

# Electrophoresis has come a long way

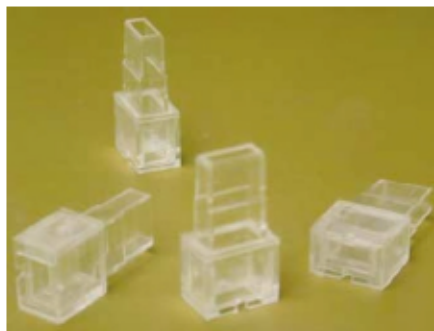
New ideas include a bespoke digital camera and calculating software.

## GeneCAPSULE

Genotech [www.genotech.com](http://www.genotech.com)

### One-step DNA extraction

GeneCAPSULE is a single-use device for the rapid recovery of DNA, RNA and protein from agarose or acrylamide gels. It uses electro-elution and requires no additional equipment. The device will extract DNA, RNA or protein as small as 20 bp or 4,000 molecular weight cut-off. The GEL-Pick is used to pick up the DNA, RNA or protein, which is then assembled using the GeneTrap. Once assembled, the GeneCAPSULE is submerged under the electrophoresis buffer and electro-elution occurs. The sample is recovered by piercing a small hole in the collection port and inserting a pipette tip for collection. Sample volume is in the range of 25–40  $\mu$ l and recovery rates reach 90%. The system takes as little as 60 seconds to recover 1,000 bp DNA. Samples are then ready for ligation, restriction enzyme digestion, sequencing, amplification, random priming, nick translation, enzymatic reactions and other applications.



GeneCAPSULE: just pop one of these on your gel.

## CouloChem III

ESA Analytical [www.esainc.com](http://www.esainc.com)

### Climate control for chromatography

ESA Analytical has added a temperature-controlled integrated organizer module to its CouloChem III HPLC electrochemical detector. The module is intended to save bench space and provide a protected, temperature-stabilized environment for columns and cells. The CouloChem III detector can operate in amperometric, coulometric, redox, screen, pulse or scan modes. DC and pulse/scan modes are in discrete modules to maximize performance. The detector can be used with any HPLC system for measurement of picogram to femtogram levels of oxidizable or reducible neurochemical, clinical, pharmaceutical, environmental or biological compounds.

## Immun-Blot

Bio-Rad [www.discover.bio-rad.com](http://www.discover.bio-rad.com)

### Handy shortcut for western blotting

Immun-Blot pre-assembled filter paper sandwiches are designed to save time when performing western blotting and protein binding assays. They consist of a piece of polyvinylidene difluoride (PVDF) blotting membrane between two pieces of filter paper. The sandwiches are pre-cut to fit Bio-Rad precast gels as well as gels hand-cast by customers using the Bio-Rad mini-PROTEAN or Criterion cells. Sandwich sizes are 8.5  $\times$  13.5 cm for Criterion gels and 7.0  $\times$  8.5 cm for Ready Gels. Bio-Rad also offers pre-assembled nitrocellulose and Sequi-Blot PVDF blotting sandwiches.

## pK<sub>i</sub> Estimator, Log P Calculator, PRO Size

CombiSep [www.combisep.com](http://www.combisep.com)

### Application-specific software

CombiSep has introduced three new software programs for electrophoresis applications. pK<sub>i</sub> Estimator automatically extracts and displays 96-capillary electropherogram data for

user verification of labelled sample and marker peaks. pK<sub>i</sub> is determined using nonlinear regression analysis. Log P Calculator can be used to determine compound octanol–water partition coefficients using multiplexed microemulsion chromatography. A typical electropherogram contains a sample peak bracketed by two migration markers. The software automatically extracts each electropherogram, establishes a system calibration curve and calculates log P values. Finally, PRO Size can be used to calculate molecular weights of protein samples based on the migration times of standards. Data are displayed in an overlay view, a stacked view, or as a simulated slab gel image. Reports can be exported containing the sample electropherogram, a simulated gel image and other pertinent sample information, including molecular weight and per cent purity.

## BioDocAnalyze

Biometra [www.biometra.de](http://www.biometra.de)

### Gels go digital

The BioDocAnalyze high-resolution (4 million pixels) digital camera for gel documentation can also be used for other tasks in the laboratory. All camera functions are controlled by the self-explanatory BioDocAnalyze software. A selection of pre-defined camera settings is provided for different gel types and stainings. In addition, individual user profiles can be defined. Other features include live preview, motor zoom and autofocus. BDAdigital is available with a small darkhood or with compact darkhoods for advanced applications.

## PARIS

Ambion [www.ambion.com](http://www.ambion.com)

### Capital idea

The new PARIS kit (a protein and RNA isolation system) uses a fast, simple, non-phenol-based procedure to isolate both RNA and native protein from the same experimental sample. The kit also permits separation of nuclear and cytoplasmic fractions prior to RNA and/or protein isolation. The resulting RNA samples are suitable for downstream applications such as array analysis, RT-PCR and northern analysis. The protein fractions can also be used directly for most common applications, including functional assays, immunoprecipitation, western blotting and two-dimensional gel electrophoresis.

*These notes are compiled in the Nature office from information provided by the manufacturers. Material intended for publication can be sent to [newproducts@nature.com](mailto:newproducts@nature.com).*