Results (Output)

Results are reported to 9 decimal places in exponential notation for all result files. Also all dimensions and distances are now in radii and pixels (not diameters or microns). This means that the reported values for width and height measurements must be multiplied by 2 to obtain the width and height for the spots.

Text file results

See "View and interpret text results" on page 37 for instructions that show you how to view the text file results.

Feature Extraction produces a tab-delimited text file that contains three tables of input parameters and output results. These tables are FEPARAMS, STATS, and FEATURES. The FEPARAMS table contains input parameters and options used to run Feature Extraction. The STATS table gives results derived from statistical calculations that apply to all features on the microarray. The last table, FEATURES, displays results for each feature in over 90 output columns, such as gene name, log ratio, processed signal, mean signal, or dye-normalized signal.

Parameters/options (FEPARAMS)

The top-most section of the result file contains the parameters and option choices that you used to run Feature Extraction.

Table 17 List of parameters and options contained within the text output file (FEPARAMS table)

Type	Parameters	Options	Description
text	FeatureExtractor_UserName		Windows Log-In Name of the User who ran Feature Extraction
text	FeatureExtractor_ComputerName		Computer Name on which Feature Extraction was run
text	FeatureExtractor_ExtractionTime		Time stamp which is applied at the beginning of Feature Extraction
text	SpotFinder		Software component ID (GUID) of the Find Spots algorithm
text	SpotFinder_Version		Version of Find Spots algorithm

Table 17 List of parameters and options contained within the text output file (FEPARAMS table)

Type	Parameters	Options	Description
integer	SpotFinder_NumRows		Number of rows in the microarray
integer	SpotFinder_NumCols		Number of columns in the microarray
float	SpotFinder_DevLimit		The maximum offset in both x and y directions that any feature can deviate from its nominal spot center and still be reported as "Found". The value is reported in pixels.
float	SpotFinder_ROIW SpotFinder_ROIH		The principal grid is determined by the overall size (rows, columns) of the microarray; this is further segmented into smaller regions of interest (ROIs) about a particular nominal spot location, within which spotfinder tries to determine the true center of a spot. The parameters refer to the width and height of this ROI.
float	SpotFinder_NomSpotWidth SpotFinder_NomSpotHeight		Spot parameters extracted from the design file or grid file or calculated when Calculate Spot Size selected; values reported in pixels
text	CornerMethod	Auto Find Corners Manual Lock Corners Manual (no lock corners)	The corners were automatically found. The corners were selected manually and locked by the user. The corners were selected manually and allowed to be refined by the software.
float	SpotFinder_Baseline		Baseline intensity used for auto find corners
float	SpotFinder_AutoFindTh		Threshold intensity used for auto corner finding
float	CornerUL_x CornerUL_y CornerUR_x CornerUR_y CornerLL_x CornerLL_y		x,y coordinates of the corners of the final grid, with top left hand side of the analysed image set as origin (0)
text	CalcSpotStats		GUID of CalcSpotStats algorithm
text	CalcSpotStats_Version		Version of CalcSpotsStats algorithm

Table 17 List of parameters and options contained within the text output file (FEPARAMS table)

Type	Parameters	Options	Description
integer	CalcSpotStats_RejectMethod	0 2 3	Pixel Outlier Rejection turned off Standard Deviation based Interquartile Range based
float	CalcSpotStats_StatBoundFeat		Multiplier parameters for feature outlier rejection method as selected above
float	CalcSpotStats_StatBoundBG		Multiplier parameters for background outlier rejection method as selected above
Boolean	CalcSpotStats_CalculateSpotSize	0 = option OFF 1 = option ON	Option to calculate the spot size found in SpotAnalyzer tab; must be ON for WholeSpot method
float	CalcSpotStats_CookieWidth	,	Cookie width (pixels) based on nominal spot size; value for WholeSpot method an averaged measure
float	CalcSpotStats_CookieHeight		Cookie height (pixels) based on nominal spot size: Same as for Cookie Width
float	CalcSpotStats_BGInnerWidth		Outer bounds of the exclusion zone width (pixels) based on nominal spot size: Same as for Cookie Width
float	CalcSpotStats_BGInnerHeight		Outer bounds of the exclusion zone height (pixels) based on nominal spot size: Same as for Cookie Width
float	CalcSpotStats_BGOuterWidth		Background radius; value independent of SpotAnalysis method
float	CalcSpotStats_BGOuterHeight		Background radius: value independent of SpotAnalysis method
text	OutlierFlagger		Software component ID of Outlier Flagger algorithm
text	OutlierFlagger_Version		Version of Outlier Flagger algorithm
integer	OutlierFlagger_NonUnifOLOn	1 0	NonUniformity Outlier flagging turned on NonUniformity Outlier flagging turned off
float	OutlierFlagger_FeatATerm		Applies to feature: specifies the intensity dependent variance and is set to the square of the CV

Table 17 List of parameters and options contained within the text output file (FEPARAMS table)

Type	Parameters	Options	Description
float	OutlierFlagger_FeatBTerm		Applies to feature: specifies the variance due to the Poisson distributed noise
float	OutlierFlagger_FeatCTerm		Applies to feature: specifies variance due to background noise of the scanner, slide glass, and other signal-independent sources
float	OutlierFlagger_BGATerm		Applies to background: specifies the intensity dependent variance and is set to the square of the CV
float	OutlierFlagger_BGBTerm		Applies to background: specifies the variance due to the Poisson distributed noise
float	OutlierFlagger_BGCTerm		Applies to background: specifies variance due to background noise of the scanner, slide glass, and other signal-independent sources
float	OutlierFlagger_ConfIntPValue		p- value at which statistical significance for polynomial outlier flagging is established
integer	OutlierFlagger_PopnOLOn	1 0	Population Outlier flagging turned on Population Outlier flagging turned off
float	OutlierFlagger_IQRatio		The boundary conditions for conducting box-plot analysis to isolate population outliers
integer	OutlierFlagger_MinPopulation		Minimum number of replicates to turn on population outlier flagging
text	BGSubtractor		GUID of BG subtractor algorithm
text	BGSubtractor_Version		Version of BGSubtractor algorithm

Table 17 List of parameters and options contained within the text output file (FEPARAMS table)

Type	Parameters	Options	Description
integer	BGSubtractor_BGSubMethod	1	Either minimum feature or minimum local background across the microarray for background subtraction (global method)
		2	Average of local backgrounds for background subtraction (global method)
		3	Average of negative controls for background for background subtraction (global method)
		5	Local background corresponding to each feature for background subtraction (local method)
		6	Minimum feature across the microarray for background subtraction (global method)
		7	No background subtraction
float	BGSubtractor_MaxPVal		The p value at which a feature is determined to be statistically significant above background
float	BGSubtractor_WellAboveMulti		The number of standard deviations above background at which the feature is flagged as well above background
integer	BGSubtractor_BackgroundCorrectionOn	1 0	Globally adjust background turned on Globally adjust background turned off
integer	BGSubtractor_BgCorrectionOffset		Value with which to center the signals of the low-signal features (pad value)
integer	BGSubtractor_SpatialDetrendOn	1 0	Spatial detrend turned on Spatial detrend turned off
integer	BGSubtractor_DetrendLowPassFilter	1 0	Low pass filter used Low pass filter not used
integer	BGSubtractor_DetrendLowPass Percentage		Specifies percentage of features based on the lowest intensity probes in each window that will be used to fit the surface

Table 17 List of parameters and options contained within the text output file (FEPARAMS table)

Type	Parameters	Options	Description
integer	BGSubtractor_DetrendLowPass Window		Specifies size of the square window by the number of rows and columns. The specified percentage of low intensity features is selected from this window size.
integer	BGSubtractor_DetrendLowPass Increment		The increment in number of features by which the above window is shifted horizontally and vertically on the microarray
float	BGSubtractor_DetrendNeighborhood Size		Specifies the fraction of total number of neighborhood data points that will be weighted for linear regression during surface fitting for each data point
text	DelCtrl		Software component ID (GUID) of deletion control algorithm
text	DelCtrl_Version		Version of deletion control algorithm
text	DyeNorm		GUID of DyeNorm algorithm
text	DyeNorm_Version		Version of DyeNorm algorithm
integer	DyeNorm_SelectMethod		Method for selecting features used for measurement of dye bias
		4	All significant non-control, non-outlier features
		5	List of normalization genes
		6	Rank Consistency Filter
Boolean	DyeNorm_IsBGPopnOLOn	1 = ON 2 = OFF	This setting is found in the DyeNorm tab. If the check box is marked, the software excludes any features from the dye normalization set if the local backgrounds associated with those features have been flagged as population outliers (in either channel). The default recommendation is OFF.

Table 17 List of parameters and options contained within the text output file (FEPARAMS table)

Type	Parameters	Options	Description
integer	DyeNorm_CorrMethod		Methods for computation of dye normalization factor to remove dye bias
		0	Linear
		1	Linear&LOWESS (locally weighted linear regression preceded by linear scaling in each dye channel)
		2	LOWESS (locally weighted linear regression)
float	DyeNorm_RankTolerance		Correlation of feature in red and green channels
float	DyeNorm_LOWESSSmoothFactor		Smoothing parameter for LOWESS curve fitting
integer	DyeNorm_LOWESSNumSteps		Number of iterations in LOWESS
float	DyeNorm_LOWESSDelta		Minimum spacing between points used in LOWESS
text	Ratio		GUID of Ratio algorithm
text	Ratio_Version		Version of Ratio algorithm
integer	Ratio_ErrorModel		Selected Error Model
		0	Hybrid Model
		1	Propagated Error
		2	Universal Error Model
integer	Ratio_AutoEstimateAddErrorGreen	1	Auto-estimation turned on
		0	Auto-estimation turned off
integer	Ratio_AutoEstimateAddErrorRed	1	Auto-estimation turned on
		0	Auto-estimation turned off
float	Ratio_MultNCAutoEstimate		Multiplier for the first term (standard deviation of the inlier negative control) in the additive error equation (page 228)
float	Ratio_MultRMSAutoEstimate		Multiplier for the second term (g(r)SpatialDetrendRMSFit) in the additive error equation (page 228)
float	Ratio_AddErrorRed		Additive error component in Red channel

Table 17 List of parameters and options contained within the text output file (FEPARAMS table)

Type	Parameters	Options	Description
float	Ratio_AddErrorGreen		Additive error component in Green channel
float	Ratio_MultErrorRed		Multiplicative error component in Red channel
float	Ratio_MultErrorGreen		Multiplicative error component in Green channel
integer	Ratio_UseSurrogates		Flag indicating the use of surrogates
		1	Use of surrogates turned on
		0	Use of surrogates turned off
text	FeatureExtractor		Software component ID (GUID) of Feature Extractor
text	FeatureExtractor_Version		Version of Feature Extractor
text	FeatureExtractor_ArrayName		Microarray filename
text	FeatureExtractor_ScanFileName		Name of the Scan File used for Feature Extraction
text	FeatureExtractor_ScanFileGUID		GUID of the Scan File
text	FeatureExtractor_Barcode		Barcode of the microarray
text	FeatureExtractor_DesignFileName		Design or grid file used for FE
text	FeatureExtractor_PrintingFileName		Print file (if available) used for FE

Statistical results (STATS)

This middle section of the text file describes the results from the statistical calculations.

Table 18 Stats results contained in the text output file (STATS table)

Type	Stats (Green Channel)	Stats (Red Channel)	Description
float	gDarkOffsetAverage	rDarkOffsetAverage	Dark offset data per image per channel as measured by scanner
float	gDarkOffsetMedian	rDarkOffsetMedian	
float	gDarkOffsetStdDev	rDarkOffsetStdDev	
integer	gDarkOffsetNumPts	rDarkOffsetNumPts	
integer	gNumSatFeat	rNumSatFeat	The number of saturated features on the microarray per channel
float	gLocalBGInlierAve	rLocalBGInlierAve	The average of all inlier local backgrounds
float	gLocalBGInlierSDev	rLocalBGInlierSDev	The standard deviation of all inlier local backgrounds
integer	gLocalBGInlierNum	rLocalBGInlierNum	The number of inlier local backgrounds
float	gGlobalBGInlierAve	rGlobalBGInlierAve	The average of all inliers used in background estimation for the selected global background subtraction method or the average of all inlier local backgrounds if the local background subtraction method is selected (after global background adjustment is applied, if selected)
float	gGlobalBGInlierSDev	rGlobalBGInlierSDev	The standard deviation of all inliers used in background estimation for the selected global background subtraction method or the standard deviation of all inlier local backgrounds if the local background subtraction method is selected
integer	gGlobalBGInlierNum	rGlobalBGInlierNum	The number of all inliers used in background estimation for the selected global background subtraction method or the number of all inlier local backgrounds if the local background subtraction method is selected

Table 18 Stats results contained in the text output file (STATS table)

Type	Stats (Green Channel)	Stats (Red Channel)	Description
integer	gNumFeatureNonUnifOL	rNumFeatureNonUnifOL	The number of features that are flagged as non-uniformity outliers
integer	gNumPopnOL	rNumPopnOL	The number of features that are flagged as population outliers
integer	gNumNonUnifBGOL	rNumNonUnifBGOL	The number of local background regions that are flagged as non-uniformity outliers
integer	gNumPopnBGOL	rNumPopnBGOL	The number of local background regions that are flagged as population outliers
float	gOffsetUsed	rOffsetUsed	Software estimated scanner offset
float	gGlobalFeatInlierAve	rGlobalFeatInlierAve	Average of all inlier features
float	gGlobalFeatInlierSDev	rGlobalFeatInlierSDev	Standard deviation of all inlier features
float	gGlobalFeatInlierNum	rGlobalFeatInlierNum	Number of all inlier features
integer	gNumNegBGSubFeat	rNumNegBGSubFeat	Number of background-subtracted features with negative signals
float	gNegCtrlSigLevel	rNegCtrlSigLevel	Average of all negative controls used in background subtraction
integer	gNegCtrlSeqUsed	rNegCtrlSeqUsed	Bit mask indicating probe IDs of the negative control groups used for computation of negative control signal level in background subtraction.
float	gSpatialDetrendRMS Fit	rSpatialDetrendRMS Fit	Root mean square (RMS) of the fitted data points obtained from the Loess algorithm. This gives an idea of the curvature of the surface fit.
float	gSpatialDetrendRMS Filtered minus Fit	rSpatialDetrendRMS Filtered minus Fit	Approximate residual from the surface fit.
float	gSpatialDetrendSurfaceArea	rSpatialDetrendSurface Area	Normalized area–the fitted surface area divided by the projected area on the microarray; also gives an idea of the curvature of the surface gradient.

Table 18 Stats results contained in the text output file (STATS table)

Type	Stats (Green Channel)	Stats (Red Channel)	Description
float	gSpatialDetrendVolume	rSpatialDetrendVolume	Sum of the intensities of the surface area minus the offset. The offset is calculated as the volume under the flat surface (parallel to the glass slide) passing through the minimum intensity point of the fitted surface. This number (total volume - offset) is normalized by the area of the microarray.
float	gSpatialDetrendAveFit	rSpatialDetrendAveFit	Describes the average intensity of the surface gradient
float	gBGAdjust	rBGAdjust	Global Background correction offset applied
float	gLinearDyeNormFactor	rLinearDyeNormFactor	Global dye norm factor
float	DyeNormDimensionlessRMS		Dimensionless RMS correction metric (Metric that indicates how much correction has been applied based upon the LOWESS curve)
float	DyeNormUnitWeightedRMS		Unit weighted RMS correction metric (Metric that indicates how much correction has been applied based upon the LOWESS curve)
float	AllColorPrcntSat		The percentage of features that are saturated in both the green AND red channels
float	AnyColorPrcntSat		The percentage of features that are saturated in either the green or red channel
float	AnyColorPrcntFeatNonUnifOL		The percentage of features that are feature non-uniformity outliers in either channel
float	AnyColorPrcntBGNonUnifOL		The percentage of local backgrounds that are non-uniformity outliers in either channel
float	AnyColorPrcntFeatPopnOL		The percentage of features that are population outliers in either the green or red channel
float	AnyColorPrcntBGPopnOL		The percentage of local backgrounds that are population outliers in either channel
float	TotalPrcntFeatOL		The percentage of non-control features that are feature non-uniformity outliers in either the green or red channel or are saturated in both channels

Feature results (FEATURES)

The bottom section of the text file gives descriptions of the results for each feature.

Table 19 Feature results contained in the output text file (FEATURES table)

Types	Features (Green)	Features (Red)	Options	Description
integer	FeatureNum			Feature number
integer	Row			Feature location : row
integer	Col			Feature location : column
integer	Start			Start position of the probe sequence
text	Sequence			The probe sequence as specified in the design file
integer	ProbeUID			Unique integer for each unique probe in a design
integer	ControlType			Feature control type
			0	Control type none
			1	Positive control
			-1	Negative control
			-10000	Deletion control
			-20000	Not probe
text	ProbeName			An Agilent-assigned identifier for the probe synthesized on the microarray
text	GeneName			This is an identifier for the gene for which the probe provides expression information. The target sequence identified by the systematic name is normally a representative or consensus sequence for the gene.

Table 19 Feature results contained in the output text file (FEATURES table)

Types	Features (Green)	Features (Red)	Options	Description
text	SystematicName			This is an identifier for the target sequence that the probe was designed to hybridize with. Where possible, a public database identifier is used (e.g., TAIR locus identifier for Arabidopsis). Systematic name is reported ONLY if Gene name and Systematic name are different.
text	Description			
float	PositionX PositionY			Found coordinates of the feature centroid in pixels
float	LogRatio (base 10)			log(REDsignal/GREENsignal) per feature (processed signals used) If SURROGATES are turned off, then:
			-2	if DyeNormRedSig <= 0.0 & DyeNormGreenSig > 0.0
			2	if DyeNormRedSig > 0.0 & DyeNormGreenSig <= 0.0
			0	if DyeNormRedSig <= 0.0 & DyeNormGreenSig <= 0.0
float	LogRatioError			If SURROGATES are turned off, then:
			1000	if DyeNormRedSig <= 0.0 OR DyeNormGreenSig <= 0.0 IF SURROGATES are turned on, then: LogRatioError = error of the log ratio calculated according to the error model chosen
float	PValueLogRatio			Significance level of the Log Ratio computed for a feature

Table 19 Feature results contained in the output text file (FEATURES table)

Types	Features (Green)	Features (Red)	Options	Description
float	gSurrogateUsed	rSurrogateUsed	non-zero value = Green (red) surrogate value used 0 = No surrogate value used	The green (red) surrogate value used.
boolean	gIsFound	rIsFound	1 = IsFound 0 = IsNotFound	A boolean used to flag found (strong) features. The flag is applied independently in each channel. A feature is considered found if the calculated spot centroid is within the bounds of the spot deviation limit with respect to corresponding nominal centroid. NOTE: IsFound was previously termed IsStrong.
float	SpotRadiusX			Radius of the spot (X-axis) when Calculate Spot Size and WholeSpot method are selected.
float	SpotRadiusY			Radius of the spot (Y-axis) when Calculate Spot Size and WholeSpot method are selected.
boolean	UsedAveRadiusfor WholeSpot		1 = Average radius used for WholeSpot analysis 0 = Exact contour determined and used for WholeSpot analysis	This radius is used if a spot is extremely noisy, or is essentially “empty”.
float	gProcessedSignal	rProcessedSignal		Dye-normalized signal after surrogate algorithm, per channel, used for computation of log ratio
float	gProcessedSigError	rProcessedSigError		Standard error of propagated feature signal, per channel

Table 19 Feature results contained in the output text file (FEATURES table)

Types	Features (Green)	Features (Red)	Options	Description
integer	gNumPixOLHi	rNumPixOLHi		Number of outlier pixels per feature with intensity > upper threshold set via the pixel outlier rejection method. The number is computed independently in each channel. These pixels are omitted from all subsequent calculations.
integer	gNumPixOLLo	rNumPixOLLo		Number of outlier pixels per feature with intensity < lower threshold set via the pixel outlier rejection method. The number is computed independently in each channel. These pixels are omitted from all subsequent calculations. NOTE: The pixel outlier method is the ONLY step that removes data in Feature Extraction.
integer	gNumPix	rNumPix		Total number of pixels used to compute feature statistics; ie. total number of inlier pixels/per spot; same in both channels
float	gMeanSignal	rMeanSignal		Raw mean signal of feature in green (red) channel (inlier pixels)
float	gMedianSignal	rMedianSignal		Raw median signal of feature in green (red) channel (inlier pixels)
float	gPixSDev	rPixSDev		Standard deviation of all inlier pixels per feature; this is computed independently in each channel.
integer	gBGNumPix	rBGNumPix		Total Number of pixels used to compute Local BG statistics per spot; ie. total number of BG inlier pixels; same in both channels
float	gBGMeanSignal	rBGMeanSignal		Mean local background signal (local to corresponding feature) computed per channel (inlier pixels)

Table 19 Feature results contained in the output text file (FEATURES table)

Types	Features (Green)	Features (Red)	Options	Description
float	gBGMedianSignal	rBGMedianSignal		Median local background signal (local to corresponding feature) computed per channel (inlier pixels)
float	gBGPixSDev	rBGPixSDev		Standard deviation of all inlier pixels per Local BG of each feature, computed independently in each channel
integer	gNumSatPix	rNumSatPix		Total number of saturated pixels per feature, computed per channel
boolean	gIsSaturated	rIsSaturated	1 = Saturated or 0 = Not saturated	Boolean flag indicating if a feature is saturated or not. A feature is saturated IF 50% of the pixels in a feature are above the saturation threshold.
float	PixCorrelation			Ratio of estimated feature covariance in RedGreen space to product of feature Standard Deviation in Red Green space The covariance of two features measures their tendency to vary together, i.e., to co-vary. In this case, it is a cumulative quantitation of the tendency of pixels belonging to a particular feature in Red and Green spaces to co-vary.
float	BGPixCorrelation			The same concept as above but in case of background.
boolean	gIsFeatNonUnifOL	rIsFeatNonUnifOL	g(r)IsFeatNonUnifOL = 1 indicates Feature is a non-uniformity outlier in g(r)	Boolean flag indicating if a feature is a NonUniformity Outlier or not. A feature is non-uniform if the pixel noise of feature exceeds a threshold established for a "uniform" feature.
boolean	gIsBGNonUnifOL	rIsBGNonUnifOL	g(r)IsBGNonUnifOL = 1 indicates Local background is a non-uniformity outlier in g(r)	The same concept as above but for background.

Table 19 Feature results contained in the output text file (FEATURES table)

Types	Features (Green)	Features (Red)	Options	Description
boolean	gIsFeatPopnOL	rIsFeatPopnOL	g(r)IsFeatPopnOL = 1 indicates Feature is a population outlier in g(r)	Boolean flag indicating if a feature is a Population Outlier or not. Probes with replicate features on a microarray are examined using population statistics. A feature is a population outlier if its signal is less than a lower threshold or exceeds an upper threshold determined using a multiplier (1.42) times the interquartile range (i.e., IQR) of the population.
boolean	gIsBGPopnOL	rIsBGPopnOL	g(r)IsBGPopnOL = 1 indicates local background is a population outlier in g(r)	The same concept as above but for background
boolean	IsManualFlag			
float	gBGSubSignal	rBGSubSignal	gBGSubSignal = gMeanSignal - gBGUsed	Background-subtracted signal. To view the values used to calculate this variable using different background signals and settings of spatial detrend and global background adjust, see Table 29 on page 214.
float	gBGSubSigError	rBGSubSigError		Propagated standard error as computed on net g(r) background-subtracted signal
float	BGSubSigCorrelation			Ratio of estimated background-subtracted feature signal covariance in RG space to product of background-subtracted feature Standard Deviation in RG space
Boolean	gIsPosAndSignif	rIsPosAndSignif	g(r)isPosAndSignif = 1 indicates Feature is positive and significant above background	Boolean flag, established via a 2-sided t-test, indicates if the mean signal of a feature is greater than the corresponding background (selected by user) and if this difference is significant. To view variables used in the t-test, see Table 29 on page 214.

Table 19 Feature results contained in the output text file (FEATURES table)

Types	Features (Green)	Features (Red)	Options	Description
float	gPValFeatEqBG	rPValFeatEqBG		P-value from t-test of significance between g(r)Mean signal and g(r) background (selected by user)
Boolean	gIsWellAboveBG	rIsWellAboveBG		Boolean flag indicating if a feature is WellAbove Background or not Feature passes g(r)IsPosAndSignif and additionally the g(r)BGSubSignal is greater than 2.6*g(r)BG_SD.
Boolean	gSpatialDetrendIsIn FilteredSet	rSpatialDetrendIsIn FilteredSet		Set to true for a given feature if it is part of the filtered set used to detrend the background. This featire is considered part of the locally weighted lowest x% of features as defined by the *DetrendLowPassPercentage*.
float	gSpatialDetrend SurfaceValue	rSpatialDetrend SurfaceValue		Value of the smoothed surface calculated by the Spatial detrend algorithm
Boolean	IsUsedBGAdjust		1 = Feature used 0 = Feature not used	A Boolean used to flag features used for computation of global BG offset
float	gBGUsed	rBGUsed	gBGSubSignal = gMeanSignal - gBGUsed	Background used to subtract from the MeanSignal; variable also used in t-test. To view the values used to calculate this variable using different background signals and settings of spatial detrend and global background adjust, see Table 29 on page 214.
float	gBGSDUsed	rBGSDUsed		Standard deviation of background used in g(r) channel; variable also used in t-test and surrogate algorithms. To view the values used to calculate this variable using different background signals and settings of spatial detrend and global background adjust, see Table 29 on page 214.
integer	DelCtrlFeatNum			If deletion controls exist then this is the corresponding feature number

Table 19 Feature results contained in the output text file (FEATURES table)

Types	Features (Green)	Features (Red)	Options	Description
text	DelCtrlProbeName			If deletion controls exist then this is the corresponding probe name
float	gPerfMatchSignal	rPerfMatchSignal		If the corresponding deletion control exists then the perfect match signal = g(r)MeanSignal; if no such deletion control exists then its value is the background-subtracted signal
float	gDelCtrlSignal	rDelCtrlSignal		This is the g(r)MeanSignal of the corresponding deletion control or zero if no deletion control exists.
float	gPerfMatchError	rPerfMatchError		If the corresponding deletion control exists then the perfect match error is the propagated standard error as calculated on the raw perfect match signal; if no such deletion control exists then its value is the background-subtracted error.
float	gDelCtrlError	rDelCtrlError		This is the propagated standard error as calculated on the raw deletion control signal or zero if no deletion control exists.
float	gPValPerfMatchEq DelCtrl	rPValPerfMatchEq DelCtrl		The p-value for the t-test that tests if a perfect match probe is equal to its deletion control in the g(r) channel.
boolean	gIsLowSpecificity	rIsLowSpecificity		g(r)PerfMatchSignal fails positive and significance t-test (0.01) versus its g(r)DelCtrlSignal; and deletion control passes g(r)IsWellAboveBG
boolean	gIsGoodPM	rIsGoodPM		Feature passes g(r)IsWellAboveBG and additionally the g(r)PerfMatchSignal is positive and significant (t-test p-value <0.01) versus its g(r)DelCtrlSignal

Table 19 Feature results contained in the output text file (FEATURES table)

Types	Features (Green)	Features (Red)	Options	Description
float	gPMDLratio	rPMDLratio		If the g(r)PerfMatchSignal is positive and significant versus its g(r)DelCtrlSignal, a ratio is calculated between the PerfMatch net signal and the DelCtrl net signal; else the ratio is set to 1. The g(r)net signal is equal to the g(r)BGSubSignal if the signal passes g(r)WellAboveBG, else the g(r)net signal is equal to 2.6*g(r)BGSDUsed.
boolean	IsNormalization		1 = Feature used; 0 = Feature not used	A boolean flag which indicates if a feature is used to measure dye bias
float	gDyeNormSignal	rDyeNormSignal		The dye-normalized signal in the indicated channel
float	gDyeNormError	rDyeNormError		The standard error associated with the dye-normalized signal
float	DyeNormCorrelation			Dye-normalized red and green pixel correlation
	ErrorModel		0 = Propagated model chosen by you or by software 1 = Universal error model chosen by you or by software	Indicates the error model that you chose for Feature Extraction or that the software uses if you have chosen the "Most Conservative" option
float	xDev			A signal-to-noise parameter used to calculate p-value; calculated differently depending on error model chosen