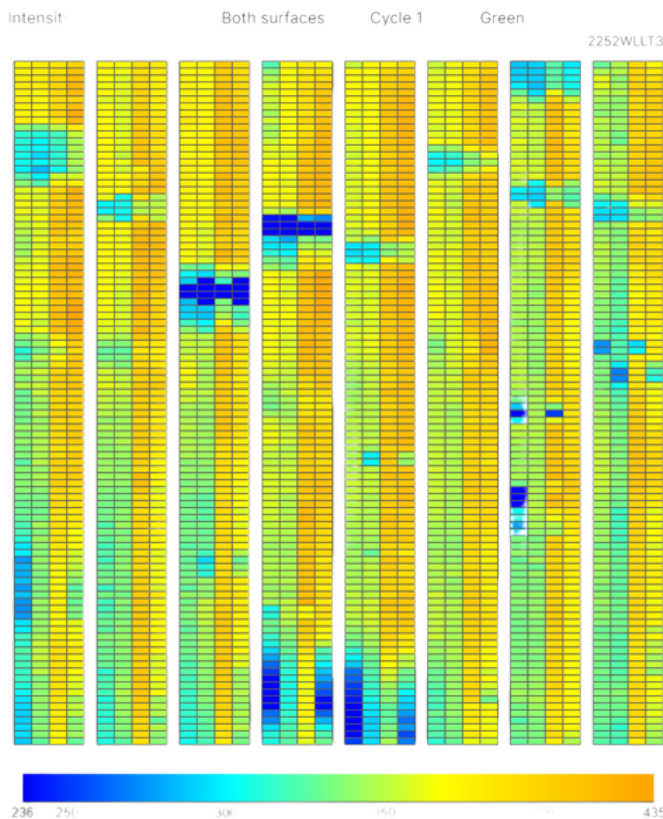


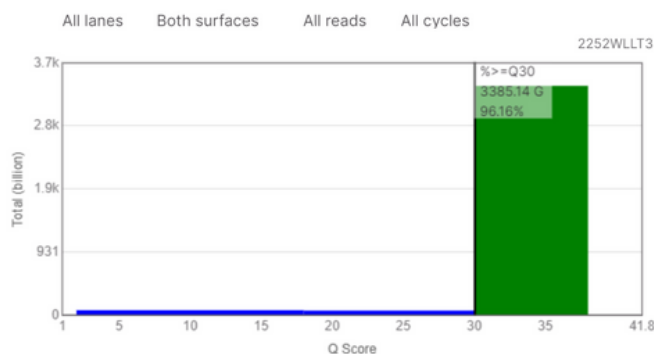


# NOVASEQ X PLUS CONCORDANCE DATA PHIX VALIDATION RUN QC METRICS

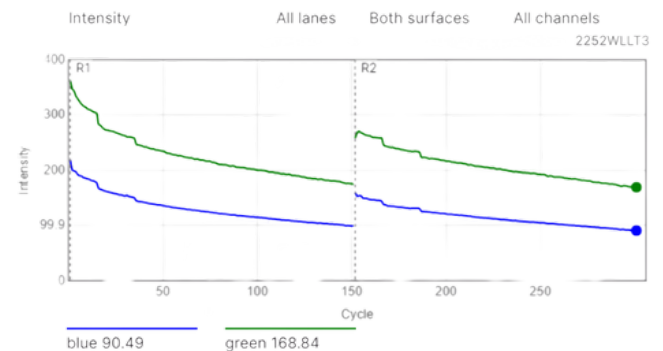
## Flow Cell Chart



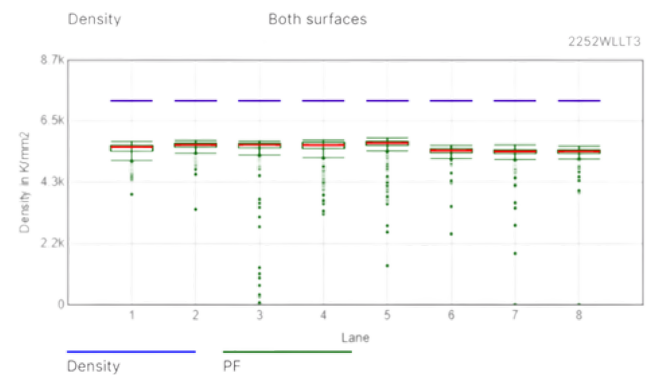
## QScore distribution



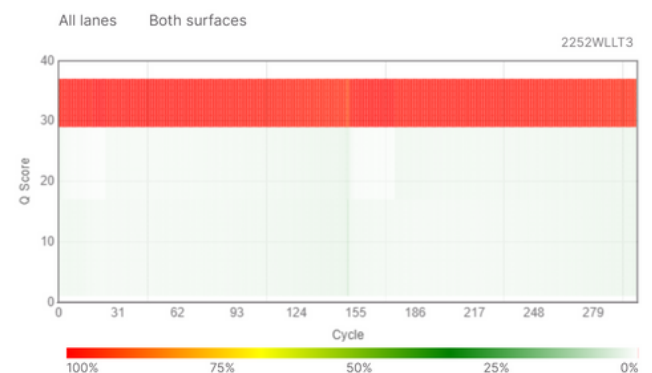
## Data by cycle



## Data by lane



## QScore heatmap



Run Summary

Cycle status    Extracted 302    Scored 302    Error rated 0 - 301

| Level | Yield Total (GB) |        | Projected Yield (GB) |          | Error Rate (%) |      | Intensity Cycle 1 |     | % Intensity Cycle 1 |       | % >= Q30 |      | % Occupied |
|-------|------------------|--------|----------------------|----------|----------------|------|-------------------|-----|---------------------|-------|----------|------|------------|
|       | Read 1           | Read 2 | 1,748.7              | 1,748.25 | 0.18           | 0.21 | 218.36            | 159 | 115.73              | 84.27 | 96.26    | 96.1 | 96.91      |
|       |                  |        |                      | 1,748.25 |                |      |                   |     |                     |       |          |      | 96.91      |

Read 1

| Lane | Tiles | Density (K/mm2) | Legacy Phasing / Prephasing |             | % PF        | Reads (M) | Reads PF (M) | % >= Q30 | Yield (GB) | Cycle Error |               | Error Rate  | Error Rate 35 (%) | Error Rate 50 (%) | Error Rate 75 (%) | Error Rate 100 (%) | Intensity Cycle 1 | Phasing slope / offset | Prephasing slope / offset |
|------|-------|-----------------|-----------------------------|-------------|-------------|-----------|--------------|----------|------------|-------------|---------------|-------------|-------------------|-------------------|-------------------|--------------------|-------------------|------------------------|---------------------------|
|      |       |                 | Rate                        | Rated       |             |           |              |          |            |             |               |             |                   |                   |                   |                    |                   |                        |                           |
| 1    | 392   | 7235.24 ± 0     | 76.09 ± 3.56                | 0.07 / 0.05 | 0.07 / 0.05 | 1950.55   | 1484.15      | 96.38    | 219.74     | 0 - 150     | 9917 ± 017    | 0.15 ± 0.04 | 0.07 ± 0.05       | 0.07 ± 0.04       | 0.09 ± 0.04       | 0.11 ± 0.04        | 222.1 ± 14.12     | 0.04 / 0.42            | 0.05 / 0.31               |
| 2    | 392   | 7235.24 ± 0     | 77.75 ± 2.77                | 0.07 / 0.05 | 0.07 / 0.05 | 1950.55   | 1516.46      | 96.56    | 224.26     | 0 - 150     | 9915 ± 0.2    | 0.16 ± 0.03 | 0.08 ± 0.09       | 0.08 ± 0.06       | 0.09 ± 0.04       | 0.11 ± 0.04        | 230.73 ± 12.18    | 0.04 / 0.43            | 0.05 / 0.31               |
| 3    | 392   | 7235.24 ± 0     | 75.08 ± 13.15               | 0.07 / 0.05 | 0.07 / 0.05 | 1950.55   | 1464.43      | 96.5     | 216.18     | 0 - 150     | 93.84 ± 21.78 | 0.24 ± 0.45 | 0.09 ± 0.23       | 0.13 ± 0.4        | 0.08 ± 0.04       | 0.11 ± 0.04        | 219.07 ± 34.45    | 0.04 / 0.44            | 0.05 / 0.34               |
| 4    | 392   | 7235.24 ± 0     | 76.53 ± 5.52                | 0.07 / 0.05 | 0.07 / 0.05 | 1950.55   | 1492.68      | 96.28    | 220.87     | 0 - 150     | 98.89 ± 0.98  | 0.16 ± 0.14 | 0.08 ± 0.15       | 0.08 ± 0.14       | 0.09 ± 0.13       | 0.11 ± 0.13        | 216.74 ± 22.48    | 0.04 / 0.45            | 0.05 / 0.35               |
| 5    | 392   | 7235.24 ± 0     | 77.34 ± 6.9                 | 0.07 / 0.05 | 0.07 / 0.05 | 1950.55   | 1508.51      | 96.53    | 223.31     | 0 - 150     | 98.98 ± 0.5   | 0.16 ± 0.07 | 0.06 ± 0.08       | 0.07 ± 0.07       | 0.08 ± 0.06       | 0.1 ± 0.06         | 219.88 ± 14.34    | 0.04 / 0.43            | 0.05 / 0.34               |
| 6    | 392   | 7235.24 ± 0     | 75.16 ± 3.13                | 0.07 / 0.06 | 0.07 / 0.06 | 1950.55   | 1466.07      | 95.99    | 216.92     | 0 - 150     | 98.92 ± 0.55  | 0.19 ± 0.04 | 0.08 ± 0.11       | 0.08 ± 0.08       | 0.1 ± 0.06        | 0.13 ± 0.05        | 220.1 ± 9.83      | 0.04 / 0.44            | 0.06 / 0.33               |
| 7    | 392   | 7235.24 ± 0     | 73.7 ± 7.9                  | 0.07 / 0.05 | 0.07 / 0.05 | 1950.55   | 1437.61      | 95.84    | 212.53     | 0 - 150     | 95.16 ± 17.77 | 0.21 ± 0.1  | 0.13 ± 0.39       | 0.12 ± 0.27       | 0.13 ± 0.18       | 0.15 ± 0.14        | 210.38 ± 25.13    | 0.04 / 0.44            | 0.05 / 0.33               |
| 8    | 392   | 7235.24 ± 0     | 74.52 ± 4.48                | 0.07 / 0.05 | 0.07 / 0.05 | 1950.55   | 1453.51      | 95.96    | 214.88     | 0 - 150     | 98.94 ± 0.35  | 0.16 ± 0.03 | 0.05 ± 0.01       | 0.06 ± 0.01       | 0.08 ± 0.02       | 0.11 ± 0.02        | 207.9 ± 14.77     | 0.04 / 0.41            | 0.05 / 0.35               |

Read 2

| Lane | Tiles | Density (K/mm2) | Legacy Phasing / Prephasing |             | % PF        | Reads (M) | Reads PF (M) | % >= Q30 | Yield (GB) | Cycle Error |              | Error Rate  | Error Rate 35 (%) | Error Rate 50 (%) | Error Rate 75 (%) | Error Rate 100 (%) | Intensity Cycle 1 | Phasing slope / offset | Prephasing slope / offset |
|------|-------|-----------------|-----------------------------|-------------|-------------|-----------|--------------|----------|------------|-------------|--------------|-------------|-------------------|-------------------|-------------------|--------------------|-------------------|------------------------|---------------------------|
|      |       |                 | Rate                        | Rated       |             |           |              |          |            |             |              |             |                   |                   |                   |                    |                   |                        |                           |
| 1    | 392   | 7235.24 ± 0     | 76.09 ± 3.56                | 0.04 / 0.01 | 0.04 / 0.01 | 1950.55   | 1484.15      | 96.32    | 219.7      | 0 - 150     | 98.04 ± 0.28 | 0.18 ± 0.02 | 0.09 ± 0.02       | 0.11 ± 0.02       | 0.14 ± 0.02       | 0.16 ± 0.02        | 154.82 ± 15.91    | 0.04 / 0.47            | 0.04 / 0.03               |
| 2    | 392   | 7235.24 ± 0     | 77.75 ± 2.77                | 0.04 / 0.01 | 0.04 / 0.01 | 1950.55   | 1516.46      | 96.42    | 224.28     | 0 - 150     | 98.02 ± 0.27 | 0.19 ± 0.02 | 0.09 ± 0.05       | 0.11 ± 0.04       | 0.14 ± 0.03       | 0.16 ± 0.02        | 164.51 ± 16.42    | 0.05 / 0.49            | 0.04 / 0.03               |
| 3    | 392   | 7235.24 ± 0     | 75.08 ± 13.15               | 0.04 / 0.01 | 0.04 / 0.01 | 1950.55   | 1464.43      | 96.31    | 216.03     | 0 - 150     | 88.1 ± 29.74 | 0.2 ± 0.04  | 0.09 ± 0.06       | 0.12 ± 0.07       | 0.15 ± 0.05       | 0.17 ± 0.04        | 159.97 ± 26.76    | 0.04 / 0.48            | 0.04 / 0.05               |
| 4    | 392   | 7235.24 ± 0     | 76.53 ± 5.52                | 0.04 / 0.01 | 0.04 / 0.01 | 1950.55   | 1492.68      | 96.21    | 220.82     | 0 - 150     | 97.94 ± 0.42 | 0.2 ± 0.13  | 0.09 ± 0.08       | 0.11 ± 0.08       | 0.15 ± 0.09       | 0.17 ± 0.1         | 157.28 ± 17.08    | 0.04 / 0.51            | 0.04 / 0.06               |
| 5    | 392   | 7235.24 ± 0     | 77.34 ± 6.9                 | 0.04 / 0.01 | 0.04 / 0.01 | 1950.55   | 1508.51      | 96.31    | 223.3      | 0 - 150     | 97.68 ± 1.89 | 0.22 ± 0.19 | 0.09 ± 0.08       | 0.12 ± 0.1        | 0.15 ± 0.12       | 0.18 ± 0.15        | 160.94 ± 11.92    | 0.05 / 0.49            | 0.04 / 0.04               |
| 6    | 392   | 7235.24 ± 0     | 75.16 ± 3.13                | 0.05 / 0.01 | 0.05 / 0.01 | 1950.55   | 1466.07      | 95.76    | 216.87     | 0 - 150     | 97.6 ± 0.28  | 0.22 ± 0.02 | 0.08 ± 0.02       | 0.11 ± 0.02       | 0.15 ± 0.01       | 0.18 ± 0.01        | 162.52 ± 11.38    | 0.05 / 0.5             | 0.04 / 0.04               |
| 7    | 392   | 7235.24 ± 0     | 73.7 ± 7.9                  | 0.04 / 0.01 | 0.04 / 0.01 | 1950.55   | 1437.61      | 95.68    | 212.49     | 0 - 150     | 94.88 ± 15.4 | 0.21 ± 0.03 | 0.09 ± 0.02       | 0.12 ± 0.02       | 0.15 ± 0.02       | 0.18 ± 0.03        | 154.1 ± 16.98     | 0.05 / 0.48            | 0.04 / 0.04               |
| 8    | 392   | 7235.24 ± 0     | 74.52 ± 4.48                | 0.04 / 0.01 | 0.04 / 0.01 | 1950.55   | 1453.51      | 95.79    | 214.76     | 0 - 150     | 97.44 ± 0.64 | 0.2 ± 0.02  | 0.1 ± 0.03        | 0.12 ± 0.02       | 0.15 ± 0.02       | 0.18 ± 0.02        | 157.89 ± 11.12    | 0.04 / 0.46            | 0.04 / 0.03               |