

Whatman®  
Part of GE Healthcare



Productivity  
Enhancing and  
Cost Reducing  
Laboratory Product  
Innovations with  
the Planet in Mind

# In the Lab it Isn't Always Easy Being Green ...We Can Help

In the lab we're always looking for ways to improve productivity and reduce cost. If in the process, we can also reduce the environmental

impact in terms of reducing solid waste, solvent usage and disposal, and energy consumption it becomes a real plus.

At Whatman we are doing just that. Products that were developed to help improve productivity and save cost do indeed have positive conservation benefits as we become more aware of our responsibility to protect the planet we share.

We invite you to review the latest Whatman product innovations that provide productivity and cost advantages *and* can help your lab get a little greener.



# Autovial™ SYRINGELESS FILTERS



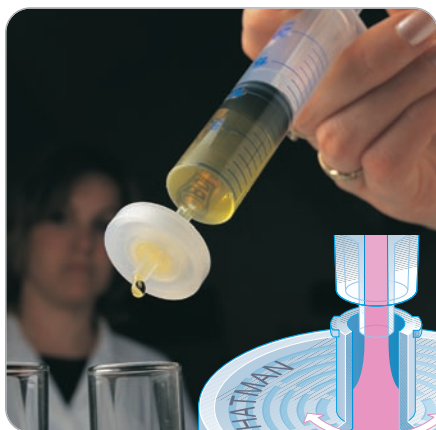
## Replace Syringe-Coupled Filtration Devices with Single Disposable Units

Autovial Syringeless Filters are unique patented filtration devices that are comprised of a graduated filter barrel and a plunger. The filtration function utilizes a built-in air purge which maximizes sample recovery. Ideal for hazardous samples, the self-contained design eliminates the risk of filter pop-off. Available in 5 mL and 12 mL sizes plus a choice of final and prefilter media to ensure sample compatibility.

## Autovial Membranes can be Selected for Various Applications:

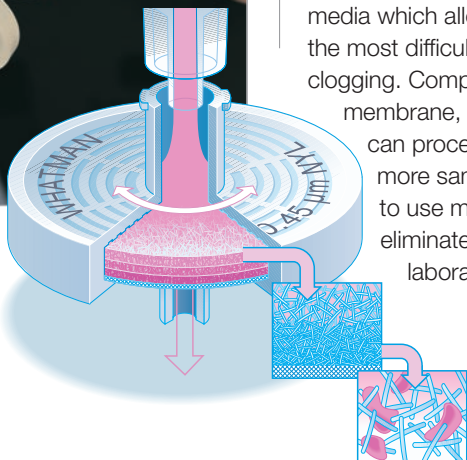
- **Teflon® (PTFE):** Hydrophobic membrane. Resistant to organic solvents as well as strong acids and bases. Low protein binding. Low in extractables.
- **Polyvinylidene Difluoride (PVDF):** Hydrophilic membrane. Resistant to a broad range of organic solvents. Low protein binding.
- **Polypropylene (PP):** Hydrophobic membrane. Resistant to a wide range of organic solvents.
- **Polyethersulfone (PES):** Hydrophilic membrane. Broad solvent compatibility. Suitable for filtration of aqueous and compatible organic solvents. Higher liquid flow than either PTFE or PVDF. Low in extractables. Low protein binding.
- **Nylon (NYL):** Hydrophilic membrane. Resistant to a range of organic solvents. Suitable for use with high pH samples. Binds proteins, hence not suitable for protein recovery applications.
- **Cellulose Acetate (CA):** Hydrophilic membrane. Limited solvent resistance. Very low protein binding capacity and hence excellent for protein recovery applications.
- **Glass Microfiber/Glass Fiber (GMF/GF):** Hydrophilic material. Excellent compatibility with organic solvents and strong acids (apart from hydrofluoric acid) and bases. Either used as a prefilter or as a final filter.

# GD/X® HEAVY DUTY SYRINGE FILTERS



## Process Hard to Filter Samples in One Pass

The Whatman GD/X Disposable Syringe Filters contain a unique prefiltration stack of GMF 150 (graded density) and GF/F glass microfiber media which allows you to filter even the most difficult samples without clogging. Compared to an unprotected membrane, GD/X Syringe Filters can process three to seven times more sample volume. The need to use multiple filters is eliminated and therefore laboratory waste reduced.



## Applications

GD/X Syringe Filters are ideal for heavily particulate-laden samples found in:

- Dissolution testing
- Content uniformity
- Concentration analysis
- Routine sample preparation
- Food analysis
- Environmental samples
- Composite assay

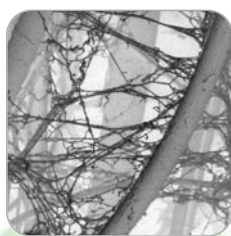
# FTA<sup>®</sup> TECHNOLOGY



## Collect, Transport, Archive, and Isolate Nucleic Acids – All at Room Temperature

FTA Cards with patented FTA Technology simplify the handling and processing of nucleic acids. Samples can be collected, shipped, and stored at room temperature thereby eliminating the high cost of vials as well as liquid nitrogen plus the energy required for laboratory freezer storage. The FTA matrix is chemically treated with proprietary reagents that lyse cells upon

contact causing the release of nucleic acids. Depending on the nature of the sample and the FTA product employed DNA can be easily recovered by a simplified process.



Electron micrograph showing DNA entrapped within the FTA Matrix (magnification x 10,000)

## Use FTA for a Wide Range of Applications:

- Forensics
- Transgenic Identification
- Transfusion Medicine/HLA Typing
- Plasmid Screening
- Food and Agriculture Testing
- Drug Discovery
- Genomics
- STR Analysis
- Animal Identification

## FTA<sup>®</sup> Elute



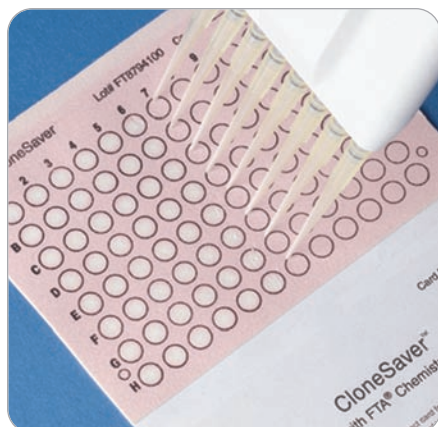
## Simplifies the Processing and Retrieval of DNA from Blood Samples

FTA Elute Cards simplify the handling and processing of blood samples. With FTA Elute, DNA is eluted from the FTA matrix through a simplified elution process using water and heat. Inhibitory components such as hemoglobin are retained on the matrix. Sample processing time to isolate the DNA is substantially reduced (15-30 minutes) thereby eliminating a lengthy and multiple step isolation procedure. Sample volume requirements are minimal eliminating venous blood samples and large blood volume handling/processing.

## FTA Elute Applications

- Multiplex PCR
- Sequencing after PCR Amplification
- SNP Analysis
- STR Analysis
- HLA Typing
- Whole Genome Amplification
- Quantitative PCR
- Biobanking
- Pharmacogenomics
- Genotyping
- Genetic Identification
- Molecular Diagnostic
- Transgenic Analysis

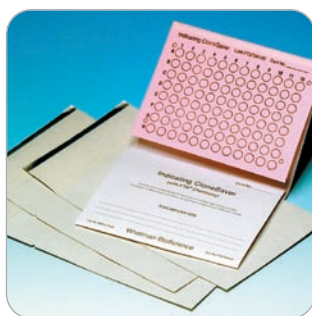
# CloneSaver® CLONE ARCHIVING



## CloneSaver® Cards Enable High Throughput Handling and Processing of Clone Samples

CloneSaver® Cards provide FTA technology in a 96 well format for the collection, long-term storage, and purification of plasmid and BAC DNA from bacterial clones. Preparation is amazingly easy. Once a bacterial culture, resuspended colony or glycerol stock is applied to a spot location, cells are lysed and plasmid or BAC DNA is stabilized for long-term storage or immediate processing.

Plasmid DNA stored on CloneSaver Cards has been confirmed stable for at least five years. DNA is easily accessible for downstream applications including transformations and PCR.



In addition to the time and energy saving FTA products presented here, Whatman offers a complete line of reagents, accessories, and kits to enable you to efficiently utilize this exciting new technology for your application. Visit our web site at [www.whatman.com](http://www.whatman.com).

# Mini-UniPrep™ SYRINGELESS FILTERS



## Prepare Samples for HPLC in 1/3 the Time and Eliminate Multiple Consumables

The Whatman Mini-UniPrep Syringeless Filters provide a faster, easier way to remove particulates from samples being prepared for HPLC analysis. Once the filtration step is completed, the Mini-UniPrep becomes a sample vial that can be placed into the autosampler for injection into your instrument. The time savings plus the cost saved from cutting down the number of multiple consumables is significant. Now add in the reduction of the amount of solid waste and the associated cost.



## A Variety of Mini-UniPrep Filters to Meet Your Needs

In a process of continuous improvement and innovation, Whatman has listened to customers and created a whole family of Mini-UniPrep Filters to meet specific needs. For customers who need to filter light sensitive samples, there is Amber Mini-UniPrep. For customers using robotics to maximize throughput, Whatman offers Slit Septa Mini-UniPrep. In addition, an extensive range of membrane types are available to ensure sample/solvent compatibility.

# UniPrep® SYRINGELESS FILTERS



## Integrated Test Tube and Filter Plunger Saves Time and Minimizes Laboratory Waste

The UniPrep Syringeless Filters are preassembled filtration devices which can be used for a wide variety of sample preparation and storage applications. They are quick and easy to use and replace syringe-coupled filtration devices with a single disposable unit. Built-in prefilters enable difficult samples to be processed easily.

## UniPrep Membranes are Available for a Wide Range of Applications:

- **Teflon® (PTFE):** Hydrophobic membrane. Resistant to organic solvents as well as strong acids and bases. Low protein binding. Low in extractables.
- **Polyvinylidene Difluoride (PVDF):** Hydrophilic membrane. Resistant to a broad range of organic solvents. Low protein binding.
- **Nylon (NYL):** Hydrophilic membrane. Resistant to a range of organic solvents. Suitable for use with high pH samples. Binds proteins, hence not suitable for protein recovery applications.
- **Glass Microfiber/Glass Fiber (GMF/GF):** Hydrophilic material. Excellent compatibility with organic solvents and strong acids (apart from hydrofluoric acid) and bases. Either used as a prefilter or as a final filter.

# Extractor™ EtBr SYSTEM



## Ethidium Bromide (EtBr) Waste Reduction System

The Extractor System is a one-step filtration funnel device for the rapid removal of ethidium bromide from gel-staining solutions. This disposable unit contains an activated carbon matrix, which removes >99% of ethidium bromide from electrophoretic buffer quickly and easily. Each device can decontaminate up to 10 liters of gel-staining solution. After filtration, the decontaminated solution can be safely poured down the laboratory drain.

The Extractor funnel device fits most standard laboratory flasks and bottles (neck size 33-45 mm), and the unit includes a cap for storage between uses. The polypropylene housing is chemically resistant to organics. Also included in the package are glass fiber pre-filters, which remove gel pieces and other debris to avoid premature clogging of the carbon filter.



At Whatman we are mindful of your need to consider ways to cut costs, improve productivity, and at the same time reduce the impact of your work on the environment...We Can Help

## Whatman Quality

Whatman is a global leader in separations technology and is known in the scientific community for providing innovative life science products and solutions. Our instinct for simplification accelerates the rate of discovery, reduces costs and saves time. For more information, visit [www.whatman.com](http://www.whatman.com)

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