

Genetic Evaluation of proteins with High Resolution Two Dimensional (2D) Gel Electrophoresis

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ABSTRACT High resolution two dimensional gel electrophoresis with the combination of isoelectric focusing (IEF) and density gradient SDS polyacrylamide gel electrophoresis (DGSDS-PAGE) is a highly sensitive technique in population genetic, biochemical genetic and medical genetic studies. 2-D gel electrophoresis separates protein according to differences in both isoelectric point and molecular weight. The technique is so impressive and significant that one can examine accurately more than 500 proteomes (>50 proteins) in a single gel using microvolumes of the sample. Most of the laboratories dealing with protein synthesis, characterization, protein chemistry and genetic heterogeneity have to use number of techniques to examine different known and unknown proteins. The aim of this paper is to highlight the fact that instead of going through number of complex and lengthy procedures one can make use of single high resolution two dimensional gel electrophoresis protocol for the purpose.