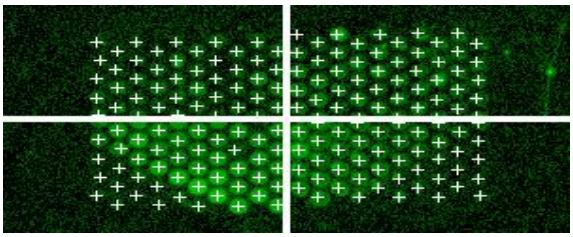
QC Report - Agilent Technologies : 1 Color Gene Expression

Date	Friday, November 08, 2019 - 16:19	Grid	MS2_1_086109_D_F_20190722
Image	SG18178613_258610910001_S001 [2_3]	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	160(Green)
Sample(red/green)		Saturation Value	777511 (g)

Spot Finding of the Four Corners of the Array



Evaluate Grid

	Feature Green	Local Background Green
Non Uniform	3525	637
Population	1272	4081

Net Signal Statistics

Agilent SpikeIns:

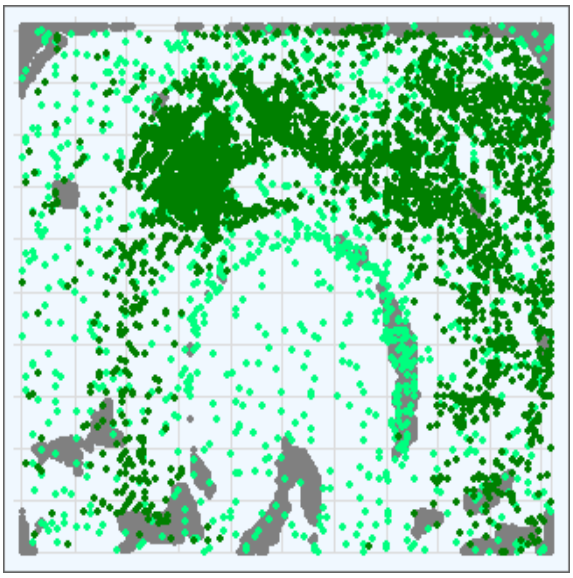
	Green
# Saturated Features	0
99% of Sig. Distrib.	1389
50% of Sig. Distrib.	250
1% of Sig. Distrib.	47

Non-Control probes:

	Green
# Saturated Features	0
99% of Sig. Distrib.	5165
50% of Sig. Distrib.	459
1% of Sig. Distrib.	125

Spatial Distribution of All Outliers on the Array

384 rows x 164 columns

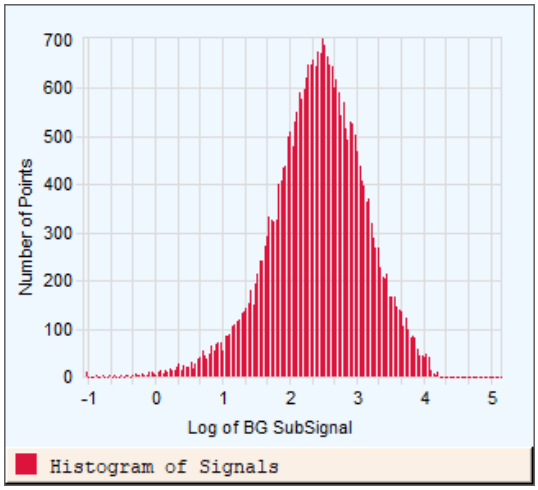


FeatureNonUnif (Green) = 3525(5.90%)

GeneNonUnif (Green) = 51 (0.260 %)

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

Histogram of Signals Plot



Features (NonCtrl) with BGSubSignal < 0: 24276 (Green)

Negative Control Stats

	Green
Average Net Signals	253.20
StdDev Net Signals	188.43
Average BG Sub Signal	-146.58
StdDev BG Sub Signal	170.39

Local Bkg (inliers)

	Green
Number	55680
Avg	45.29
SD	3.95

Foreground Surface Fit

	Green
RMS_Fit	60.82
RMS_Resid	160.14
Avg_Fit	417.63

Multiplicative Surface Fit

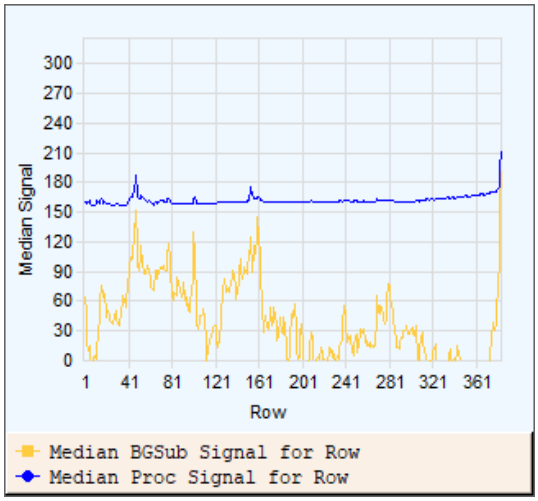
	Green
RMS_Fit	0.04

Reproducibility: %CV for Replicated Probes

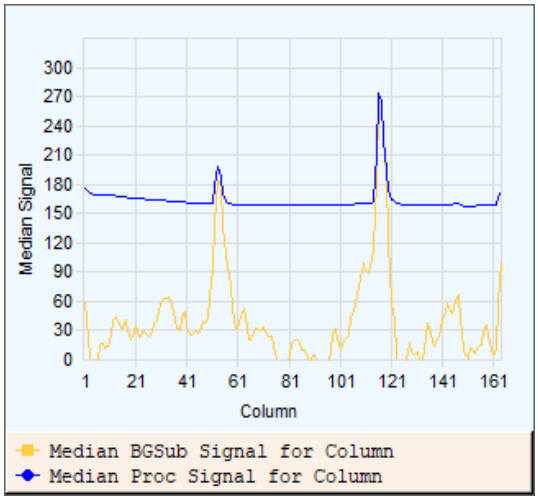
Median %CV Signal (inliers)

	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



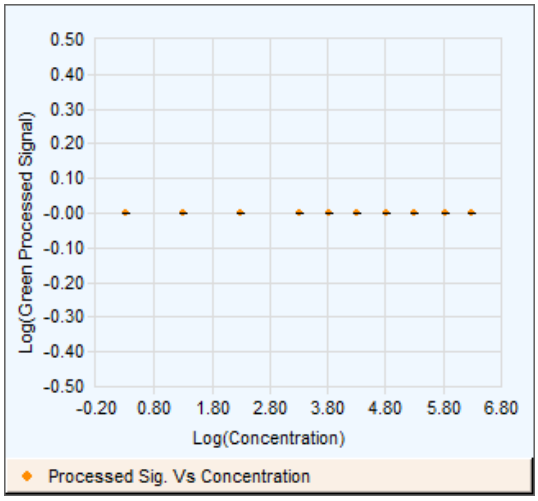
Agilent SpikeIns Signal Statistics

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

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



Evaluation Metrics for GE1_QCMT_Jun14
Evaluate (10)

Metric Name	Value	Excellent	Good	Evaluate
IsGoodGrid	0.00		>1	<1
AnyColorPrcntFeatNonU...	5.90		<1	>1
gNegCtrlAveNetSig	253.20		<40	>40
gNegCtrlAveBGSubSig	-146.58		-10 to 5	<-10 or >5
gNegCtrlSDevBGSubSig	170.38		<10	>10
gSpatialDetrendRMSFil...	160.14		<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 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