

Evaluation of qMax Gold on Azure Cielo Real-Time PCR system

8/30/2020

1. Purpose:

Compare performance of PR1MA qMax Gold (PR2010-N) with SYBR Green Enzyme from Supplier R on Azure Cielo Real-Time PCR system

2. Method:

Measurement of Limit of Detection from a cDNA template dilution representing 10 copies of Human GAPDH gene.
(n=10)

3. Results:

- a. Detection Rate was 100% for both the enzymes
- b. Samples amplified with qMax Gold had a CV of 1.47% **vs.** Supplier R had a CV of 1.48%.
- c. qMax Gold was able to detect Cq ~1.77 cycles earlier than Supplier R . Mean Cq values were 30.97 and 32.74 respectively

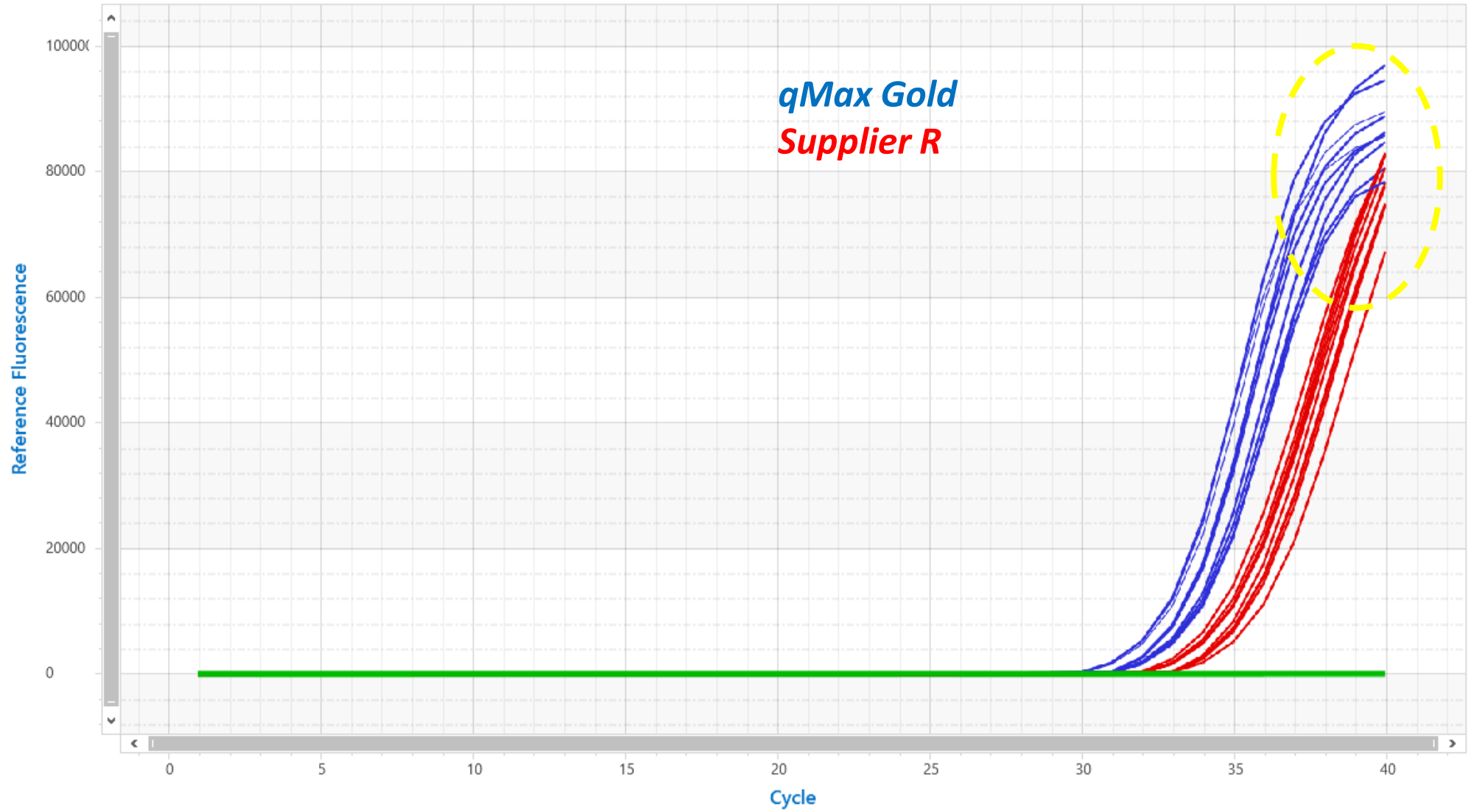
4. Conclusion & Feedback:

- a. **Azure Cielo Real-Time PCR system along with PR1MA qMax Gold detected sensitive amounts of DNA earlier and at a slightly higher fluorescence .**

Results – Amplification Curves

Higher and earlier fluorescence readouts for qMax Gold vs Supplier R

Amplification Curves



Results – Cq values and Statistics

Earlier Cq determined for samples amplified with qMax Gold vs. Supplier R

qMax Gold

| Sample# | Sample | Target | Fluorescence | Cq | CqMean | CqStd | CV |
|---------|-----------|--------|--------------|--------|---------------|--------------|--------------|
| 1 | qMAX GOLD | GAPDH | SYBR | 31.309 | 30.972 | 0.454 | 1.47% |
| 2 | qMAX GOLD | GAPDH | SYBR | 31.275 | | | |
| 3 | qMAX GOLD | GAPDH | SYBR | 30.296 | | | |
| 4 | qMAX GOLD | GAPDH | SYBR | 30.313 | | | |
| 5 | qMAX GOLD | GAPDH | SYBR | 30.353 | | | |
| 6 | qMAX GOLD | GAPDH | SYBR | 31.167 | | | |
| 7 | qMAX GOLD | GAPDH | SYBR | 31.182 | | | |
| 8 | qMAX GOLD | GAPDH | SYBR | 31.171 | | | |
| 9 | qMAX GOLD | GAPDH | SYBR | 31.337 | | | |
| 10 | qMAX GOLD | GAPDH | SYBR | 31.321 | | | |

Supplier R

| Sample# | Sample | Target | Fluorescence | Cq | CqMean | CqStd | CV |
|---------|------------|--------|--------------|--------|---------------|--------------|--------------|
| 1 | Supplier R | GAPDH | SYBR | 33.136 | 32.743 | 0.483 | 1.48% |
| 2 | Supplier R | GAPDH | SYBR | 32.321 | | | |
| 3 | Supplier R | GAPDH | SYBR | 32.214 | | | |
| 4 | Supplier R | GAPDH | SYBR | 32.316 | | | |
| 5 | Supplier R | GAPDH | SYBR | 32.270 | | | |
| 6 | Supplier R | GAPDH | SYBR | 33.309 | | | |
| 7 | Supplier R | GAPDH | SYBR | 33.174 | | | |
| 8 | Supplier R | GAPDH | SYBR | 33.202 | | | |
| 9 | Supplier R | GAPDH | SYBR | 32.314 | | | |
| 10 | Supplier R | GAPDH | SYBR | 33.172 | | | |