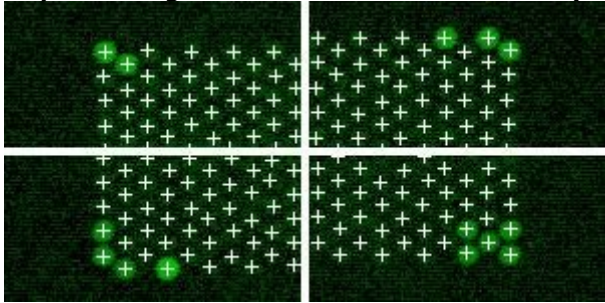


QC Report - Agilent Technologies : 1 Color Gene Expression

| | | | |
|-------------------|-----------------------------------|------------------------|--------------------------|
| Date | Friday, March 04, 2011 - 16:01 | Grid | 027516_D_F_20100501 |
| Image | US81603235_252751610048_S01 [1_3] | BG Method | No Background |
| Protocol | GE1_107_Sep09 (Read Only) | Background Detrend | On(FeatNCRRange, LoPass) |
| User Name | rockstro | Multiplicative Detrend | True |
| FE Version | 10.7.3.1 | Additive Error | 2(Green) |
| Sample(red/green) | | Saturation Value | 778048 (g) |

Spot Finding of the Four Corners of the Array

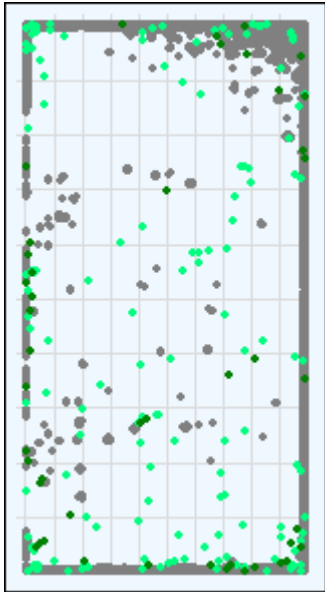


Grid Normal

| Feature | Local Background | |
|-------------|------------------|-------|
| | Green | Green |
| Non Uniform | 47 | 0 |
| Population | 169 | 6389 |

Spatial Distribution of All Outliers on the Array

1064 rows x 170 columns



FeatureNonUnif (Green) = 47(0.03%)

GeneNonUnif (Green) = 41 (0.023 %)

- BG NonUniform ● BG Population
● Green FeaturePopulation ● Green Feature NonUniform

Net Signal Statistics

Agilent SpikeIns:

Green

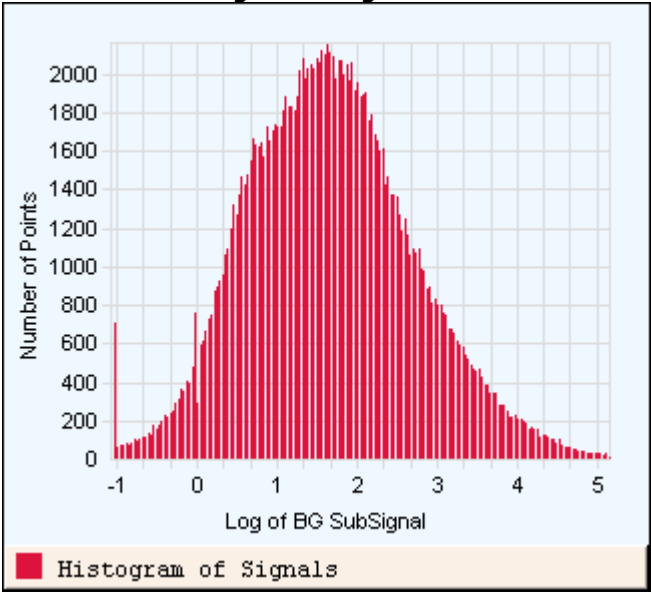
| | |
|----------------------|--------|
| # Saturated Features | 0 |
| 99% of Sig. Distrib. | 255783 |
| 50% of Sig. Distrib. | 625 |
| 1% of Sig. Distrib. | 25 |

Non-Control probes:

Green

| | |
|----------------------|-------|
| # Saturated Features | 0 |
| 99% of Sig. Distrib. | 12889 |
| 50% of Sig. Distrib. | 52 |
| 1% of Sig. Distrib. | 22 |

Histogram of Signals Plot



Features (NonCtrl) with BGSubSignal < 0: 19745 (Green)

Negative Control Stats

Green

| | |
|-----------------------|-------|
| Average Net Signals | 23.72 |
| StdDev Net Signals | 2.02 |
| Average BG Sub Signal | -2.55 |
| StdDev BG Sub Signal | 1.91 |

Local Bkg (inliers)

Green

| | |
|--------|--------|
| Number | 174491 |
| Avg | 22.45 |
| SD | 1.16 |

Foreground Surface Fit

Green

| | |
|-----------|-------|
| RMS_Fit | 0.68 |
| RMS_Resid | 2.10 |
| Avg_Fit | 31.93 |

Multiplicative Surface Fit

Green

| | |
|---------|------|
| RMS_Fit | 0.21 |
|---------|------|

Reproducibility: %CV for Replicated Probes

Median %CV Signal (inliers)

Non-Control
probes
Green

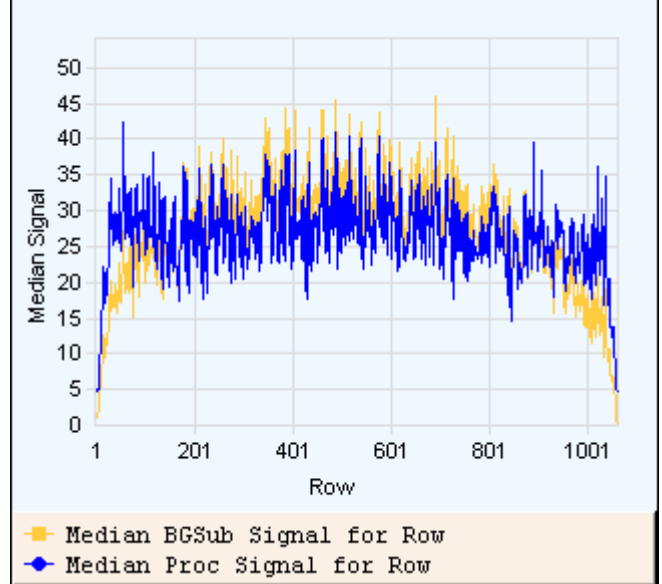
Agilent SpikeIns
Green

| | | |
|-----------------|-------|-------|
| BGSubSignal | 23.73 | 25.41 |
| ProcessedSignal | 14.45 | 16.80 |

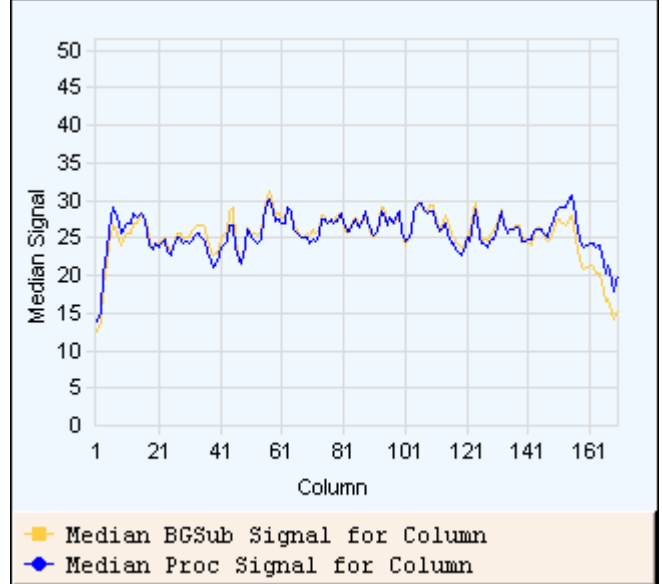
Agilent SpikeIns Signal Statistics

| Probe Name | Log (Relative Conc.) | Median (Log Proc. Sig.) | % CV | StdDev |
|-----------------|----------------------------|----------------------------------|-------|--------|
| (+)E1A_r60_3 | 0.30 | 1.04 | 37.65 | 0.21 |
| (+)E1A_r60_a104 | 1.30 | 0.61 | 85.29 | 0.25 |
| (+)E1A_r60_a107 | 2.30 | 1.58 | 24.53 | 0.18 |
| (+)E1A_r60_a135 | 3.30 | 2.39 | 16.14 | 0.10 |
| (+)E1A_r60_a20 | 3.83 | 2.70 | 21.20 | 0.27 |
| (+)E1A_r60_a22 | 4.30 | 3.36 | 9.60 | 0.05 |
| (+)E1A_r60_a97 | 4.82 | 3.99 | 9.57 | 0.05 |
| (+)E1A_r60_n11 | 5.30 | 4.57 | 16.80 | 0.17 |
| (+)E1A_r60_n9 | 5.82 | 4.82 | 24.84 | 0.29 |
| (+)E1A_r60_1 | 6.30 | 5.32 | 27.11 | 0.21 |

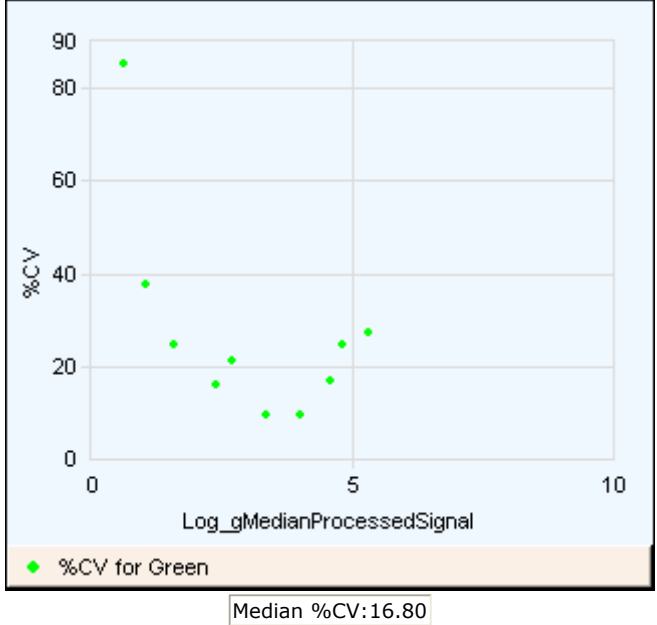
Spatial Distribution of Median Signals for each Row



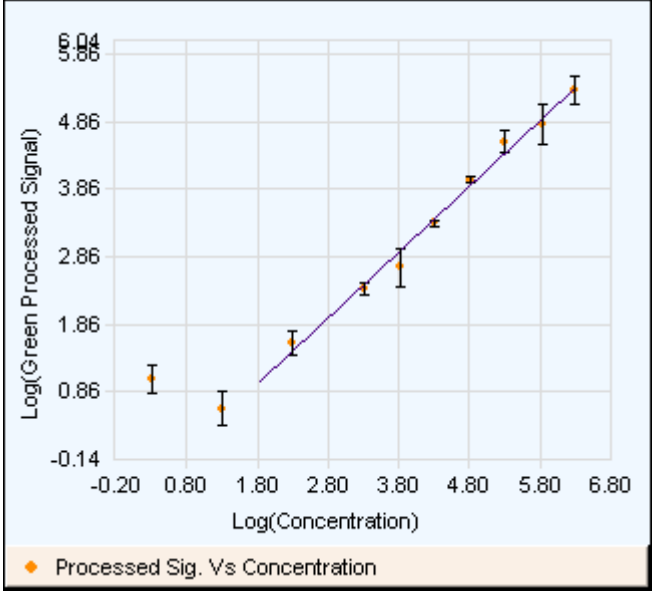
Spatial Distribution of Median Signals for each Column



Agilent SpikeIns: %CV of Avg. Processed Signal Plot



Agilent SpikeIns: Log(Signal) vs. Log(Relative concentration) Plot



Evaluation Metrics for GE1_QCMT_Sep09 :

Good (8) ; Evaluate (2)

| Metric Name | Value | Excellent | Good | Evaluate |
|---------------------------|-------|-----------|--------------|----------------|
| IsGoodGrid | 1.00 | | >1 | <1 |
| AnyColorPrcntFeatNonUn... | 0.03 | | <1 | >1 |
| gNegCtrlAveNetSig | 23.72 | | <40 | >40 |
| gNegCtrlAveBGSubSig | -2.55 | | -10 to 5 | <-10 or >5 |
| gNegCtrlSDevBGSubSig | 1.91 | | <10 | >10 |
| gSpatialDetrendRMSFilt... | 2.10 | | <15 | >15 |
| gNonCtrlMedCVProcSign... | 14.45 | | 0 to 8 | <0 or >8 |
| gE1aMedCVProcSignal | 16.80 | | 0 to 8 | <0 or >8 |
| absGE1E1aSlope | 0.97 | | 0.90 to 1.20 | <0.90 or >1.20 |
| DetectionLimit | 1.18 | | 0.01 to 2 | <0.01 or >2 |

◆ Excellent ◆ Good ◆ Evaluate

Agilent Spike-In Concentration-Response Statistics
Linear Range Statistics:

| | |
|-----------------------------|------|
| Low Signal | 1.01 |
| High Signal | 5.73 |
| Low Relative Concentration | 1.85 |
| High Relative Concentration | 6.70 |
| Slope | 0.97 |
| R^2 Value | 0.99 |

Signal Detection Limit Statistics

| | |
|--------------------------|------|
| Saturation Point | 5.89 |
| Low Threshold | 0.68 |
| Low Threshold Error | 0.32 |
| Spike-In Detection Limit | 1.18 |