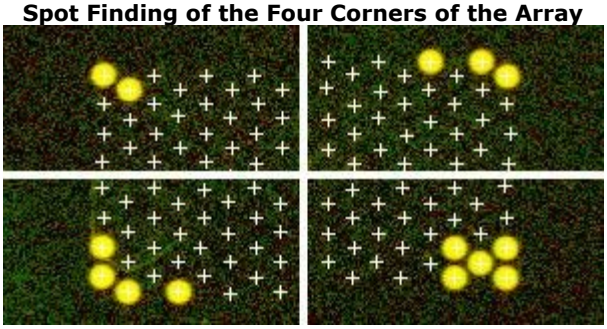
QC Report - Agilent Technologies : 2 Color Gene Expression

QCMetrics InRange (12 of 12)

Date	Tuesday, December 02, 2008 - 15:47	BG Method	No Background
Image	167-201-xdr_251485038757_S01_H [1_3]	Background Detrend	On(FeatNCRange, LoPass)
Protocol	GE2-v5_95_Feb07 (Read Only)	Multiplicative Detrend	True
User Name	scan	Dye Norm	Linear Lowess
Grid	014850_D_F_20060807	Linear DyeNorm Factor	3.09(Red) 2.59(Green)
FE Version	9.5.3.1	Additive Error	5(Red)8(Green)
		Saturation Value	646345 (r), 487955 (g)

Spot Finding of the Four Corners of the Array

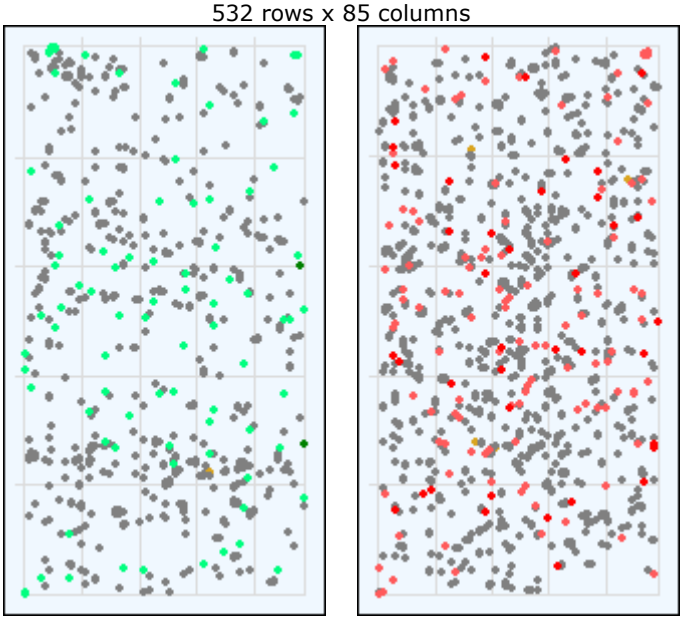


Grid Normal

	Feature		Local Background	
	Red	Green	Red	Green
Non Uniform	39	2	9	6
Population	112	84	945	524

Spatial Distribution of All Outliers on the Array

532 rows x 85 columns



FeatureNonUnif (Red or Green) = 40(0.09%)

GeneNonUnif (Red or Green) = 40 (0.098 %)

BG NonUniform
BG Population
Red FeaturePopulation
Red Feature NonUniform
Green FeaturePopulation
Green Feature NonUniform

Net Signal Statistics

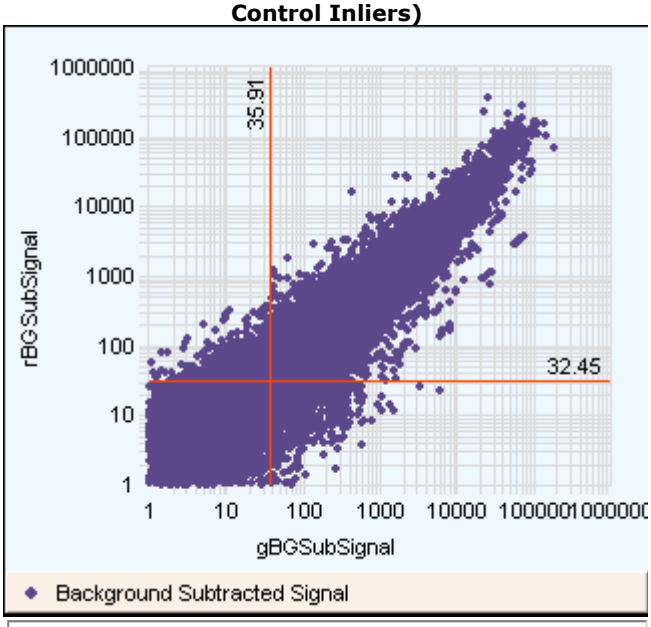
Agilent SpikeIns:

	Red	Green
# Saturated Features	0	0
99% of Sig. Distrib.	162478	54787
50% of Sig. Distrib.	23292	6116
1% of Sig. Distrib.	1190	260

Non-Control probes:

	Red	Green
# Saturated Features	0	0
99% of Sig. Distrib.	25323	23250
50% of Sig. Distrib.	57	54
1% of Sig. Distrib.	22	12

Red and Green Background Corrected Signals (Non-Control Inliers)



Features (NonCtrl) with BGSubSignals < 0: 2560 (Red); 5442 (Green)

Negative Control Stats

	Red	Green
Average Net Signals	21.90	14.97
StdDev Net Signals	1.66	2.81
Average BG Sub Signal	-2.82	-2.72
StdDev BG Sub Signal	1.67	2.79

Local Bkg (inliers)

	Red	Green
Number	44064	44490
Avg	59.91	54.24
SD	2.05	3.70

Foreground Surface Fit

	Red	Green
RMS_Fit	0.31	1.04
RMS_Resid	1.76	2.93
Avg_Fit	63.95	57.08

Reproducibility: %CV for Replicated Probes

	Median %CV Signal (inliers)			
	Non-Control probes		Agilent SpikeIns	
	Red	Green	Red	Green
BGSubSignal	10.69	11.59	8.53	8.53
ProcessedSignal	5.01	5.02	2.95	3.02

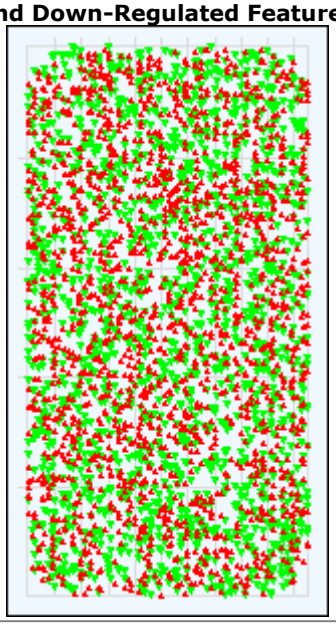
Array Uniformity: LogRatios

	Non-Control	Agilent SpikeIns
AbsAvgLogRatio	0.30	0.65
AverageS/N	10.84	58.78

Sensitivity:Agilent SpikeIns - Ratio of Signal to Background for 2 dimmest probes

(+)E1A_r60_n11		(+)E1A_r60_a97	
(g)	**(r)**	**(g)**	**(r)**
57.1	77.8	107.8	17.7

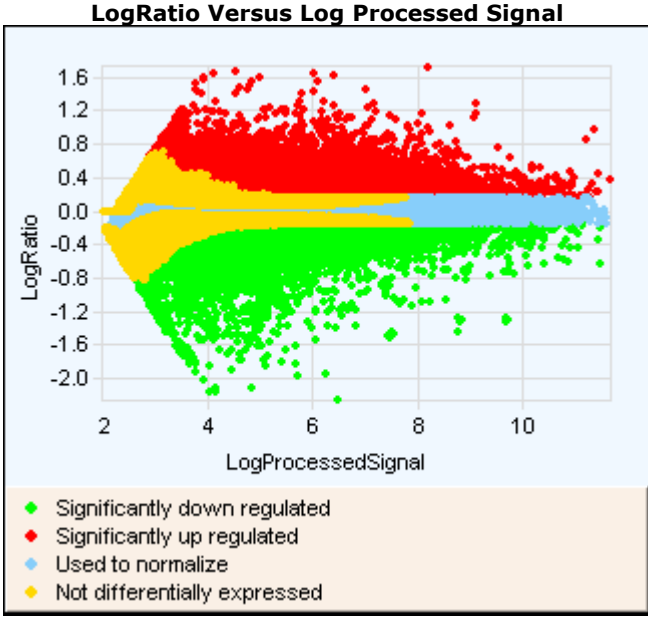
Spatial Distribution of Significantly Up-Regulated and Down-Regulated Features



#Up-Regulated:8071 (Red) ; #Down-Regulated:7870 (Green)

Up-Regulated Down-Regulated

LogRatio Versus Log Processed Signal



Agilent SpikeIns Signal Statistics

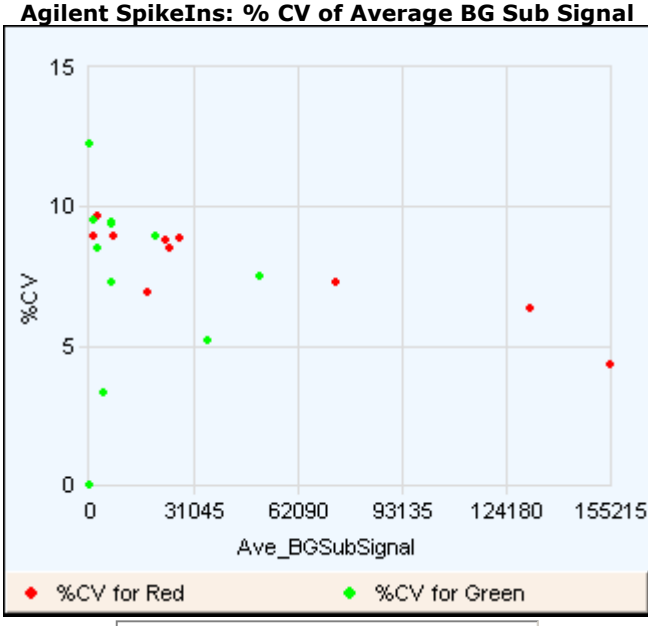
Probe Name	Exp	Obs	SD	S/N
(+)E1A_r60_n9	-1.00	-0.55	0.01	83.12
(+)E1A_r60_a107	-0.48	0.02	0.01	2.58
(+)E1A_r60_a135	-0.48	0.11	0.01	16.25
(+)E1A_r60_n11	-0.48	0.16	0.01	14.12
(+)E1A_r60_1	0.00	0.58	0.01	109.14
(+)E1A_r60_a20	0.00	0.41	0.01	28.97
(+)E1A_r60_3	0.48	1.07	0.01	90.12
(+)E1A_r60_a104	0.48	0.99	0.01	100.78
(+)E1A_r60_a97	0.48	1.11	0.02	52.74
(+)E1A_r60_a22	1.00	1.50	0.02	90.03

Evaluation Metrics for GE2_QCMT_Feb07

Metric Name	Value	UpLim	LowLim	IsMandatory
AnyColorPrcntBGNonUnifOL	0.03	5.00	NA	False
AnyColorPrcntFeatNonUnif...	0.09	1.00	NA	False
absE1aObsVsExpCorr	0.99	NA	0.86	False
absE1aObsVsExpSlope	1.02	NA	0.85	False
gE1aMedCVBkSubSignal	8.53	25.00	NA	False
gNegCtrlAveBGSubSig	-2.72	10.00	-20.00	False
gNegCtrlSDevBGSubSig	2.79	15.00	NA	False
gNonCntrlMedCVBkSubSignal	11.59	25.00	NA	False
rE1aMedCVBkSubSignal	8.53	25.00	NA	False
rNegCtrlAveBGSubSig	-2.82	4.00	-20.00	False
rNegCtrlSDevBGSubSig	1.67	6.00	NA	False
rNonCntrlMedCVBkSubSignal	10.69	25.00	NA	False

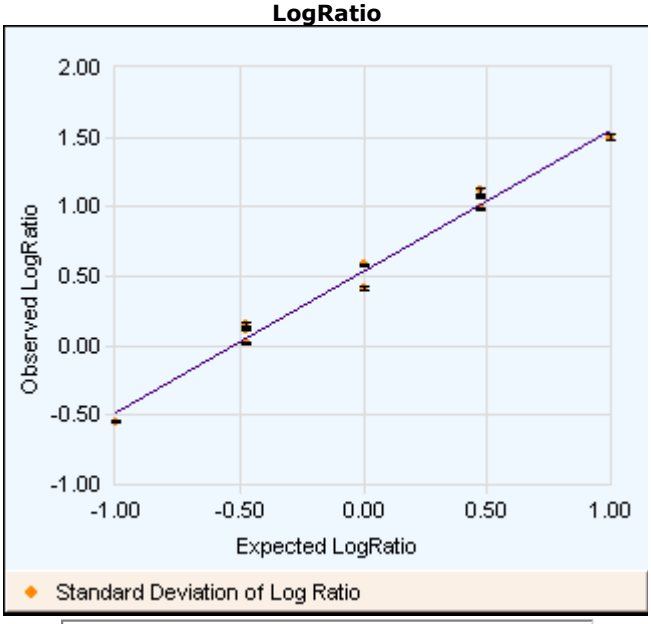
♦ In Normal Range ♦ Evaluate

Agilent SpikeIns: % CV of Average BG Sub Signal



Median %CV:8.53%(Red);8.53%(Green)

Agilent SpikeIns: Expected LogRatio Vs Observed LogRatio



Y-Intercept = 0.541 ; Slope = 1.018 ; R^2 = 0.985