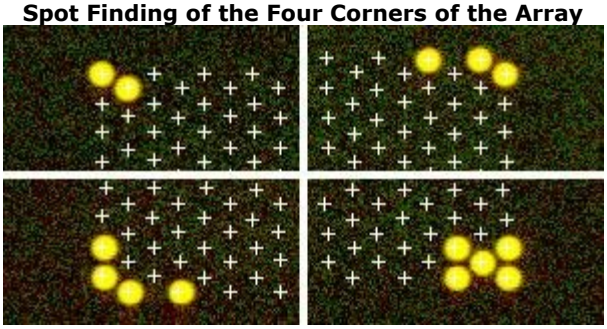
QC Report - Agilent Technologies : 2 Color Gene Expression

QCMetrics InRange (12 of 12)

Date	Tuesday, December 02, 2008 - 15:47	BG Method	No Background
Image	167-201-xdr_251485038758_S01_H [1_2]	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	1.25(Red) 3.69(Green)
FE Version	9.5.3.1	Additive Error	3(Red)14(Green)
		Saturation Value	642266 (r), 483602 (g)

Spot Finding of the Four Corners of the Array

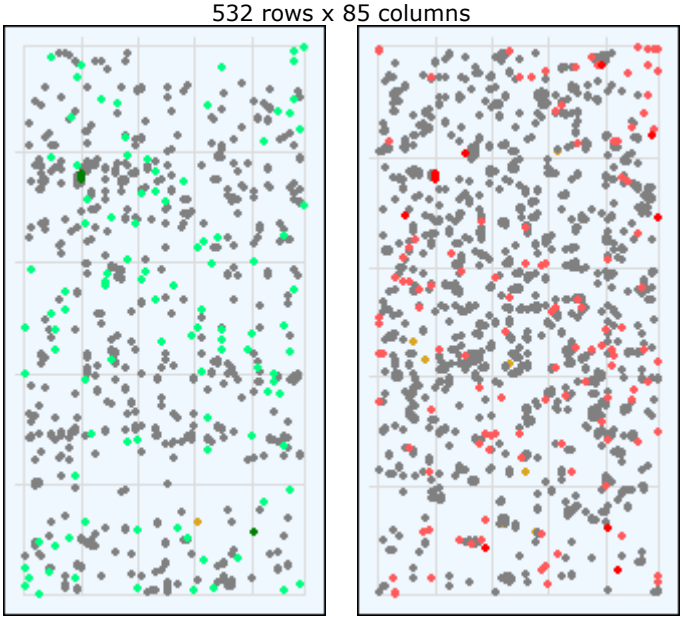


Grid Normal

	Feature		Local Background	
	Red	Green	Red	Green
Non Uniform	11	4	43	9
Population	119	103	1239	569

Spatial Distribution of All Outliers on the Array

532 rows x 85 columns



FeatureNonUnif (Red or Green) = 11(0.02%)

GeneNonUnif (Red or Green) = 11 (0.027 %)

BG NonUniform BG Population

Red FeaturePopulation Red Feature NonUniform

Green FeaturePopulation Green Feature NonUniform

Net Signal Statistics

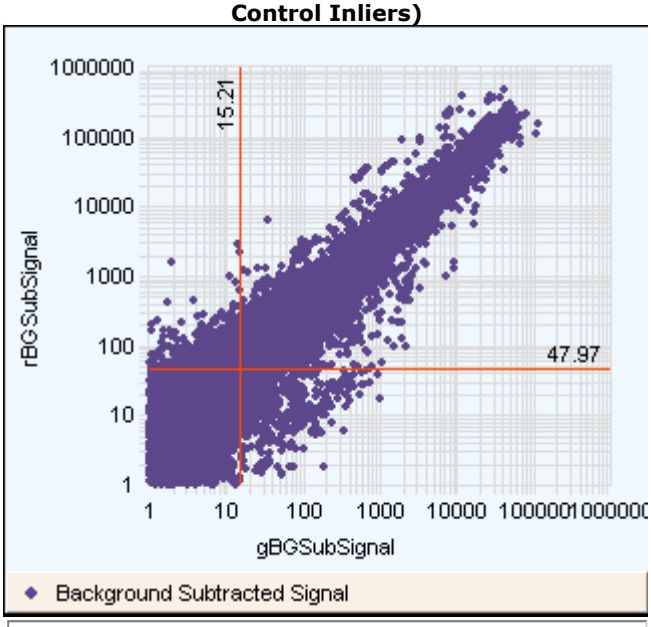
Agilent SpikeIns:

	Red	Green
# Saturated Features	0	0
99% of Sig. Distrib.	128140	98603
50% of Sig. Distrib.	14028	12714
1% of Sig. Distrib.	675	406

Non-Control probes:

	Red	Green
# Saturated Features	0	0
99% of Sig. Distrib.	45311	13853
50% of Sig. Distrib.	73	33
1% of Sig. Distrib.	21	10

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



Features (NonCtrl) with BGSubSignals < 0: 6089 (Red); 9873 (Green)

Negative Control Stats

	Red	Green
Average Net Signals	23.20	15.02
StdDev Net Signals	2.02	3.06
Average BG Sub Signal	-1.93	-2.40
StdDev BG Sub Signal	1.89	3.03

Local Bkg (inliers)

	Red	Green
Number	43764	44445
Avg	61.23	54.80
SD	1.99	3.54

Foreground Surface Fit

	Red	Green
RMS_Fit	0.83	1.16
RMS_Resid	2.68	3.85
Avg_Fit	64.25	56.95

Reproducibility: %CV for Replicated Probes

	Median %CV Signal (inliers)			
	Non-Control probes		Agilent SpikeIns	
	Red	Green	Red	Green
BGSubSignal	13.51	12.82	11.00	9.61
ProcessedSignal	5.62	6.41	3.67	3.54

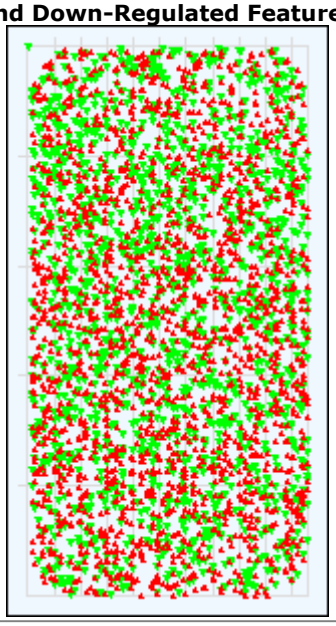
Array Uniformity: LogRatios

	Non-Control	Agilent SpikeIns
AbsAvgLogRatio	0.24	0.58
AverageS/N	8.01	54.98

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

(+)E1A_r60_n11		(+)E1A_r60_a97	
(g)	**(r)**	**(g)**	**(r)**
34.0	144.3	65.3	28.8

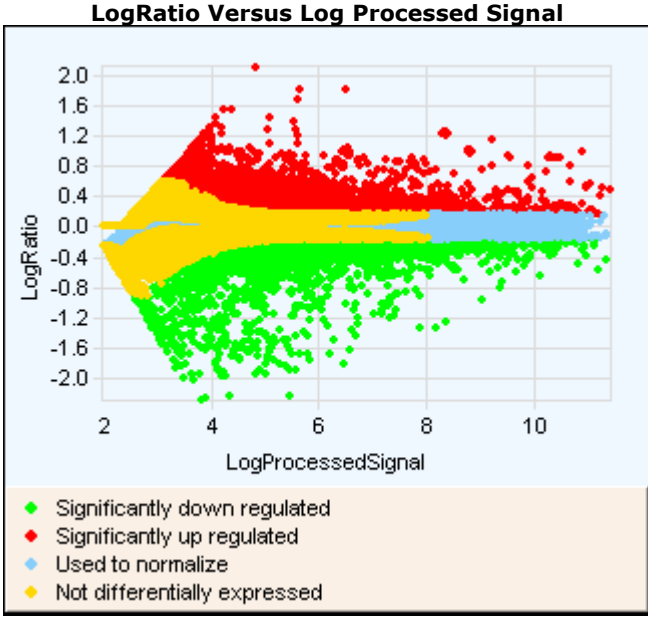
Spatial Distribution of Significantly Up-Regulated and Down-Regulated Features



#Up-Regulated:4628 (Red) ; #Down-Regulated:3953 (Green)

ΔUp-RegulatedDown-Regulated

LogRatio Versus Log Processed Signal



Agilent SpikeIns Signal Statistics

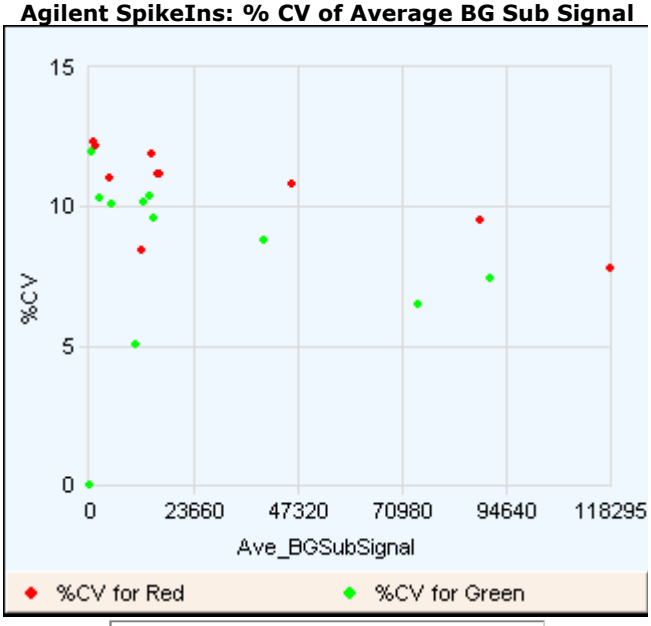
Probe Name	Exp	Obs	SD	S/N
(+)E1A_r60_n9	-1.00	-1.42	0.01	137.61
(+)E1A_r60_a107	-0.48	-0.97	0.02	63.99
(+)E1A_r60_a135	-0.48	-0.91	0.01	108.33
(+)E1A_r60_n11	-0.48	-0.96	0.01	72.03
(+)E1A_r60_1	0.00	-0.45	0.01	71.34
(+)E1A_r60_a20	0.00	-0.50	0.01	41.66
(+)E1A_r60_3	0.48	0.01	0.01	1.66
(+)E1A_r60_a104	0.48	-0.03	0.01	2.75
(+)E1A_r60_a97	0.48	0.04	0.01	3.00
(+)E1A_r60_a22	1.00	0.52	0.01	47.39

Evaluation Metrics for GE2_QCMT_Feb07

Metric Name	Value	UpLim	LowLim	IsMandatory
AnyColorPrcntBGNonUnifOL	0.10	5.00	NA	False
AnyColorPrcntFeatNonUnif...	0.02	1.00	NA	False
absE1aObsVsExpCorr	1.00	NA	0.86	False
absE1aObsVsExpSlope	0.98	NA	0.85	False
gE1aMedCVBkSubSignal	9.61	25.00	NA	False
gNegCtrlAveBGSubSig	-2.40	10.00	-20.00	False
gNegCtrlSDevBGSubSig	3.03	15.00	NA	False
gNonCntrlMedCVBkSubSignal	12.82	25.00	NA	False
rE1aMedCVBkSubSignal	11.00	25.00	NA	False
rNegCtrlAveBGSubSig	-1.93	4.00	-20.00	False
rNegCtrlSDevBGSubSig	1.89	6.00	NA	False
rNonCntrlMedCVBkSubSignal	13.51	25.00	NA	False

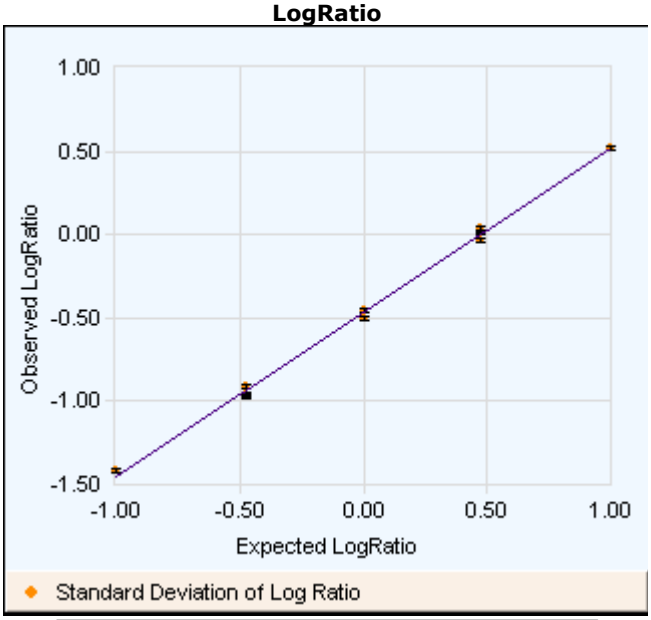
♦ In Normal Range ♦ Evaluate

Agilent SpikeIns: % CV of Average BG Sub Signal



Median %CV:11.00%(Red);9.61%(Green)

Agilent SpikeIns: Expected LogRatio Vs Observed LogRatio



Y-Intercept = -0.467 ; Slope = 0.981 ; R^2 = 0.998