

## Plasma\_Cleaning\_Exp3

### DESIGN

Three RNA plates were prepared following the below process:

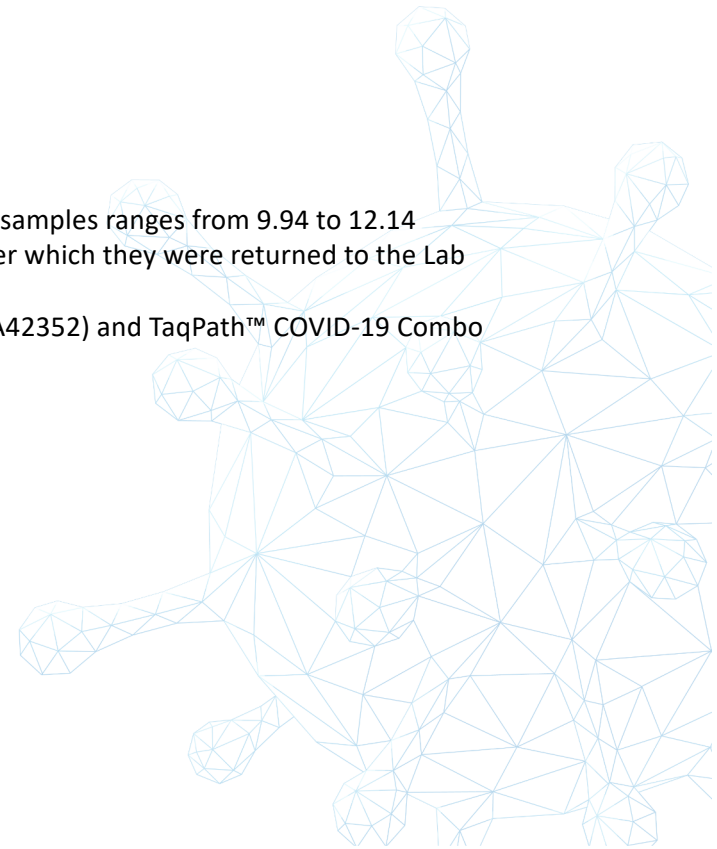
1. All wells filled with 20 $\mu$ L elution solution (ES)
2. 30-35 $\mu$ L of highly positive samples pipetted into A1
3. 20 $\mu$ L of sample from A1 use to make serial dilutions across the top 2 rows (dil-1 to dil-24)
4. Coloured wells with numbers 1 to 8 to receive 30-35 $\mu$ L of other highly positive samples
5. NC and PC added from random RNA plates to the respective wells on the plasma plates
6. Wells labelled 'ES' contained elution solution only

Highly positive samples were obtained from previously tested RNA plates. Cq values of the original samples ranges from 9.94 to 12.14

7. All RNA plates were frozen at  $-80^{\circ}\text{C}$ , sent on dry ice to IonFields System for cold plasma cleaning, after which they were returned to the Lab for qPCR testing per SOPs.

Reagents used: MagMAX™ Viral/Pathogen Nucleic Acid Isolation Kit for RNA extraction (Thermo, #A42352) and TaqPath™ COVID-19 Combo Kit for qPCR testing (Thermo, #A47813).

|   | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| A | dil-1  | dil-2  | dil-3  | dil-4  | dil-5  | dil-6  | dil-7  | dil-8  | dil-9  | dil-10 | dil-11 | dil-12 |
| B | dil-13 | dil-14 | dil-15 | dil-16 | dil-17 | dil-18 | dil-19 | dil-20 | dil-21 | dil-22 | dil-23 | dil-24 |
| C | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     |
| D | ES     | 1      | ES     | 2      | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     |
| E | ES     | ES     | 3      | ES     | 4      | ES     | ES     | ES     | ES     | ES     | ES     | ES     |
| F | ES     | 5      | ES     | 6      | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     |
| G | ES     | ES     | 7      | ES     | 8      | ES     | ES     | ES     | ES     | ES     | ES     | NC     |
| H | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     | ES     | PC     |



# Plasma\_Cleaning\_Exp3

## RESULTS: **BEFORE** Plasma cleaning

### Diagnostic call – UgenTec FastFinder

| Plate #1 (Quadrant A1)<br>AD20210405KJ_Plasma_PRE_CLEAN |     |     |     |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|   | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  |
| A   | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos |
| B   | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos |
| C   | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| D   | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| E   | Inv | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| F   | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| G   | Inv | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Neg |
| H   | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Pos |

| Plate #2 (Quadrant A2)<br>AD20210405KJ_Plasma_PRE_CLEAN |     |     |     |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|   | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  |
| A   | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos |
| B   | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos |
| C   | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| D   | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| E   | Inv | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| F   | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| G   | Inv | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Neg |
| H   | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Pos |

| Plate #3 (Quadrant B1)<br>AD20210405KJ_Plasma_PRE_CLEAN |     |     |     |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|   | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  |
| A   | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos |
| B   | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos | Pos |
| C   | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| D   | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| E   | Inv | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| F   | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| G   | Inv | Inv | Pos | Inv | Pos | Inv | Inv | Inv | Inv | Inv | Inv | Neg |
| H   | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Pos |

|     |              |
|-----|--------------|
| Pos | Positive     |
| Neg | Negative     |
| Inv | Inconclusive |



**Note:**

All three plates were populated with strong positive SARS-CoV-2 samples with Cq values starting from ~10. The inconclusive results are due to the failure of MS2 (these wells only contained elution solution). There was no viral gene detected in the wells marked as inconclusive.

Plasma\_Cleaning\_Exp3

RESULTS: **AFTER** Plasma cleaning

Diagnostic call – UgenTec FastFinder

| Plate #1 (Quadrant A1)<br>AD20210428KJ_Plasma_POST_CLEAN |     |     |     |     |     |     |     |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  |
| A  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| B  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| C  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| D  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| E  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| F  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| G  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Neg |
| H  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Pos |

| Plate #2 (Quadrant A2)<br>AD20210428KJ_Plasma_POST_CLEAN |     |     |     |     |     |     |     |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  |
| A  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| B  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| C  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| D  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| E  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| F  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| G  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Neg |
| H  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Pos |

| Plate #3 (Quadrant B1)<br>AD20210428KJ_Plasma_POST_CLEAN |     |     |     |     |     |     |     |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  |
| A  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| B  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| C  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| D  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| E  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| F  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv |
| G  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Neg |
| H  | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Inv | Pos |

|     |              |
|-----|--------------|
| Pos | Positive     |
| Neg | Negative     |
| Inv | Inconclusive |



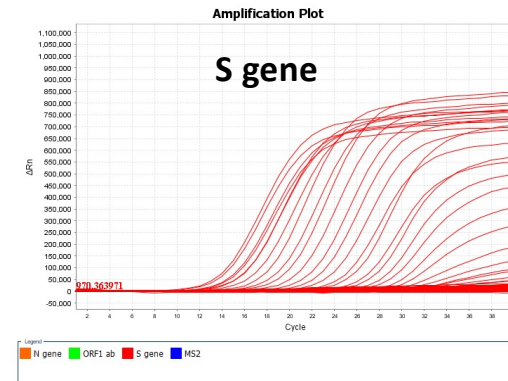
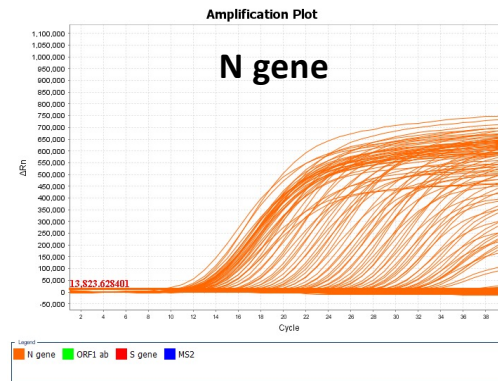
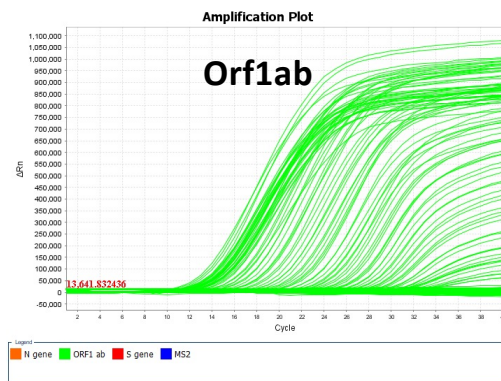
**Note:**

There was no viral gene contamination on any of the plates after plates were subjected to Plasma cleaning procedure. The inconclusive results are due to the failure of MS2 (these wells only contained elution solution). There was no viral gene detected in the wells marked as inconclusive.

## Plasma\_Cleaning\_Exp3

### RESULTS: **BEFORE** Plasma cleaning

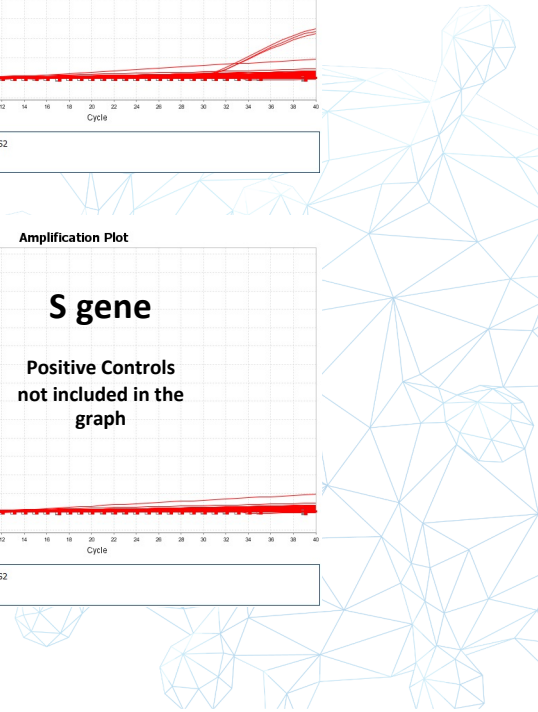
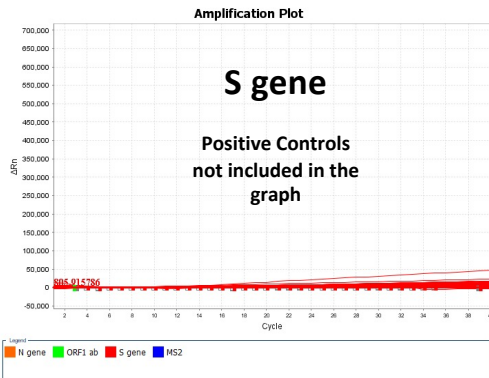
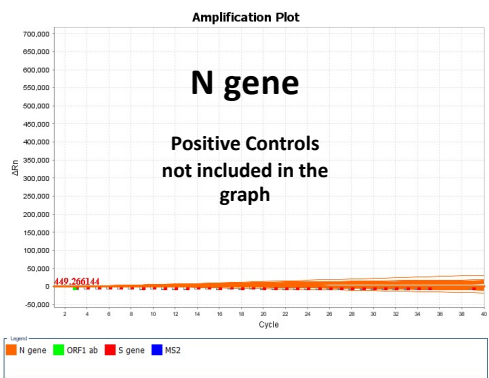
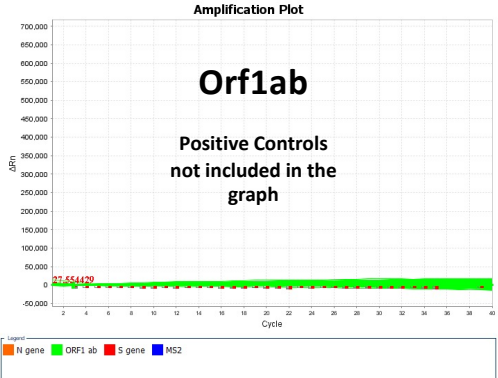
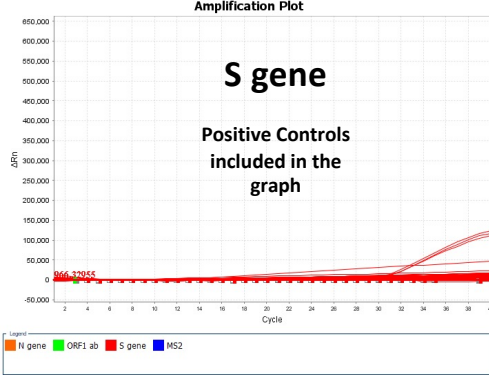
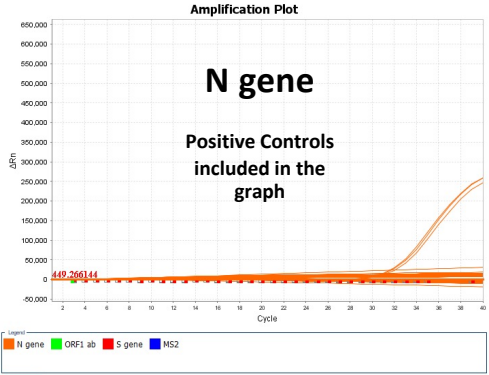
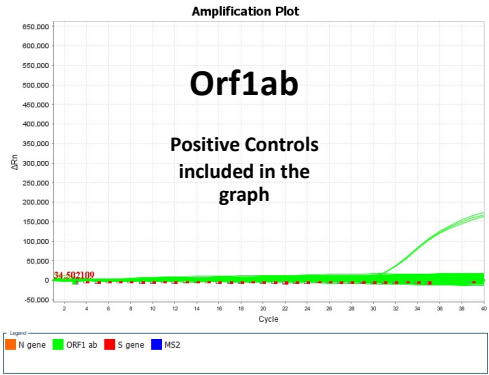
Amplification plots for the SARS-COV2 viral genes  
384-well PCR plate



Note: the experiments were done when the Alpha variant was the predominant variant in the positive sample population. Thermo TaqPath kit targets an area of the S gene that is deleted in the Alpha variant, hence fewer results are available for the S gene.

Plasma\_Cleaning\_Exp3

RESULTS: **AFTER** Plasma cleaning



Plasma\_Cleaning\_Exp3

RESULTS: **BEFORE** Plasma cleaning

Orf1ab Cq values

| Plate #1 (Quadrant A1)<br>AD20210405KJ_Plasma_PRE_CLEAN |      |      |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|------|------|
|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   |
| A   | 11.1 | 11.7 | 12.4 | 13.5 | 14.7 | 15.6 | 16.4 | 17.3 | 18.2 | 19.2 | 20.0 | 21.0 |
| B   | 22.0 | 22.9 | 23.9 | 24.7 | 25.6 | 26.6 | 27.6 | 28.3 | 29.5 | 30.1 | 31.9 | 32.2 |
| C   |      |      |      |      |      |      |      |      |      |      |      |      |
| D   |      | 11.6 |      | 12.3 |      |      |      |      |      |      |      |      |
| E   |      |      | 11.3 |      | 14.4 |      |      |      |      |      |      |      |
| F   |      | 11.8 |      | 11.8 |      |      |      |      |      |      |      |      |
| G   |      |      | 11.8 |      | 11.7 |      |      |      |      |      |      |      |
| H   |      |      |      |      |      |      |      |      |      |      |      | 31.1 |

| Plate #2 (Quadrant A2)<br>AD20210405KJ_Plasma_PRE_CLEAN |      |      |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|------|------|
|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   |
| A   | 10.9 | 11.3 | 12.3 | 12.8 | 14.3 | 15.4 | 16   | 17.1 | 17.6 | 18.6 | 19.3 | 20.4 |
| B   | 21.6 | 22.3 | 23   | 23.7 | 25   | 26.1 | 26.9 | 27.9 | 28.6 | 29.8 | 30.8 | 31.6 |
| C   |      |      |      |      |      |      |      |      |      |      |      |      |
| D   |      | 11.3 |      | 12.8 |      |      |      |      |      |      |      |      |
| E   |      |      | 11.6 |      | 11.9 |      |      |      |      |      |      |      |
| F   |      | 11.3 |      | 11.4 |      |      |      |      |      |      |      |      |
| G   |      |      | 12.5 |      | 12.3 |      |      |      |      |      |      |      |
| H   |      |      |      |      |      |      |      |      |      |      |      | 29.6 |

| Plate #3 (Quadrant B1)<br>AD20210405KJ_Plasma_PRE_CLEAN |      |      |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|------|------|
|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   |
| A   | 11.2 | 11.6 | 12.5 | 13.2 | 14.6 | 15.6 | 16.4 | 17.3 | 18.0 | 19.0 | 20.0 | 21.0 |
| B   | 22.0 | 22.8 | 23.7 | 24.8 | 25.7 | 26.5 | 27.5 | 28.7 | 29.5 | 30.5 | 31.9 | 31.6 |
| C   |      |      |      |      |      |      |      |      |      |      |      |      |
| D   |      | 11.5 |      | 12.4 |      |      |      |      |      |      |      |      |
| E   |      |      | 12.6 |      | 12.4 |      |      |      |      |      |      |      |
| F   |      | 11.6 |      | 11.6 |      |      |      |      |      |      |      |      |
| G   |      |      | 11.9 |      | 11.1 |      |      |      |      |      |      |      |
| H   |      |      |      |      |      |      |      |      |      |      |      | 30.6 |

|  |                    |
|--|--------------------|
|  | Negative Control   |
|  | Positive Control   |
|  | SARS-CoV-2 samples |

NOTE:



Plasma\_Cleaning\_Exp3

RESULTS: **AFTER** Plasma cleaning

Orf1ab Cq values

| Plate #1 (Quadrant A1)<br>AD20210428KJ_Plasma_POST_CLEAN |       |       |       |       |       |       |       |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|  | 01    | 02    | 03    | 04    | 05    | 06    | 07    | 08    | 09    | 10    | 11    | 12    |
| A  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| B  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| C  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| D  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| E  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| F  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| G  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| H  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | 29.6  |

| Plate #2 (Quadrant A2)<br>AD20210428KJ_Plasma_POST_CLEAN |       |       |       |       |       |       |       |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|  | 01    | 02    | 03    | 04    | 05    | 06    | 07    | 08    | 09    | 10    | 11    | 12    |
| A  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| B  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| C  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| D  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| E  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| F  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| G  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| H  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | 29.4  |

| Plate #3 (Quadrant B1)<br>AD20210428KJ_Plasma_POST_CLEAN |       |       |       |       |       |       |       |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|  | 01    | 02    | 03    | 04    | 05    | 06    | 07    | 08    | 09    | 10    | 11    | 12    |
| A  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| B  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| C  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| D  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| E  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| F  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| G  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| H  | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | 29.4  |

|        |                    |
|--------|--------------------|
| Blue   | Negative Control   |
| Yellow | Positive Control   |
| Green  | SARS-CoV-2 samples |



Plasma\_Cleaning\_Exp3

RESULTS: **BEFORE** Plasma cleaning

N gene Cq values

| Plate #1 (Quadrant A1)<br>AD20210405KJ_Plasma_PRE_CLEAN |      |      |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|------|------|
|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   |
| A   | 12.1 | 13.5 | 14.2 | 15.5 | 16.3 | 17.1 | 18.1 | 19   | 20.2 | 21   | 22   | 23.3 |
| B   | 23.8 | 25   | 26   | 26.8 | 27.4 | 28.3 | 29.2 | 29.8 | 30.8 | 32.1 | 32.6 | 35.5 |
| C   |      |      |      |      |      |      |      |      |      |      |      |      |
| D   |      | 11.4 |      | 10.5 |      |      |      |      |      |      |      |      |
| E   |      |      | 11.8 |      | 12.1 |      |      |      |      |      |      |      |
| F   |      | 11.5 |      | 12   |      |      |      |      |      |      |      |      |
| G   |      |      | 11.6 |      | 11.4 |      |      |      |      |      |      |      |
| H   |      |      |      |      |      |      |      |      |      |      |      | 31.5 |

| Plate #2 (Quadrant A2)<br>AD20210405KJ_Plasma_PRE_CLEAN |      |      |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|------|------|
|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   |
| A   | 10.1 | 10.5 | 11.6 | 12.2 | 13.3 | 14.1 | 15.2 | 16.3 | 17.1 | 18.1 | 18.9 | 20   |
| B   | 20.9 | 21.7 | 22.7 | 23.6 | 24.7 | 25.8 | 26.6 | 27.3 | 28.6 | 29.5 | 30.6 | 31.3 |
| C   |      |      |      |      |      |      |      |      |      |      |      |      |
| D   |      | 11.5 |      | 12.9 |      |      |      |      |      |      |      |      |
| E   |      |      | 11.4 |      | 11.4 |      |      |      |      |      |      |      |
| F   |      | 11.3 |      | 11.1 |      |      |      |      |      |      |      |      |
| G   |      |      | 11.4 |      | 12.4 |      |      |      |      |      |      |      |
| H   |      |      |      |      |      |      |      |      |      |      |      | 30.7 |

| Plate #3 (Quadrant B1)<br>AD20210405KJ_Plasma_PRE_CLEAN |      |      |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|------|------|
|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   |
| A   | 10.5 | 11.3 | 12   | 12.8 | 13.7 | 15.1 | 16   | 16.7 | 17.7 | 18.3 | 19.5 | 20.5 |
| B   | 21.2 | 22.1 | 23.2 | 24.2 | 25.1 | 26.1 | 27.3 | 28.2 | 29.1 | 30   | 30.4 | 31.7 |
| C   |      |      |      |      |      |      |      |      |      |      |      |      |
| D   |      | 11.5 |      | 11.6 |      |      |      |      |      |      |      |      |
| E   |      |      | 11.4 |      | 11.7 |      |      |      |      |      |      |      |
| F   |      | 13.2 |      | 10.8 |      |      |      |      |      |      |      |      |
| G   |      |      | 11.7 |      | 12.6 |      |      |      |      |      |      |      |
| H   |      |      |      |      |      |      |      |      |      |      |      | 30.7 |

|  |                    |
|--|--------------------|
|  | Negative Control   |
|  | Positive Control   |
|  | SARS-CoV-2 samples |



NOTE:



Plasma\_Cleaning\_Exp3

RESULTS: **AFTER** Plasma cleaning

**N gene Cq values**

| Plate #1 (Quadrant A1)<br>AD20210428KJ_Plasma_POST_CLEAN |    |    |    |    |    |    |    |    |    |    |    |      |
|--|----|----|----|----|----|----|----|----|----|----|----|------|
|  | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12   |
| A  |    |    |    |    |    |    |    |    |    |    |    |      |
| B  |    |    |    |    |    |    |    |    |    |    |    |      |
| C  |    |    |    |    |    |    |    |    |    |    |    |      |
| D  |    |    |    |    |    |    |    |    |    |    |    |      |
| E  |    |    |    |    |    |    |    |    |    |    |    |      |
| F  |    |    |    |    |    |    |    |    |    |    |    |      |
| G  |    |    |    |    |    |    |    |    |    |    |    |      |
| H  |    |    |    |    |    |    |    |    |    |    |    | 29.9 |

| Plate #2 (Quadrant A2)<br>AD20210428KJ_Plasma_POST_CLEAN |    |    |    |    |    |    |    |    |    |    |    |      |
|--|----|----|----|----|----|----|----|----|----|----|----|------|
|  | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12   |
| A  |    |    |    |    |    |    |    |    |    |    |    |      |
| B  |    |    |    |    |    |    |    |    |    |    |    |      |
| C  |    |    |    |    |    |    |    |    |    |    |    |      |
| D  |    |    |    |    |    |    |    |    |    |    |    |      |
| E  |    |    |    |    |    |    |    |    |    |    |    |      |
| F  |    |    |    |    |    |    |    |    |    |    |    |      |
| G  |    |    |    |    |    |    |    |    |    |    |    |      |
| H  |    |    |    |    |    |    |    |    |    |    |    | 30.2 |

| Plate #3 (Quadrant B1)<br>AD20210428KJ_Plasma_POST_CLEAN |    |    |    |    |    |    |    |    |    |    |    |      |
|--|----|----|----|----|----|----|----|----|----|----|----|------|
|  | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12   |
| A  |    |    |    |    |    |    |    |    |    |    |    |      |
| B  |    |    |    |    |    |    |    |    |    |    |    |      |
| C  |    |    |    |    |    |    |    |    |    |    |    |      |
| D  |    |    |    |    |    |    |    |    |    |    |    |      |
| E  |    |    |    |    |    |    |    |    |    |    |    |      |
| F  |    |    |    |    |    |    |    |    |    |    |    |      |
| G  |    |    |    |    |    |    |    |    |    |    |    |      |
| H  |    |    |    |    |    |    |    |    |    |    |    | 30.3 |

|  |                    |
|--|--------------------|
|  | Negative Control   |
|  | Positive Control   |
|  | SARS-CoV-2 samples |



Plasma\_Cleaning\_Exp3

RESULTS: **BEFORE** Plasma cleaning

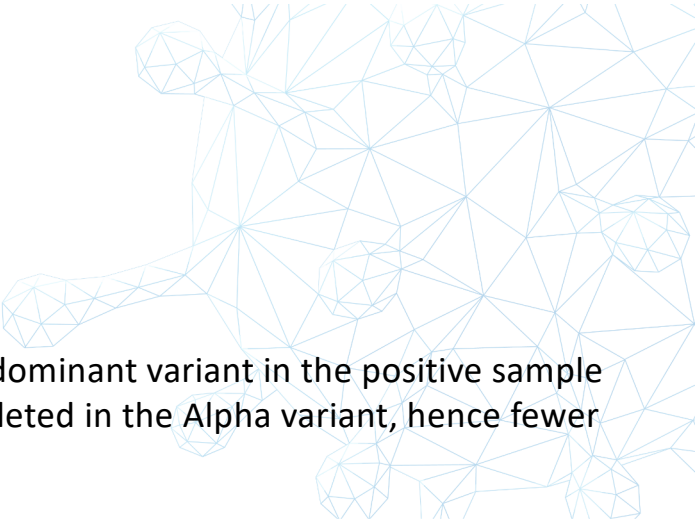
S gene Cq values

| Plate #1 (Quadrant A1)<br>AD20210405KJ_Plasma_PRE_CLEAN |      |      |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|------|------|
|   | 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   |
| A   | 11.4 | 12.1 | 13.1 | 13.7 | 15   | 16   | 18.5 | 18.9 | 19.9 | 20.9 | 21.4 | 22.5 |
| B   | 21.5 | 23.6 | 24.8 | 25.9 | 26.9 | 27.3 | 28.4 | 29.1 | 30.2 | 31.9 | 31.9 | 35   |
| C   |      |      |      |      |      |      |      |      |      |      |      |      |
| D   |      |      |      |      |      |      |      |      |      |      |      |      |
| E   |      |      |      |      |      |      |      |      |      |      |      |      |
| F   |      |      |      |      |      |      |      |      |      |      |      |      |
| G   |      |      |      |      |      |      |      |      |      |      |      |      |
| H   |      |      |      |      |      |      |      |      |      |      |      | 32.7 |

| Plate #2 (Quadrant A2)<br>AD20210405KJ_Plasma_PRE_CLEAN |    |    |    |    |    |    |    |    |    |    |    |      |
|---|----|----|----|----|----|----|----|----|----|----|----|------|
|   | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12   |
| A   |    |    |    |    |    |    |    |    |    |    |    |      |
| B   |    |    |    |    |    |    |    |    |    |    |    |      |
| C   |    |    |    |    |    |    |    |    |    |    |    |      |
| D   |    |    |    |    |    |    |    |    |    |    |    |      |
| E   |    |    |    |    |    |    |    |    |    |    |    |      |
| F   |    |    |    |    |    |    |    |    |    |    |    |      |
| G   |    |    |    |    |    |    |    |    |    |    |    |      |
| H   |    |    |    |    |    |    |    |    |    |    |    | 30.8 |

| Plate #3 (Quadrant B1)<br>AD20210405KJ_Plasma_PRE_CLEAN |    |    |    |    |    |    |    |    |    |    |    |      |
|---|----|----|----|----|----|----|----|----|----|----|----|------|
|   | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12   |
| A   |    |    |    |    |    |    |    |    |    |    |    |      |
| B   |    |    |    |    |    |    |    |    |    |    |    |      |
| C   |    |    |    |    |    |    |    |    |    |    |    |      |
| D   |    |    |    |    |    |    |    |    |    |    |    |      |
| E   |    |    |    |    |    |    |    |    |    |    |    |      |
| F   |    |    |    |    |    |    |    |    |    |    |    |      |
| G   |    |    |    |    |    |    |    |    |    |    |    |      |
| H   |    |    |    |    |    |    |    |    |    |    |    | 31.1 |

|  |                    |
|--|--------------------|
|  | Negative Control   |
|  | Positive Control   |
|  | SARS-CoV-2 samples |



Note: the experiments were done when the Alpha variant was the predominant variant in the positive sample population. Thermo TaqPath kit targets an area of the S gene that is deleted in the Alpha variant, hence fewer results are available for the S gene.

Plasma\_Cleaning\_Exp3

RESULTS: **AFTER** Plasma cleaning

S gene Cq values

| Plate #1 (Quadrant A1)<br>AD20210428KJ_Plasma_POST_CLEAN |     |     |     |     |     |     |     |     |     |     |     |      |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
|  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12   |
| A  | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red  |
| B  | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red  |
| C  |     |     |     |     |     |     |     |     |     |     |     |      |
| D  |     | Red |     | Red |     |     |     |     |     |     |     |      |
| E  |     | Red | Red | Red | Red |     |     |     |     |     |     |      |
| F  |     | Red |     | Red |     | Red |     |     |     |     |     |      |
| G  |     |     | Red |     | Red |     |     |     |     |     |     |      |
| H  |     |     |     |     |     |     |     |     |     |     |     | 30.2 |

| Plate #2 (Quadrant A2)<br>AD20210428KJ_Plasma_POST_CLEAN |     |     |     |     |     |     |     |     |     |     |     |      |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
|  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12   |
| A  | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red  |
| B  | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red  |
| C  |     |     |     |     |     |     |     |     |     |     |     |      |
| D  |     | Red |     | Red |     |     |     |     |     |     |     |      |
| E  |     | Red | Red | Red | Red |     |     |     |     |     |     |      |
| F  |     | Red |     | Red |     | Red |     |     |     |     |     |      |
| G  |     |     | Red |     | Red |     |     |     |     |     |     |      |
| H  |     |     |     |     |     |     |     |     |     |     |     | 30.5 |

| Plate #3 (Quadrant B1)<br>AD20210428KJ_Plasma_POST_CLEAN |     |     |     |     |     |     |     |     |     |     |     |      |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
|  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12   |
| A  | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red  |
| B  | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red  |
| C  |     |     |     |     |     |     |     |     |     |     |     |      |
| D  |     | Red |     | Red |     |     |     |     |     |     |     |      |
| E  |     | Red | Red | Red | Red |     |     |     |     |     |     |      |
| F  |     | Red |     | Red |     | Red |     |     |     |     |     |      |
| G  |     |     | Red |     | Red |     |     |     |     |     |     |      |
| H  |     |     |     |     |     |     |     |     |     |     |     | 30.6 |

|  |                    |
|--|--------------------|
|  | Negative Control   |
|  | Positive Control   |
|  | SARS-CoV-2 samples |



## Plasma\_Cleaning\_Exp3

### RESULTS: **AFTER** Plasma cleaning

Pictures of the plates after they went through plasma cleaning process showing that cold plasma does not remove sharpie writing on plates or ink on barcodes.

