The Significance of Linearity of Quantities in Electrophoresed and Blotted Materials Demonstrated by BandScan© - an Analytical Program

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Abstract

There is still an undervalued need for quantitation in the biological, biochemical, and the molecular genetic sciences. Quantitation of electrophoresed and blotted molecular and biochemical results while insuring that the samples processed are within the linear range of the methods employed. This study demonstrates errors that can occur when a linearity study is not conducted. Versatile, easy-to-use quantitative graphics programs, such as the BandScan program, can further pipe numerical output to spreadsheets or statistical packages and provide the bridge between modern computation and traditional wet lab techniques. This analytical bioinformatics program that allows for statistical analysis is also a valuable tool for teaching purposes in Bioinformatics and Molecular Biology. BandScan is available free for academic institutions and class room work from the corresponding author.