



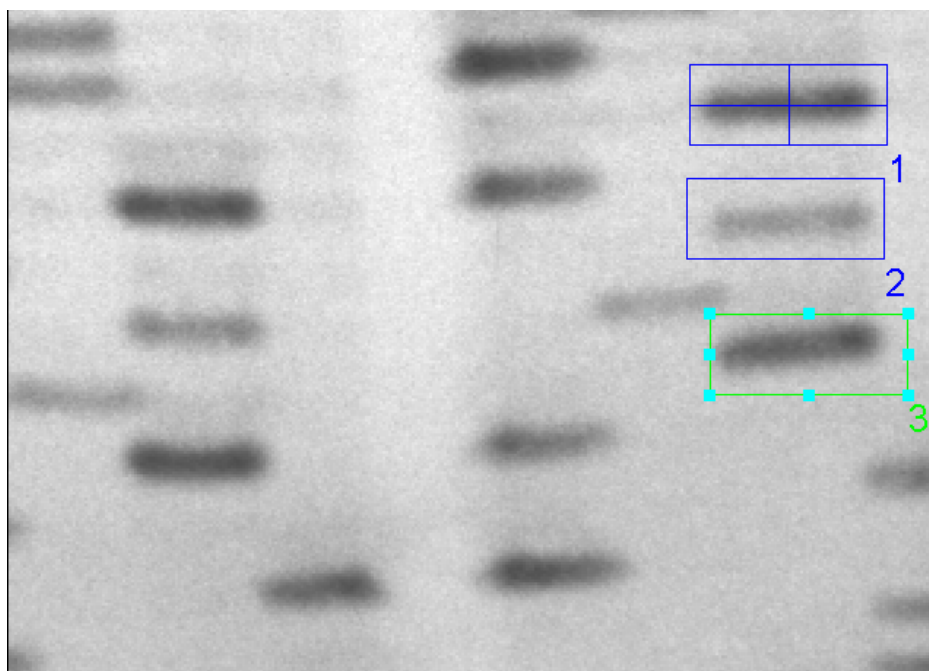
Handy Helper

Technical Note 45

Comparing the use of effective pixels with the native resolution of the camera

An autoradiograph film was imaged with a G:BOX Chemi HR16 at 1.38m pixels and 5.52m pixels. The native resolution of this camera is 1.38m pixels.

Both images were analysed in GeneTools, selecting manual band quantification as the analysis method. Three manual boxes of the same size were added to both images and automatic background correction performed. For the top band an assigned quantity of 10,000 was assigned. For the remaining two bands the calibrated quantities were calculated and in the results table.



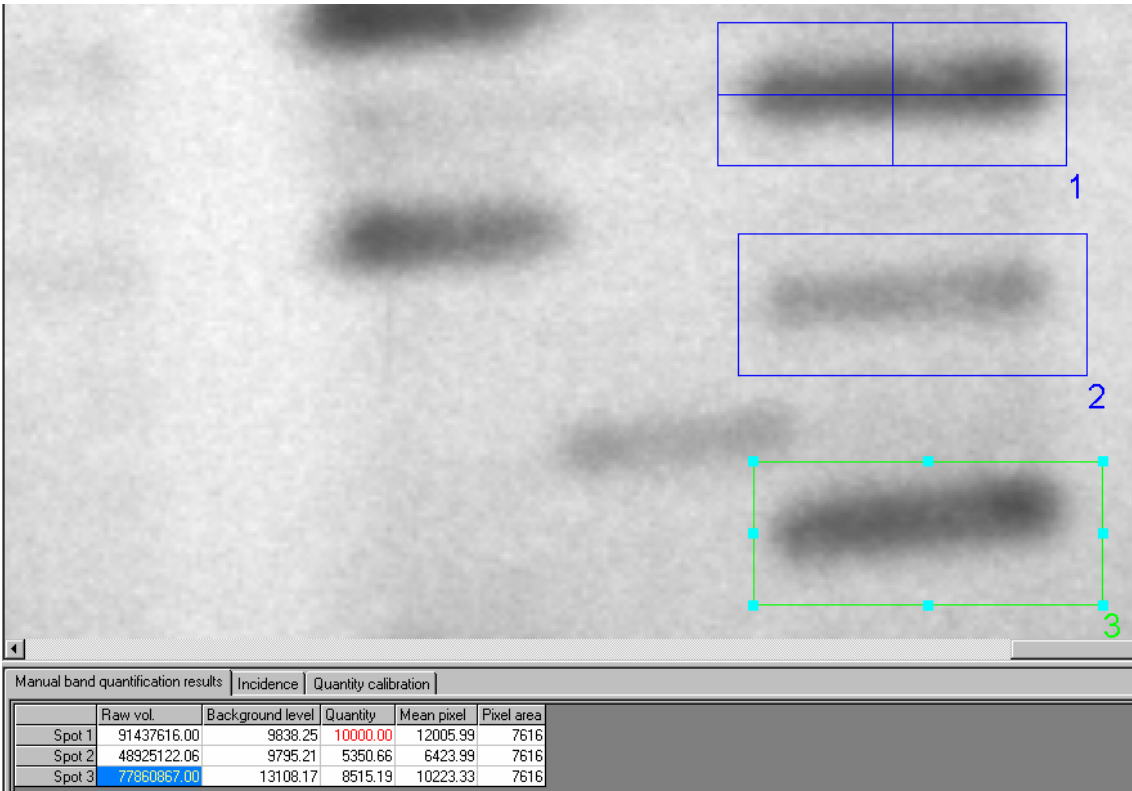
The volume values (background corrected) are different for both images as the total pixel areas are different. The use of effective pixels does not affect the data as can be seen by looking at the quantity columns for both images – the values for the calibrated bands are identical.

Manual band quantification results		Incidence	Quantity calibration		
	Raw vol.	Background level	Quantity	Mean pixel	Pixel area
Spot 1	22914810.78	10361.66	10000.00	12035.09	1904
Spot 2	12177065.00	10246.56	5314.06	6395.52	1904
Spot 3	19355824.48	13581.85	8446.86	10165.87	1904

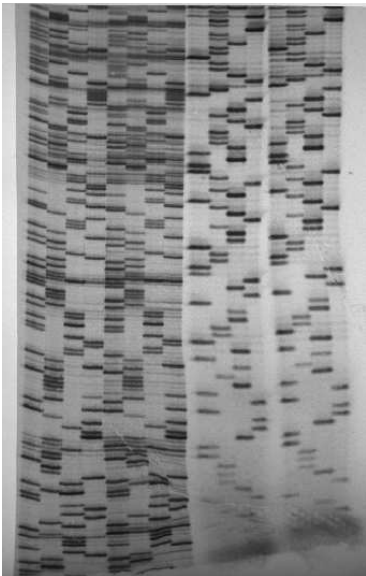
/more....



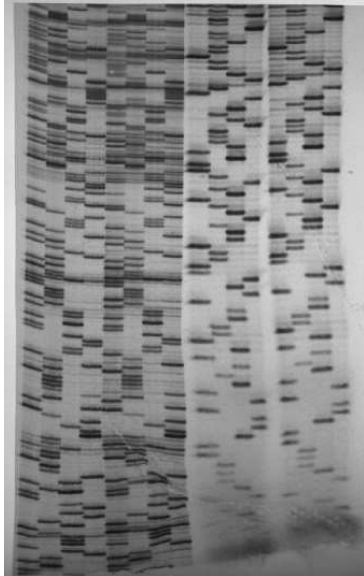
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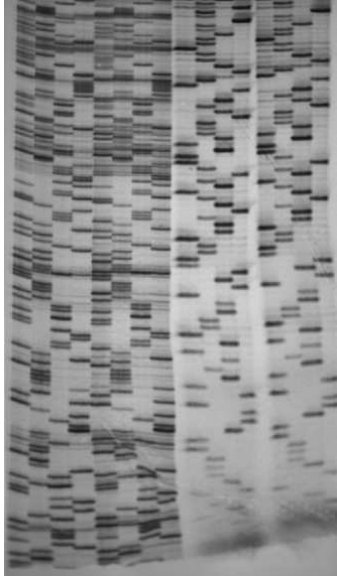
Effective pixels versus native pixels



1.4m native pixels



4.1m effective pixels



4.1m native pixels