

Electrophoresis

As the premier contract laboratory serving global pharmaceutical interests, Lancaster Laboratories has built a reputation on providing quality analytical services. In our Biopharmaceutical Services, we are pleased to offer a range of electrophoretic techniques with densitometric scanning analysis. Electrophoretic methods are based upon the migration of biomolecules through a gelatinous media as a function of its size, charge, and conformation.

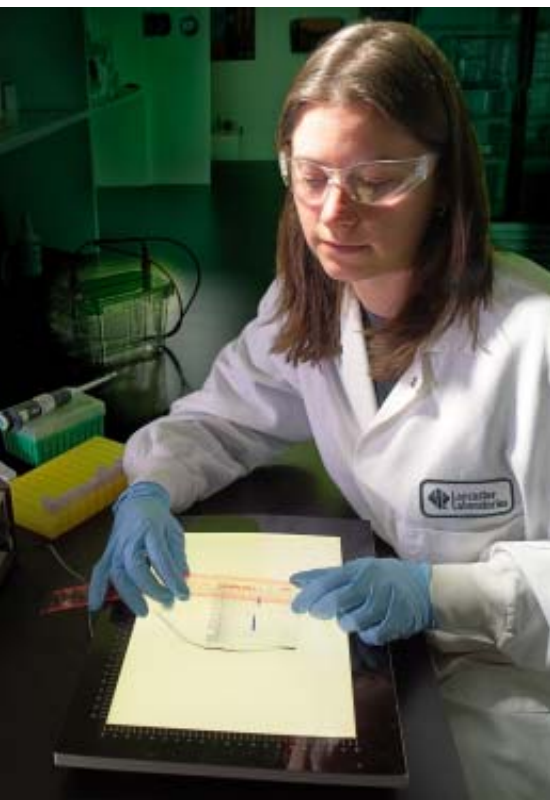
Several of the most common techniques available are:

- Polyacrylamide and Agarose-based 1D and 2D Gels
- Western Blot Analysis
- Isoelectric Focusing

An important technique used to determine stability, identification, and allow for drug release is Isoelectric Focusing (IEF). In general, IEF is a method of separating proteins based on their relative content of acidic and basic residues. This content is represented by a value known as an isoelectric point, or pI. Proteins are introduced into a gel (composed of polyacrylamide, starch, agarose, etc.), which has an established pH gradient or is capable of establishing such a gradient after applying an electrical current. This gradient is established by subjecting a mixture of polyampholytes, small polymers that have different pI values, to electrophoresis before the application of proteins. Proteins that are introduced into the gel migrate until they reach a place in the gel where the pH is equal to the isoelectric point of the protein. Isoelectric focusing can resolve proteins that differ in pI value by as little as 0.01.

All of our work is performed under strict cGMP requirements. As a result, our clients can have confidence in a comprehensive result.

For more information on our electrophoresis capabilities or any of our pharmaceutical capabilities, please contact your project manager or Pharmaceutical Business Development at 717-656-2300.



2425 New Holland Pike, PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681
www.lancasterlabs.com