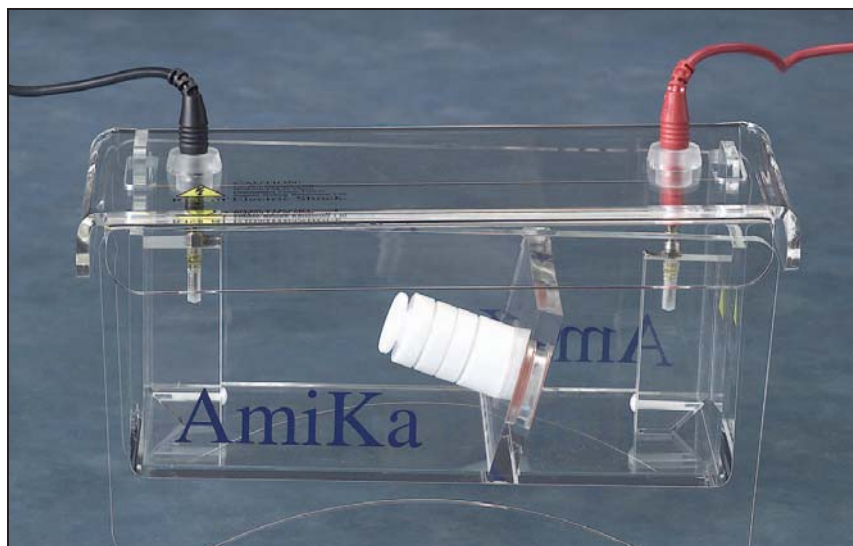
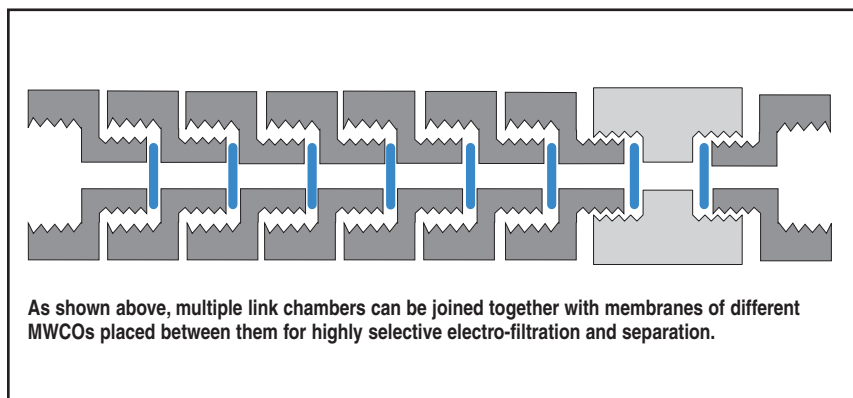


ElectroPrep™






ElectroPrep System (SR0001) with Multiple Link-Chambers (sold separately)

The ElectroPrep system is an extremely versatile sample prep technology developed by Harvard Apparatus/Amika scientists. This patented, electrophoresis-based system is ideal for the rapid purification of proteins, nucleic acids, carbohydrates and other biomolecules. With a run-time of 5 to 10 minutes, ElectroPrep provides speed and convenience, even at the very low currents (5 to 10 mA) used with this system. The sample chambers are made of Teflon, a completely inert material especially suited for high sample recovery. Membranes of different MWCO (molecular weight cut off), from 100 to 300,000 Daltons, can be used for selective elution, filtration, dialysis, fractionation and concentration.



* See pages 402-404 for membrane selection and ordering information.

Key	
	Link-Chamber
	BioDialyzer Chamber
	Membrane

For Membrane ordering:

www.nestgrp.com/pdf/Ap1/membranes.pdf

Advantages

- Faster dialysis times due to movement of charged molecules in the electric field
- Re-usable
- Available for most sample sizes - large or small
- Membranes available with MWCO's to suit almost any application
- Easy to use
- Leak proof
- Autoclaveable
- Low protein binding
- High sample recovery
- Made of Teflon - totally inert

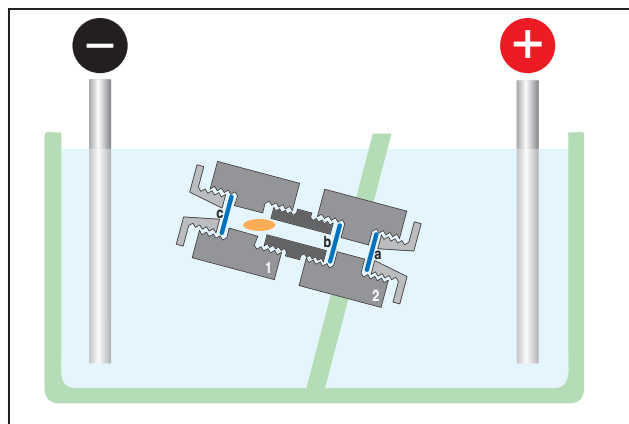
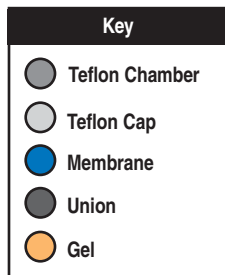
Applications

- Electro-elution from gels and solutions
- Electro-dialysis (with an average buffer exchange time of 5 to 10 minutes)
- On-line electro-dialysis
- Electro-concentration
- Selective electro-filtration
- Size fractionation
- Primer removal
- Salt removal
- Detergent removal
- Dye-Terminator removal
- See some examples on the following pages

ElectroPrep™

Electro-Elution of DNA, Proteins or other Biomolecules from Gel Pieces

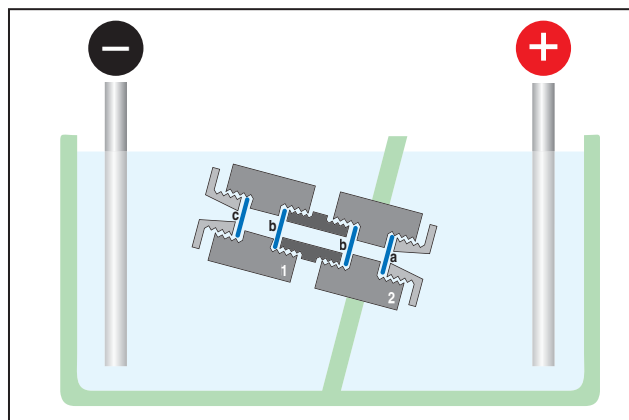
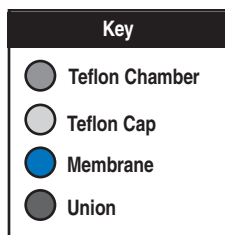
Using the ElectroPrep system in the illustrated configuration, elution of DNA, proteins, or any other biomolecules from a gel slice/plug can be achieved quickly and easily with excellent recovery. Chambers can be joined in any combination necessary to accommodate the required gel volume. Samples can be concentrated if desired, by choosing a receiving chamber of suitable volume. The MWCO (molecular weight cut off) of the membranes (a and b) can also be chosen to achieve very selective filtration or size fractionation during the electro-elution process.



Electro-Elution of DNA, Proteins or other Biomolecules from Gel Pieces

Selective Electro-Filtration/Concentration/Separation Based on Different Charges on Biomolecules

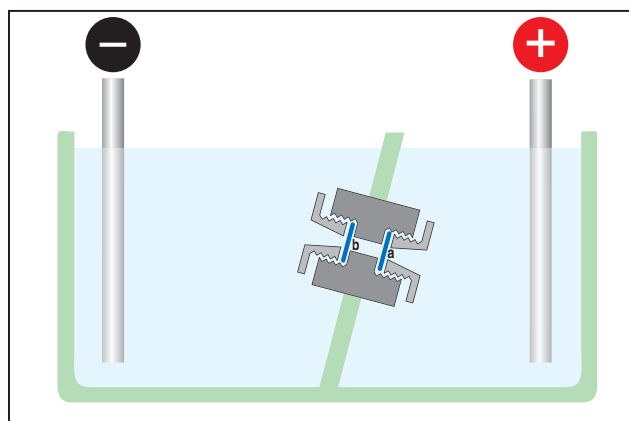
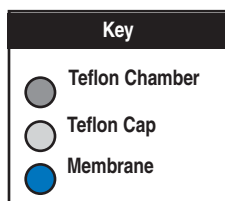
In this configuration of the ElectroPrep, the sample is placed in a sample compartment between two membranes (b), both of which should have a MWCO larger than the desired biomolecules. Membranes (a) and (c) should have MWCOs smaller than the biomolecules. Based on their charges, the biomolecules will move to either chamber (1) or chamber (2). Biomolecules with unknown isoelectric points can also be separated and purified using this method.



Selective Electro-Filtration/Concentration/Separation Based on Different Charges on Biomolecules

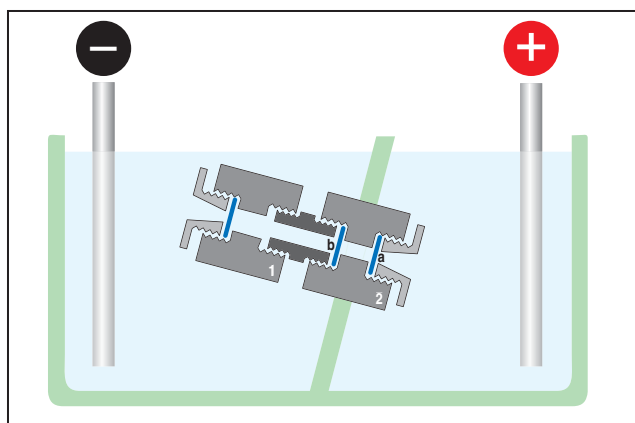
Electrodialysis through Simultaneous Exchange of Buffers

A sample is placed in the sample compartment between membranes (a) and (b), both of which have MWCOs lower than the molecular weight of the desired biomolecules. The sample is dialyzed through the simultaneous exchange of buffers in the electric field. This method is very fast and very effective. For example, after a PCR reaction, it can be used to rapidly (5 to 10 minutes) remove 100% of the primer. Electrodialysis is also effective for desalting neutral molecules that do not move in an electric field (such as sugars) or charged molecules at their isoelectric point.



Electrodialysis through Simultaneous Exchange of Buffers

ElectroPrep™



Rapid and Selective Electro-Filtration/Concentration

Link-Chambers

Link-Chambers can be joined together in different combinations without the need for a union. The 25µl, 50µl, and 100µl can be joined together and the 250µl can be joined to the 500µl size. A union (NP 74-0102) can be used to join a 25, 50 or 100µl chamber to a 250 or 500µl chamber.

Link Chambers				
Chamber Volume (µl)	Qty. of 1	\$	Qty. of 5	\$
25	SERF 0025.1	74.00	SERF 0025.5	282.00
50	SERF 0050.1	74.00	SERF 0050.5	282.00
100	SERF 0100.1	74.00	SERF 0100.5	282.00
250	SERF 0250.1	74.00	SERF 0250.5	282.00
500	SERF 0500.1	74.00	SERF 0500.5	282.00

Fast DIALYZERS™

The ElectroPrep must use at least one Fast DIALYZER (range of 50µl to 1,500µl volume). The joining of multiple Fast DIALYZER units requires a union of the appropriate size. Link Chambers can be easily attached to Fast DIALYZER.

Fast DIALYZERS™				
Chamber Volume (µl)	Qty. of 1	\$	Qty. of 5	\$
25	SRD 00252D	225.00	SSU 0025	568.00
50	SRD 00502D	225.00	SSU 0050	568.00
250	SRD 02502D	225.00	SSU 0250	568.00
500	SRD 05002D	225.00	SSU 0500	568.00
1000	SRD 10002D	225.00	SSU 1000	568.00
1500	SRD 15002D	225.00	SSU 1500	568.00

Membrane ordering information,
www.nestgrp.com/pdf/pdf.shtm

Key	
	Teflon Chamber
	Teflon Cap
	Membrane
	Union

Rapid and Selective Electro-Filtration/Concentration

The sample is placed in the sample compartment comprised of a chamber (1) and the union. The MWCO of membrane (b) should be larger than the molecular weight of the biomolecules and the

MWCO of membrane (a) should be smaller. Upon the passage of electric current, the biomolecules will pass through membrane (b) and collect in chamber (2) while smaller molecules will pass through membrane (a). This is a fast and effective method for the concentration of small samples and for selective filtration.

Catalog No. \$ Description

SR0002	490.00	ElectroPrep Tank
SPW1198	775.00	Power Supply

Unions and Other Accesories

Catalog No. \$ Description

SRU 25-100.1	50.00	Union which Joins Two Chambers with Volumes from 10 to 200µl (volume = 350µl)
SRU 250-1500.1	50.00	Union which Joins Two Chambers with Volumes from 250 to 1,500µl (volume = 2000µl)
SRU 251-2515.1	50.00	Union which Joins a 25 to 100µl Chamber to a 250 to 1,500µl Chamber (volume = 2500µl)
NP 74-1112	78.00	Mini Vacuum Dessicator for Sample Concentration,

The membrane ordering information is color coded to assist you in selecting the appropriate membrane:

Pink shaded membranes are for products with sample sizes up to 200µl

Purple shaded membranes are for products with sample sizes ranging from 250µl to 1,500µl

Green shaded membranes are for products with sample sizes ranging from 3,000µl to 5,000µl

Membranes for DIALYZERS

A large variety of membranes are available for use with our different dialysis products. The following tables are designed to assist you in choosing the appropriate membranes for your needs. Specialty membranes are also available. Contact The Nest Group for any custom membranes.

Cellulose Acetate

These membranes are low protein binding and have a sharp MWCO range. The membranes are pre-cut, and supplied in 0.05% sodium azide solution. They are ready to use after rinsing with deionized water and buffer. Glycerol, sulfur, and heavy metals are not present in these membranes. The cellulose acetate membranes are intended only for aqueous solutions, and the presence of an organic solvent is not recommended.

Regenerated Cellulose

These membranes are more stable in organic solvents, but the MWCO range is not as sharply defined as that of cellulose acetate membranes. The membranes are pre-cut, and supplied in a 0.05% sodium azide solution. They are ready to use after rinsing with deionized water and buffer. Glycerol, sulfur, or heavy metals are not present in these membranes.

Polycarbonate

These membranes are more stable in organic solvents. They are available in four highly controlled pore sizes for a well defined MWCO range.

MEMBRANES for DIALYZER Volumes Ranging from 10 µl to 5000 µl (packs of 25)

MEMBRANES:	Price:	DIALYZER Chamber Volume 10 µl, 20 µl, 50 µl, 100 µl & 200 µl	DIALYZER Chamber Volume 500 µl, 1000 µl & 1500 µl	DIALYZER Chamber Volume 3000 µl & 5000 µl
A. Regenerated Cellulose MEMBRANES:				
1k Da MWCO		SA010S.24	SB010S.24	SC010S.24
2k Da MWCO		SA020S.24	SB020S.24	SC020S.24
5k Da MWCO		SA050S.24	SB050S.24	SC050S.24
10k Da MWCO		SA100S.24	SB100S.24	SC100S.24
25k Da MWCO		SA250S.24	SB250S.24	SC250S.24
50k Da MWCO		SA500S.24	SB500S.24	SC500S.24
B. Cellulose Acetate MEMBRANES:				
100 Da MWCO		SA001K.24	SB001K.24	SC001K.24
500 Da MWCO		SA005K.24	SB005K.24	SC005K.24
1k Da MWCO		SA010K.24	SB010K.24	SC010K.24
2k Da MWCO		SA020K.24	SB020K.24	SC020K.24
5k Da MWCO		SA050K.24	SB050K.24	SC050K.24
10k Da MWCO		SA100K.24	SB100K.24	SC100K.24
25k Da MWCO		SA250K.24	SB250K.24	SC250K.24
50k Da MWCO		SA500K.24	SB500K.24	SC500K.24
100k Da MWCO		SA111K.24	SB111K.24	SC111K.24
300k Da MWCO		SA333K.24	SB333K.24	SC333K.24
C. Polycarbonate MEMBRANES:				
0.01 µm Pore Size		SA0001P.24	SB0001P.24	SC0001P.24
0.05 µm Pore Size		SA0005P.24	SB0005P.24	SC0005P.24
0.10 µm Pore Size		SA0010P.24	SB0010P.24	SC0010P.24
0.60 µm Pore Size		SA0060P.24	SB0060P.24	SC0060P.24

The membrane ordering information is color coded to assist you in selecting the appropriate membrane:

Orange shaded membranes are for products with chamber sizes up to 200 µl

Yellow shaded membranes are for products with chamber sizes ranging from 500 µl to 1,500 µl

Green shaded membranes are for products with chamber sizes ranging from 3,000 µl to 5,000 µl