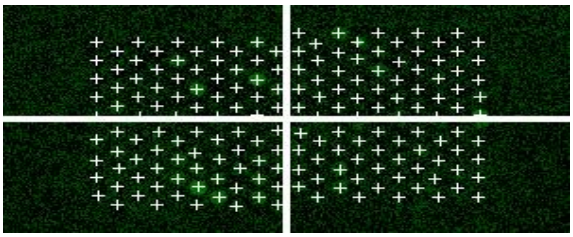
QC Report - Agilent Technologies : 1 Color Gene Expression

Date	Friday, November 08, 2019 - 16:19	Grid	MS2_1_086109_D_F_20190722
Image	SG18178613_258610910001_S001 [1_4]	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	2(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	4	0
Population	1140	1237

Net Signal Statistics

Agilent SpikeIns:

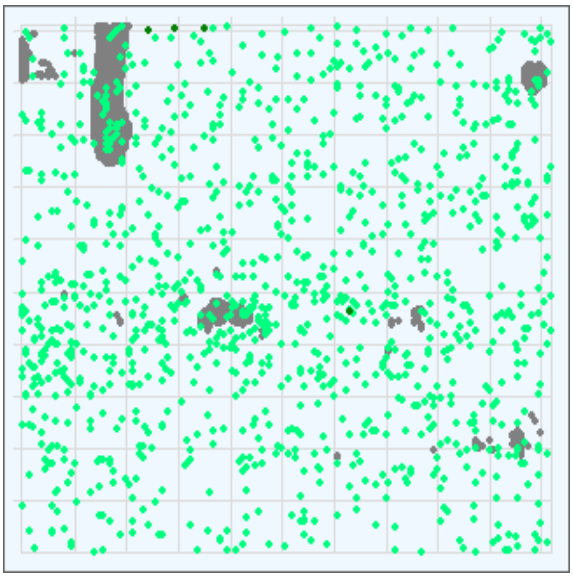
	Green
# Saturated Features	0
99% of Sig. Distrib.	24
50% of Sig. Distrib.	14
1% of Sig. Distrib.	9

Non-Control probes:

	Green
# Saturated Features	0
99% of Sig. Distrib.	164
50% of Sig. Distrib.	21
1% of Sig. Distrib.	12

Spatial Distribution of All Outliers on the Array

384 rows x 164 columns

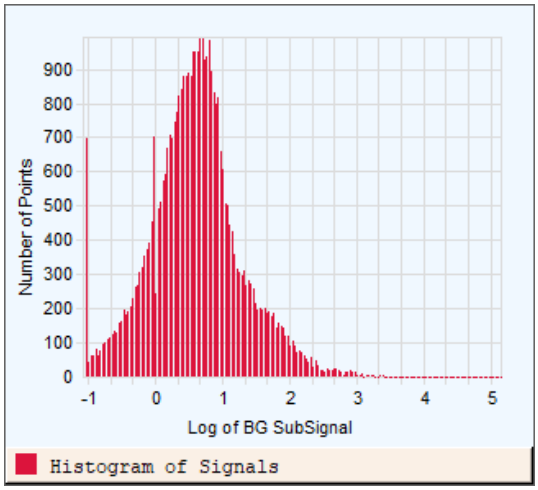


FeatureNonUnif (Green) = 4(0.01%)

GeneNonUnif (Green) = 0 (0.000 %)

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

Histogram of Signals Plot



Features (NonCtrl) with BGSubSignal < 0: 20338 (Green)

Negative Control Stats

	Green
Average Net Signals	15.30
StdDev Net Signals	3.77
Average BG Sub Signal	-3.57
StdDev BG Sub Signal	2.18

Local Bkg (inliers)

	Green
Number	58524
Avg	23.65
SD	0.98

Foreground Surface Fit

	Green
RMS_Fit	2.85
RMS_Resid	2.25
Avg_Fit	28.84

Multiplicative Surface Fit

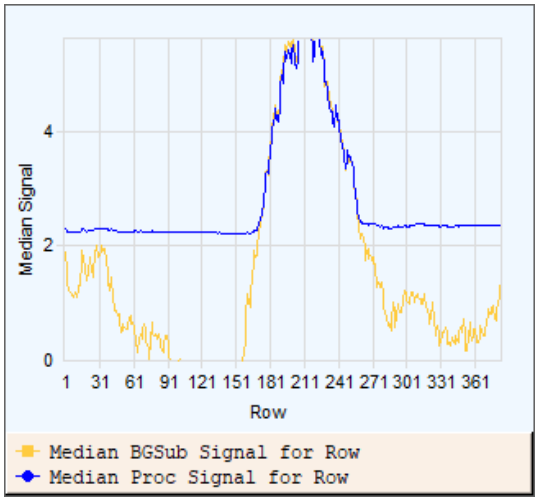
	Green
RMS_Fit	0.04

Reproducibility: %CV for Replicated Probes

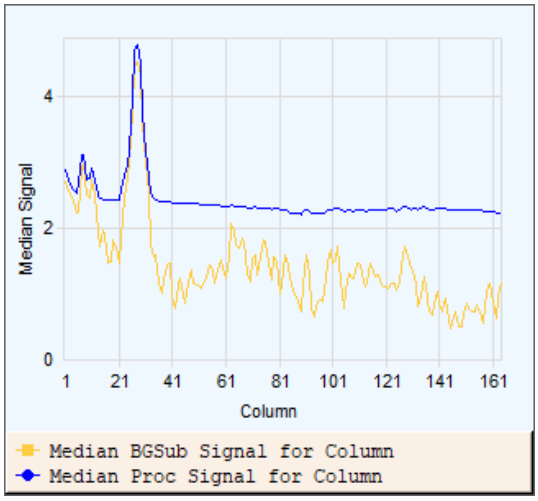
Median %CV Signal (inliers)

	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

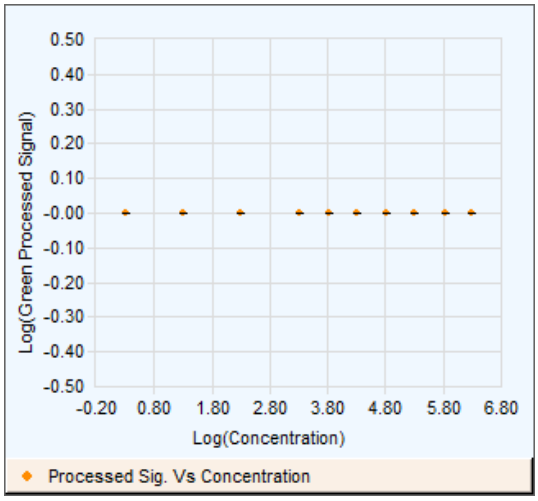
Median %CV:-1.00

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	15.30		<40	>40
gNegCtrlAveBGSubSig	-3.57		-10 to 5	<-10 or >5
gNegCtrlSDevBGSubSig	2.18		<10	>10
gSpatialDetrendRMSFil...	2.25		<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