2%)	2 (4%)	1 (2%)	2 (4%)
H	1 (2%)	1 (2%)	1 (2%)	0 (0%)	2 (4%)	3 (7%)	2 (4%)	1 (2%)	4 (9%)	2 (4%)	3 (7%)	1 (2%)