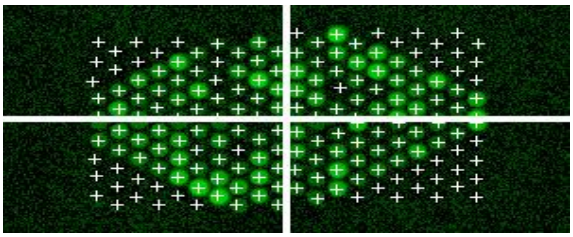
QC Report - Agilent Technologies : 1 Color Gene Expression

Date	Friday, November 08, 2019 - 16:19	Grid	MS2_1_086109_D_F_20190722
Image	SG18178613_258610910001_S001 [2_1]	BG Method	No Background
Protocol	GE1_1200_Jun14 (Read Only)	Background Detrend	On(FeatNCRange, LoPass)
User Name	ledossey	Multiplicative Detrend	True
FE Version	12.1.0.3	Additive Error	3(Green)
Sample(red/green)		Saturation Value	777511 (g)

Spot Finding of the Four Corners of the Array



Grid Normal

	Feature Green	Local Background Green
Non Uniform	3	0
Population	1096	291

Net Signal Statistics

Agilent SpikeIns:

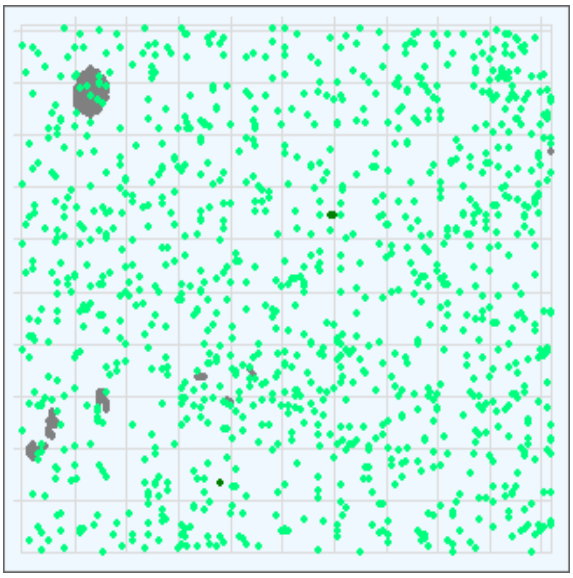
	Green
# Saturated Features	0
99% of Sig. Distrib.	94
50% of Sig. Distrib.	16
1% of Sig. Distrib.	11

Non-Control probes:

	Green
# Saturated Features	0
99% of Sig. Distrib.	6181
50% of Sig. Distrib.	89
1% of Sig. Distrib.	31

Spatial Distribution of All Outliers on the Array

384 rows x 164 columns

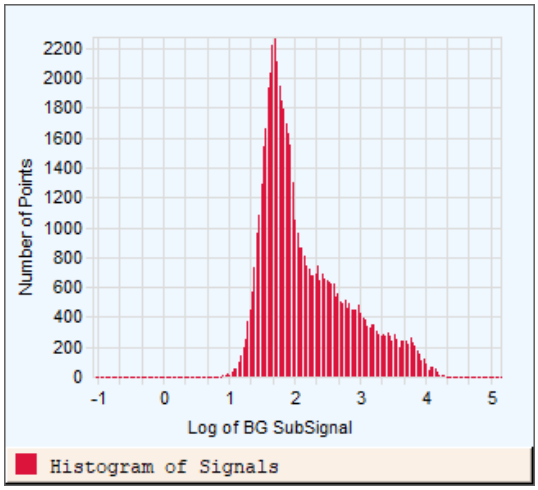


FeatureNonUnif (Green) = 3(0.01%)

GeneNonUnif (Green) = 0 (0.000 %)

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

Histogram of Signals Plot



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

Negative Control Stats

	Green
Average Net Signals	17.60
StdDev Net Signals	5.11
Average BG Sub Signal	0.72
StdDev BG Sub Signal	4.68

Local Bkg (inliers)

	Green
Number	59470
Avg	29.13
SD	1.60

Foreground Surface Fit

	Green
RMS_Fit	1.55
RMS_Resid	2.78
Avg_Fit	26.84

Multiplicative Surface Fit

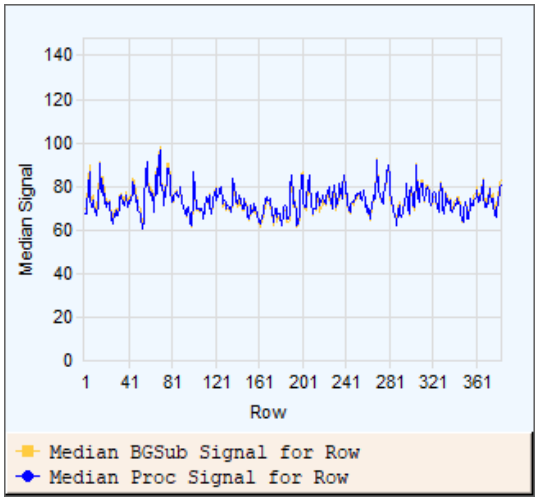
	Green
RMS_Fit	0.05

Reproducibility: %CV for Replicated Probes

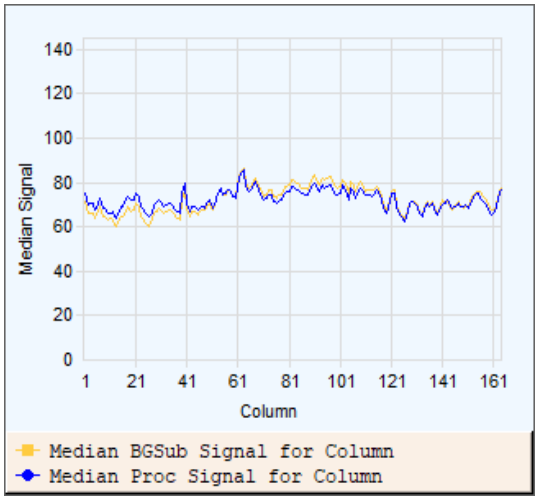
Median %CV Signal (inliers)

	Non-Control probes Green	Agilent SpikeIns Green
BGSubSignal	-1.00	-1.00
ProcessedSignal	-1.00	-1.00

Spatial Distribution of Median Signals for each Row



Spatial Distribution of Median Signals for each Column



Agilent SpikeIns Signal Statistics

Probe Name	Log(Relative Conc.)	Median(Log Proc. Sig.)	% CV	StdDev
r60_3	0.30	0.00	0.00	0.00
(+)E1A_r60_3	0.30	0.00	0.00	0.00
r60_a104	1.30	0.00	0.00	0.00
(+)E1A_r60_a104	1.30	0.00	0.00	0.00
r60_a107	2.30	0.00	0.00	0.00
(+)E1A_r60_a107	2.30	0.00	0.00	0.00
r60_a135	3.30	0.00	0.00	0.00
(+)E1A_r60_a135	3.30	0.00	0.00	0.00
r60_a20	3.83	0.00	0.00	0.00
(+)E1A_r60_a20	3.83	0.00	0.00	0.00

Agilent SpikeIns: %CV of Avg. Processed Signal Plot

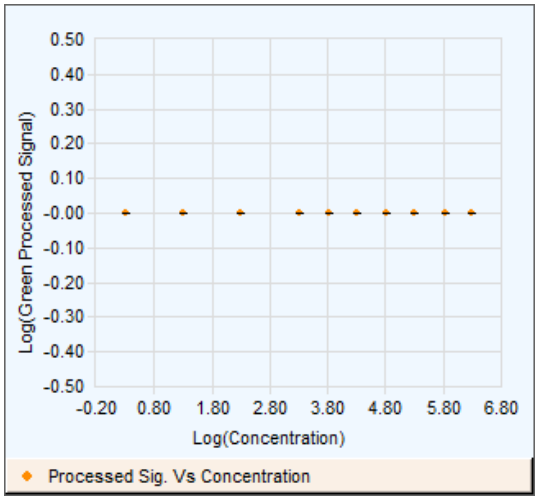
Median %CV:-1.00

Evaluation Metrics for GE1_QCMT_Jun14
Good (6) ; Evaluate (4)

Metric Name	Value	Excellent	Good	Evaluate
IsGoodGrid	1.00		>1	<1
AnyColorPrcntFeatNonU...	0.01		<1	>1
gNegCtrlAveNetSig	17.60		<40	>40
gNegCtrlAveBGSubSig	0.72		-10 to 5	<-10 or >5
gNegCtrlSDevBGSubSig	4.68		<10	>10
gSpatialDetrendRMSFil...	2.78		<15	>15
gNonCntrlMedCVProcSig...	-1.00		0 to 8	<0 or >8
gE1aMedCVProcSignal	-1.00		0 to 8	<0 or >8
absGE1E1aSlope	0.00		0.90 to 1.20	<0.90 or >1.20
DetectionLimit	-1.00		0.01 to 2	<0.01 or >2

● Excellent ● Good ● Evaluate

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



Agilent Spike-In Concentration-Response Statistics

Linear Range Statistics:

Low Signal	NA
High Signal	NA
Low Relative Concentration	NA
High Relative Concentration	NA
Slope	NA
R^2 Value	NA

Signal Detection Limit Statistics

Saturation Point	NA
Low Threshold	NA
Low Threshold Error	NA
Spike-In Detection Limit	NA