



Amersham™ ECL™ Gel Electrophoresis System

Amersham ECL Gel and Amersham ECL Gel Box constitute a horizontal mini-gel system for high-quality protein electrophoresis. The gel is compatible with standard Laemmli buffers allows reproducible resolution of complex samples, and works well with standard protein detection protocols. The gel enables high electrotransfer efficiency of proteins, and convenient integration into the Amersham ECL Western blotting workflow.

ECL Gel Box is a horizontal electrophoresis system that enables easy sample loading and low buffer consumption with no risk of leakage between buffer chambers.

The key benefits of Amersham ECL Gel and Amersham ECL Box are:

- > High lot-to-lot consistency of gels ensures reproducible, high-quality results
- > Shelf life of up to 12 months allows off-the-shelf selection of the best gel for the application
- > Robust gels for convenient handling without breakage in downstream detection steps
- > Everything required to access and cut the gel is included in the Amersham ECL Gel cassette
- > Horizontal electrophoresis system provides open gel surface and “bird’s eye view” of runs

Amersham ECL Gel is available in 15, 10, and 2 well formats and as either homogeneous (10% and 12%) or gradient (4–12%, 8–16%, and 4–20%) gels. The gel contains no sodium dodecyl sulfate (SDS), making it an excellent solution for protein analysis under both native and denaturing conditions, depending on the choice of running buffer.

For a Data file describing the product in greater detail, visit www.gelifsciences.com, open the Literature tab and type 28-9970-20.

Western blotting – new handbook

Western blotting, also known as immunoblotting, is a well-established and widely used technique for the detection and analysis of proteins. The method is based on building an antibody:protein complex via specific binding of antibodies to proteins immobilized on a membrane and detecting the bound antibody with one of several detection methods.

The aim of this all-new handbook is to guide and inspire beginners and experts to successful Western blotting. The handbook provides expertise and support, taking you through the complete Western blotting workflow, from sample preparation to detection and analysis. The content follows a Western blotting workflow step-by-step and describes theoretical as well as practical aspects of the technique together with useful hints and tips. Examples of typical applications, protocols and recipes, troubleshooting, as well as some new approaches to Western blotting are described.

Over the past decade, improved detection methods and software have brought quantitative analysis to Western blotting and this handbook provides examples and protocols to help you adapt your methods and obtain more quantitative data from your Western blots

Western blotting – Principles and methods joins a growing series of methodology handbooks from GE Healthcare, many of which cover topics closely connected to Western blotting, such as sample preparation or 2-D gel electrophoresis.

The code number for ordering a printed copy of the handbook is 28-9998-97, or download the PDF at www.gelifsciences.com/handbooks

ÄKTApurifier™ 10 and 100 plus

ÄKTApurifier 10 and 100 plus are the latest additions to our established range of ÄKTApurifier chromatography systems. ÄKTApurifier systems are extremely versatile tools for the purification of proteins and peptides by FPLC, as well as for media screening, optimization, and scale-up.

ÄKTApurifier 10 and 100 plus offer enhanced convenience as the most widely used automation kits are preinstalled and pretested. This provides trouble-free FPLC purification and increased automation, as well as minimal installation time, right from the start. We have paid extra attention to the flow path, thus the systems provide optimized flow-pressure ratios, improved performance, and increased automation without compromising on the flexibility to add more components if needed.

In common with ÄKTApurifier and ÄKTApurifier UPC systems, ÄKTApurifier 10 and 100 plus are available in 10 and 100 ml/min flow configurations, respectively. The new systems are fitted with Monitor UV-900 for triple wavelength detection and the combined pH/conductivity monitor, pH/C-900. UNICORN™ 5 control software is used together with the systems, providing the proven and verified control software that all other AKTA systems are acknowledged for.

ÄKTApurifier 10 and 100 plus provide:

- > Convenient column scouting — up to seven columns can be connected and run sequentially without manual interaction
- > Automatic buffer screening with two switch valves for support of four inlets
- > An outlet valve to allow collection of flowthrough or larger volumes of purified samples
- > The 100 ml/min version is equipped with the sample pump P-960 and sample inlet valve for automatic sample injection of multiple samples and/or large sample volumes
- > Optimized capillaries for increased performance and minimized backpressure
- > Easier connection of multiple small columns using column clamps and column holders

Ordering information

Product	Code number
ÄKTApurifier 10 plus	28-9914-36
ÄKTApurifier 100 plus	28-9914-35

ÄKTApurifier 10 and 100 plus systems complement the existing range of ÄKTApurifier and ÄKTApurifier UPC systems, visit www.gelifesciences.com/akta for more details.





HiScreen™ Capto™ HIC columns

HiScreen HIC columns are designed for method optimization and parameter screening. The columns are part of the growing platform of process development solutions from GE Healthcare. HiScreen HIC columns are prepacked with two different hydrophobic interaction chromatography (HIC) media. The small bed volume of HiScreen columns reduces the consumption of sample and buffer.

HiScreen Capto Phenyl (high sub) is suitable for initial and intermediate step purifications requiring a chromatography medium with medium to high hydrophobicity. The performance and selectivity of the prepacked medium is similar to that of Phenyl Sepharose™ 6 Fast Flow (high sub), although higher flow rates can be used with Capto Phenyl (high sub) during equilibration, wash, and regeneration.

HiScreen Capto Butyl is intended for initial and intermediate step purifications requiring a chromatography medium with low to medium hydrophobicity. Capto Butyl often works efficiently in low salt concentrations. The mechanism of binding and elution onto the butyl ligand is different from that onto the phenyl ligand, giving a different selectivity. Capto Butyl has similar selectivity and performance compared with, for example, Butyl Sepharose™ 4 Fast Flow, but allows higher flow rates during equilibration, wash, and regeneration.

Capto Phenyl (high sub) and Capto Butyl are available in laboratory pack sizes of 25 ml and 100 ml, and in larger pack sizes suited for large-scale purification.

HiScreen™ Capto™ Blue

HiScreen Capto Blue is prepacked with Capto Blue affinity medium for the capture of human serum albumin (HSA), and purification of HSA fusion proteins, blood coagulation factors, enzymes, and recombinant proteins. Capto Blue is a highly chemically stable chromatography medium and has a more rigid agarose base matrix than Blue Sepharose 6 Fast Flow. This allows the use of faster flow rates and larger sample volumes.

Benefits of HiScreen Capto Blue include:

- > Highly rigid chromatography medium, enabling high flow rates for increased productivity
- > Sodium hydroxide resistance for repeated and efficient Cleaning-in-Place (CIP)
- > Low ligand leakage

HiScreen columns are prepacked with a range of chromatography media and designed for method optimization and parameter screening. They have small bed volumes (4.7 ml), reducing the cost of sample and buffer consumption.

Capto Blue chromatography medium available in laboratory pack sizes of 25 and 500 ml, and in larger pack sizes suited for large-scale purification.

Ordering information

Product	Code number
HiScreen Capto Phenyl (high sub), 1 × 4.7 ml	28-9924-72
HiScreen Capto Butyl, 1 × 4.7 ml	28-9924-73
Capto Phenyl (high sub), 25 ml	17-5451-01
Capto Phenyl (high sub), 100 ml	17-5451-02
Capto Butyl, 25 ml	17-5459-01
Capto Butyl, 100 ml	17-5459-02

For more information on HiScreen prepacked columns, visit www.gelifesciences/protein-purification

Ordering information

Product	Code number
HiScreen Capto Blue, 1 × 4.7 ml	28-9924-74
Capto Blue, 25 ml	17-5448-01
Capto Blue, 500 ml	17-5448-02

For more information on HiScreen prepacked columns, visit www.gelifesciences/protein-purification



XK laboratory columns – column design improvements

XK columns are designed for preparative liquid chromatography at low to medium pressure (up to 5 bar) as well as purification scale-up in process development. The M6 fittings of the original XK series have been replaced with improved 1/16" and 5/16" Valco fittings and longer tubing that allows easier connection to pumps, ÄKTA™ systems, and other chromatography systems without the need for flanges.

In addition to the upgraded fittings, XK column capillary tubing inner diameters (i.d.) have changed to 0.75 mm for XK 16 and 26 columns while the new i.d. for XK 50 columns is 1.55 mm. The columns can be ordered on new code numbers (see Ordering information below).

Features and benefits of XK empty columns include:

- > Plunger design to ensure a homogeneous buffer distribution and reproducible packing
- > Adapter QuickLock mechanism that facilitates column handling and cleaning
- > Fittings for direct connection to chromatography systems
- > Cooling jacket for sensitive purifications

XK empty columns provide reliable and reproducible separations. The tube material is made of borosilicate glass, which allows for visual inspection of the media bed. The columns are made of biocompatible materials that exhibit excellent chemical resistance. A broad range of column dimensions makes XK columns suitable for many different purification needs.

Ordering information

Product	Code number
XK 16/20	28-9889-37
XK 16/40	28-9889-38
XK 16/70	28-9889-46
XK 16/100	28-9889-47
XK 26/20	28-9889-48
XK 26/40	28-9889-49
XK 26/70	28-9889-50
XK 26/100	28-9889-51
XK 50/20	28-9889-52
XK 50/30	28-9889-53
XK 50/60	28-9889-64
XK 50/100	28-9889-65

For more information, visit www.gelifesciences.com/protein-purification



HiLoad™ Superdex™ columns – improved column fittings

HiLoad Superdex columns are based on the redesigned XK laboratory columns and are prepacked with Superdex 30 prep grade, Superdex 75 prep grade, and Superdex 200 prep grade media for high-resolution gel filtration at preparative scale. The new 1/16" Valco fittings of the column and longer tubing allows improved connection to ÄKTA™ chromatography systems. This improved column hardware design does not impact on column purification performance.

In conjunction with the hardware improvement, HiLoad columns have been renamed and have new article code numbers (see Ordering information below).

HiLoad Superdex columns offer:

- > Purification with exceptional resolution and recovery
- > Reproducibility and quick preparative separations according to size
- > 1/16" fittings for convenient connections to ÄKTA systems
- > Superdex 30 prep grade for polishing of peptides
- > Superdex 75 prep grade for recombinant and native proteins up to approx. M_r 70 000
- > Superdex 200 prep grade separates MABs from aggregates, dimers, and contaminants

HiLoad Superdex columns are packed to 600 mm bed heights in 16 mm (120 ml) or 26 mm (320 ml) diameter columns. Each column is expertly packed with Superdex prep grade media, which are composed of dextran and highly cross-linked agarose. The columns are individually tested for quality. The steep selectivity of the dextran component in combination with the high chemical and physical stability of agarose give high-resolution purification at flow rates of up to 50 cm/h.

Ordering information

Product	Code number
HiLoad 16/600 Superdex 30 pg, 1 × 120 ml	28-9893-31
HiLoad 26/600 Superdex 30 pg, 1 × 320 ml	28-9893-32
HiLoad 16/600 Superdex 75 pg, 1 × 120 ml	28-9893-33
HiLoad 26/600 Superdex 75 pg, 1 × 320 ml	28-9893-34
HiLoad 16/600 Superdex 200 pg, 1 × 120 ml	28-9893-35
HiLoad 26/600 Superdex 200 pg, 1 × 320 ml	28-9893-36

For more information, visit www.gelifesciences.com/protein-purification

Whatman™ Indicating FTA™ DMPK cards for colorless biological sample bioanalysis

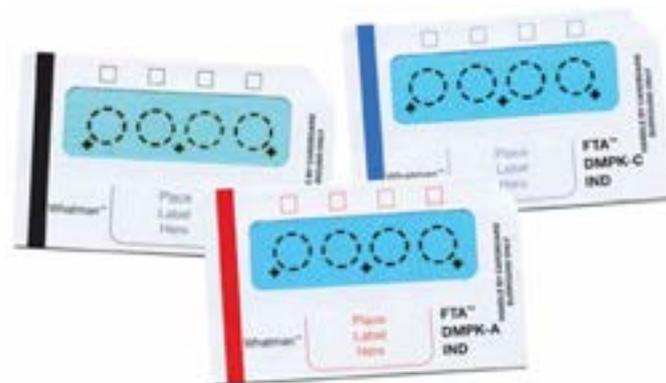
Whatman Indicating FTA DMPK cards are now available for the collection and storage of colorless biological samples (biosamples) for use in pharmacokinetic and toxicokinetic (PK/TK) studies.

Whatman Indicating FTA DMPK cards offer the following benefits:

- > **Easy visualization of colorless fluids:** Biological samples such as plasma, urine, cerebrospinal fluid, synovial fluid, and lachrymal fluid are observed as lighter spots on the colored card
- > **Low blood volumes:** Sampling of Dried Biosample Spots (DBS) requires only 10 to 20 µl per sample
- > **No freeze-thaw:** Reduces the potential for analyte degradation or crystallization
- > **Room temperature storage:** Saves on costs of dry-ice shipments

The methodology stores samples as DBS and has a broad applicability across the entire drug discovery and development process. The low biosample volumes of 10 to 20 µl are useful when the fluid is only available in limited volume or collection into tubes is problematic. Freeze-thaw is not necessary for DBS and can save time during sample processing. In addition, handling and shipping of samples is safer and simpler.

For all card types, the resulting dried biosamples can be stored and shipped at room temperature. For analysis, sample discs are taken from the cards using a manual or automatic punch, from which the compounds of interest are extracted and analyzed.



Ordering information

Product	Code number
FTA DMPK-A IND Card, 100/pack	WB120222
FTA DMPK-B IND Card, 100/pack	WB120223
FTA DMPK-C IND Card, 100/pack	WB120224
FTA DMPK IND Starter Pack*, 45/pack	WB120225

* The Starter Pack consists of 15 of each card type to allow cost-effective trials.

For more information on the range of Whatman FTA DMPK products and a video tutorial, visit www.gelifesciences.com/dmpk

MicroCal™ VP-Capillary DSC software 2.0 upgrade



Differential scanning calorimetry (DSC) is a powerful tool for the study of protein stability without the use of labeling or artificial probes. The technique determines the heat absorbed by the sample as the protein unfolds, giving a measure of its thermostability and an indication of its long-term stability. By using the predictive powers of sensitive DSC measurements, conditions that lead to optimum stability can be identified rapidly. The automation provided in MicroCal VP-Capillary DSC system allows a quick screen of large numbers of samples with little hands-on effort.

The new software streamlines the workflow with simplified experiment setup and flexible instrument scheduling. This means better utilization of resources and better asset management. The data analysis bottleneck is reduced by automated data analysis and improved data sorting. The automated data analysis features can reduce this phase of a typical experiment from days to hours. Baselines and buffer subtraction are automated to give more consistent results from run to run.

Ordering information

Product	Code number
MicroCal VP-Capillary DSC software 2.0 upgrade	28-9784-80

For more information, visit www.gelifesciences.com/microcal



PreDicator™ HIC plates

PreDicator™ plates are disposable, 96-well filter plates for parallel screening of media as well as chromatographic conditions such as binding, wash, and elution conditions in purification schemes. Different chromatography media can be screened simultaneously using dedicated screening plates, or more thoroughly using plates containing a single medium. Data generated using PreDicator plates show good correlation with data from chromatography columns, making the plates an excellent tool for initial screening of process conditions.

The range of PreDicator products is now expanded with eight different media for hydrophobic interaction chromatography (HIC), all available as single medium plates or grouped in two different screening plates (low and high hydrophobicity) for simultaneous studies on multiple chromatography media.

All PreDicator HIC plates are available in two different volumes, 6 µl or 50 µl.

Assist software v1.2 is updated software to support the new PreDicator HIC plates.

For more information, visit www.gelifesciences/predictor

Ordering information

Product	Code number
Single medium filter plates, 4 × 96-well	
PreDicator Butyl Sepharose 4 Fast Flow, 6 µl	17-0980-16
PreDicator Butyl Sepharose 4 Fast Flow, 50 µl	17-0980-17
PreDicator Butyl-S Sepharose 6 Fast Flow, 6 µl	17-0978-16
PreDicator Butyl-S Sepharose 6 Fast Flow, 50 µl	17-0978-17
PreDicator Capto Butyl, 6 µl	17-5459-16
PreDicator Capto Butyl, 50 µl	17-5459-17
PreDicator Capto Octyl, 6 µl	17-5465-16
PreDicator Capto Octyl, 50 µl	17-5465-17
PreDicator Capto Phenyl (high sub), 6 µl	17-5451-16
PreDicator Capto Phenyl (high sub), 50 µl	17-5451-17
PreDicator Octyl Sepharose 4 Fast Flow, 6 µl	17-0946-16
PreDicator Octyl Sepharose 4 Fast Flow, 50 µl	17-0946-17
PreDicator Phenyl Sepharose 6 Fast Flow (high sub), 6 µl	17-0973-16
PreDicator Phenyl Sepharose 6 Fast Flow (high sub), 50 µl	17-0973-17
PreDicator Phenyl Sepharose 6 Fast Flow (low sub), 6 µl	17-0965-16
PreDicator Phenyl Sepharose 6 Fast Flow (low sub), 50 µl	17-0965-17
Screening filter plates, 4 × 96-well	
PreDicator HIC screening high hydrophobicity, 6 µl	28-9923-92
PreDicator HIC screening high hydrophobicity, 50 µl	28-9923-97
PreDicator HIC screening low hydrophobicity, 6 µl	28-9923-95
PreDicator HIC screening low hydrophobicity, 50 µl	28-9923-98
Software	
Assist 1.2 Software package	28-9969-17
Assist, 1-User License v1.2*	28-9453-97

* Assist v1.2 also works with previous software versions 1.0 and 1.1