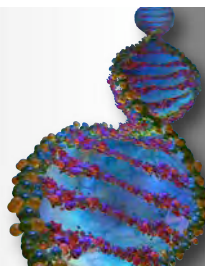


ElectroPrep™ System



The **NEW** ElectroPrep™ System from The Nest Group is a versatile sample preparation technology based on electro-dialysis.

The patented ElectroPrep™ System can be used for electro-dialysis, electro-elution, electro-filtration, electro-fractionation or electro-concentration.

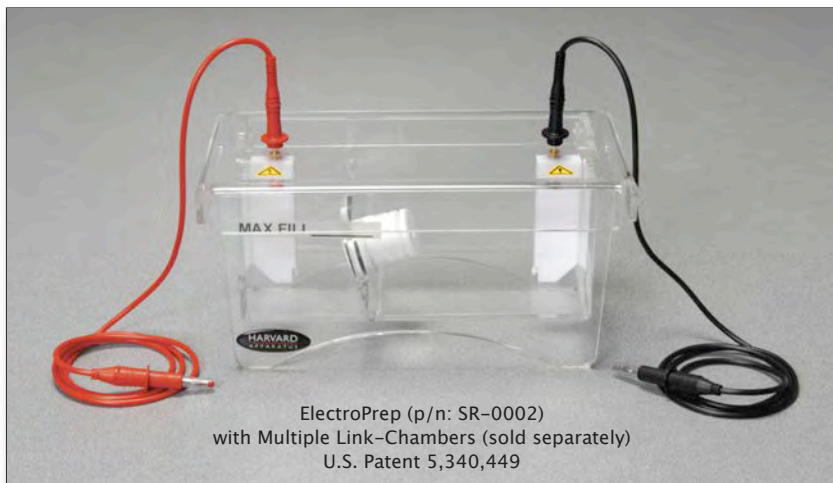
By running a sample sequentially into multiple molecular weight cut off (MWCO) chambers – in as little as three minutes – this ElectroPrep™ System is ideal for the rapid purification of dye-labeled proteins from unbound dye, nucleic acids from gel slices, desalting carbohydrates or detergent removal from biomolecules. It provides speed and convenience, even at the very low currents (5 to 10 mA) it uses.

The redesigned, reusable sample chambers are made of PTFE for high sample recovery, and provide large membrane surface areas for faster dialysis rates. The DIALYZER™ volumes are from 50 µl to 1500 µl. They can be used individually or joined with a Union or with one or more Link Chambers. With different combinations of MWCO membranes, the ElectroPrep™ System is ideal for:

- **Electro-Dialysis Buffer Exchange or Detergent Removal.**
- **Selective Electro-Filtration, Concentration and Separation of Charged Bio-molecules.**
- **Rapid Removal of Dye From Dye-Labeled Proteins.**
- **Electro-MW Fractionation and Concentration of DNA or Proteins From Gel Slices.**

After electro-dialysis, a momentary polarity reversal assures complete removal of concentrated molecules from the membrane surface.

Membranes from 100Da to 300KDa MWCO offer a wide range of choices for your special application.



ElectroPrep (p/n: SR-0002)
with Multiple Link-Chambers (sold separately)
U.S. Patent 5,340,449

Order#	Product
ElectroPrep System	
SR 0002	ElectroPrep Tank, includes Tank, with Safety Lid and High Voltage leads, pkg. of 1
74-1197	ElectroPrep Connector, pkg. of 1
74-1198	Power Supply, 110V 300 Volt, 500 mA, 90W, pkg. 1
74-1199	Power Supply, 230V 300 Volt, 500 mA, 90W, pkg. 1
Dialysis Chambers (uses SC... dia. membranes)	
SRD-00502D	50µl Chamber Volume, pkg. 2
SRD-01002D	100µl Chamber Volume, pkg. 2
SRD-02502D	250µl Chamber Volume, pkg. 2
SRD-05002D	500µl Chamber Volume, pkg. 2
SRD-10002D	1000µl Chamber Volume, pkg. 2
SRD-15002D	1500µl Chamber Volume, pkg. 2
Link Chambers use SB... dia. membranes for 1st Link & SA... for 2nd Link:	
Link Chambers	
SRD-0502L	50µl Chamber Volume, pkg. 2
SRD-01002L	100µl Chamber Volume, pkg. 2
SRD-02502L	250µl Chamber Volume, pkg. 2
SRD-05002L	500µl Chamber Volume, pkg. 2
SRD-10002L	1000µl Chamber Volume, pkg. 2
SRD-15002L	1500µl Chamber Volume, pkg. 2
Unions	
SRU 50-1500.1	50µl-1500 Chamber Volumes, Volume 500µl Union, pkg. 1

ElectroPrep™ is a trademark of Harvard Apparatus



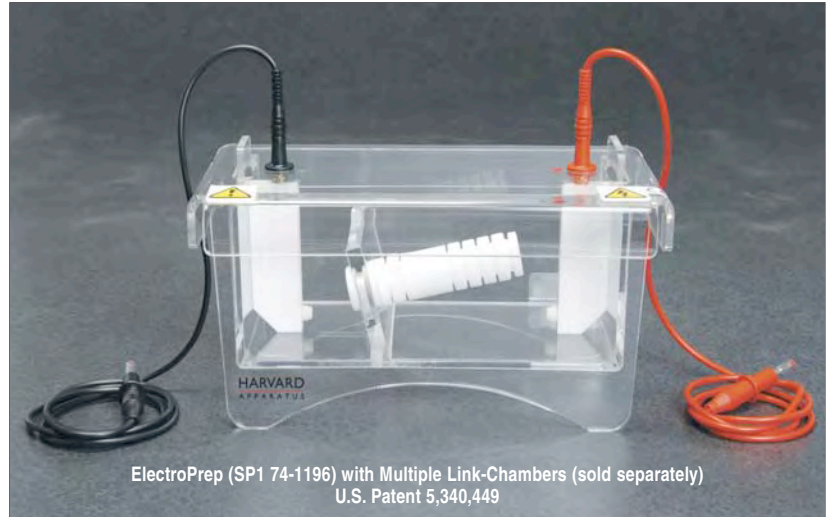
ElectroPrep™ System

advantages

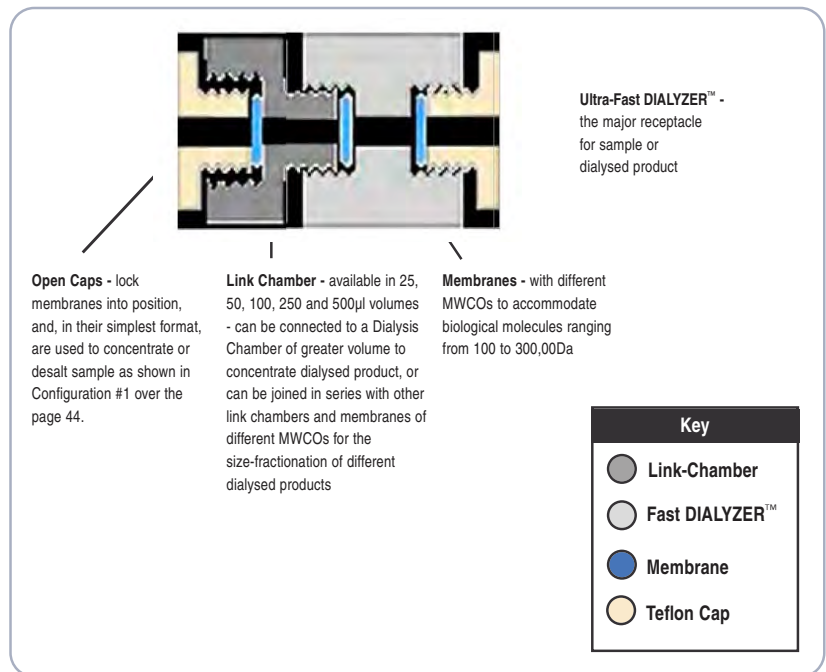
- Faster dialysis times due to movement of charged molecules in the electric field
- Re-usable
- Available for most sample sizes - large or small
- Membranes available with MWCO's to suit almost any application
- Easy to use
- Leak proof
- Autoclaveable
- Low protein binding
- High sample recovery
-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



The ElectroPrep system from Harvard Apparatus is an extremely versatile patented sample prep technology based on (2D) dialysis electrophoresis. This ElectroPrep 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. Ultra-Fast DIALYZER can be joined with each other or with multiple link chambers in different combinations (see pages 43 & 44) and membranes (see page 46).



As shown above, multiple link chambers can be joined together with membranes of different MWCOs placed between them for highly selective electro-filtration and separation.

ElectroPrep™ System

Configurations

Electroprep System Configurations

1. Decide Application:

- Electro-Dialysis - **Configuration #1**
- Electro-Concentration - **Configuration #2**
- Electro-Separation - **Configuration #2**
- Electro-Elution - **Configuration #2**
- Electro-Filtration - **Configuration #3**
- Electro-Fractionation - **Configuration #4**

2. Select Dialysis Chamber Volume

50 µl to 1500 µl (a Chamber can be connected to an Union for increased volume)

3. Choose suitable size, type and MWCO Dialysis Membranes

for desired configurations

4. Connect Dialysis Chamber

- with a membrane and open-ended Caps for Desalting or Buffer Exchange (**Configuration #1**)
- with a membrane, Union and a smaller volume Chamber for Electro-Concentration (**Configuration #2**)
- with a membrane, Union and equal volume Chamber for Electro-Separation & Electro-Elution (**Configuration #2**)
- with a membrane and Link Chambers for Electro-Filtration (**Configuration #3**)
- with membranes of different MWCO and multiple Link Chambers for Electro-Fractionation (**Configuration #4**)

Example Configurations

Most Basic: To Desalt or Buffer Exchange



Two Different Volume Chambers: To Selectively Concentrate



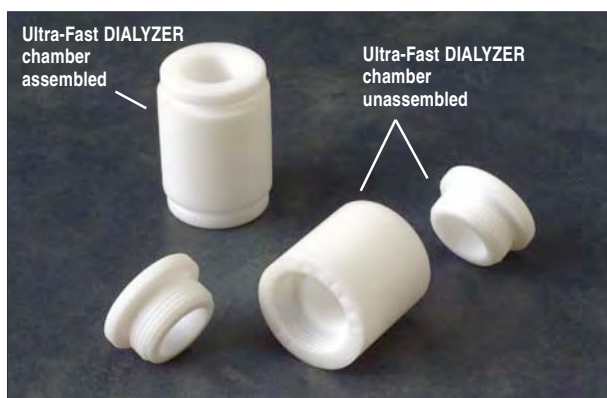
Larger Volume Chambers: To Purify and Concentrate or Filter



Complex Configuration: for Concentration/Filtration/Separation



ElectroPrep™ System (continued)



The ElectroPrep System must use at least one Fast DIALYZER unit (range of 50 µl to 1,500 µl volume).

Dialysis Chambers

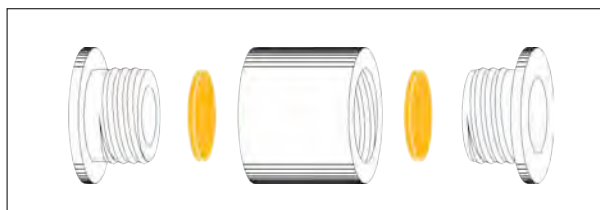
Chamber Volume	Pkg of 2
50 µl	SRD 00502D
100 µl	SRD-1002D
250 µl	SRD-2502D
500 µl	SRD-5002D
1000 µl	SRD-10002D
1500 µl	SRD-15002D

Dialysis Chambers are the major receptacles for either samples or dialyzed materials. Included with each Fast DIALYZER are one main Chamber with two open ports and two matching end caps.

- Chambers can have dialysis membranes of appropriate MWCO at one or both ends.
- Chambers can be joined to each other with a Union or connected directly to one or more Link Chambers separated by dialysis membranes.
- Chambers of different volumes in the colored Fast DIALYZER series can be connected together or intermixed using Unions.

Union

Joins Dialysis Chambers of	Pkg of 2	Chamber Volume
Any two chambers with volume range of 50 µl to 1500 µl	SRU 50-1500.1	500 µl



The joining of multiple Fast DIALYZERS units requires a Union of the appropriate size.

Unions can join two main Dialysis Chambers:

- Without membranes to make larger volume chambers, or;
- With dialysis membranes of appropriate MWCO for serial dialysis.

Union SRU 50-1500.1 with 500 ul volume can join two Chambers of the Fast DIALYZERS with volumes from 50 ul to 1500 ul.

Link Chambers

Chamber Volume	Pkg of 2
50 µl	SRD-502L
100 µl	SRD-1002L
250 µl	SRD-2502L
500 µl	SRD-5002L
1000 µl	SRD-10002L
1500 µl	SRD-15002L

Link Chambers of various volumes can be easily attached to a main Chamber of the Fast DIALYZERS when volumes smaller than that of the main Chamber are required, by placing membranes at either end.

- Links can be used as a single Link directly attached to one Main Chamber without the need of a Union.
- Unlike Unions, Links do not connect to each other or to the main Chamber without a dialysis membrane.
- Without Unions, Links can be directly connected to main Dialysis Chambers. Only the 50 µl and 100 µl Links can be joined together or interchanged, but not the other volume Links

See next page for ElectroPrep Product List and Ordering Information.

DIALYZERS, Chambers & Membranes for ElectroPrep

Ordering Information

ElectroPrep DIALYZERS™, Additional or Connector Chambers & Membranes for ElectroDialysis						
Chamber Volume:	50 µl	100 µl	250 µl	500 µl	1000 µl	1500 µl
ElectroPrep DIALYZER						
Qty. of 2	SRD 7411-502D	SRD 7411-1002D	SRD 7411-2502D	SRD 7411-5002D	SRD 7411-10002D	SRD 7411-15002D
Additional (Link)						
Qty. of 2	SRD 7411-502L	SRD 7411-2502L	SRD 7411-2502L	SRD 7411-5002L	SRD 7411-10002L	SRD 7411-15002L
Connector (Union)						
Qty. of 2	600 µl, 3500 µl (to join 50 µl, 100 µl, 250 µl, 500 µl, 1000 µl or 1500 µl ElectroPrep DIALYZERS)					
	SRU 50-1500.1					
Membranes: Pack of 25						
for Chamber Volume	50µl, 100µl, 250µl, 500µl, 1000µl or 1500µl					
A. Regenerated Cellulose MEMBRANES:						
1k Da MWCO	Body: SCP010S.24 LINK1: SB010S.24 LINK2: SA010S.24					
2k Da MWCO	Body: SCP020S.24 LINK1: SB020S.24 LINK2: SA020S.24					
5k Da MWCO	Body: SCP050S.24 LINK1: SB050S.24 LINK2: SA050S.24					
10k Da MWCO	Body: SCP100S.24 LINK1: SB100S.24 LINK2: SA100S.24					
25k Da MWCO	Body: SCP250S.24 LINK1: SB250S.24 LINK2: SA250S.24					
50k Da MWCO	Body: SCP500S.24 LINK1: SB500S.24 LINK2: SA500S.24					
B. Cellulose Acetate MEMBRANES:						
100-500 Da MWCO	Body: SCP005K.24 LINK1: SB005K.24 LINK2: SA005K.24					
1k Da MWCO	Body: SCP010K.24 LINK1: SB010K.24 LINK2: SA010K.24					
2k Da MWCO	Body: SCP020K.24 LINK1: SB020K.24 LINK2: SA020K.24					
5k Da MWCO	Body: SCP050K.24 LINK1: SB050K.24 LINK2: SA050K.24					
10k Da MWCO	Body: SCP100K.24 LINK1: SB100K.24 LINK2: SA100K.24					
25k Da MWCO	Body: SCP250K.24 LINK1: SB250K.24 LINK2: SA250K.24					
50k Da MWCO	Body: SCP500K.24 LINK1: SB500K.24 LINK2: SA500K.24					
100k Da MWCO	Body: SCP111K.24 LINK1: SB111K.24 LINK2: SA111K.24					
300k Da MWCO	Body: SCP333K.24 LINK1: SB333K.24 LINK2: SA333K.24					
C. Polycarbonate MEMBRANES:						
0.01 µm Pore Size	Body: SCP0001P.24 LINK1: SB0001P.24 LINK2: SA0001P.24					
0.05 µm Pore Size	Body: SCP0005P.24 LINK1: SB0005P.24 LINK2: SA0005P.24					
0.10 µm Pore Size	Body: SCP0010P.24 LINK1: SB0010P.24 LINK2: SA0010P.24					
0.60 µm Pore Size	Body: SCP0060P.24 LINK1: SB0060P.24 LINK2: SA0060P.24					
Accessories: Quantity of 1						
ElectroPrep Tank	SR0002					
ElectroPrep Connector	SR1197					
Power Supply, 110V	SR1198					
Power Supply, 220V	SPW-1199					

Membranes are supplied either as dry or in 0.05% sodium azide solution. They are ready to use after rinsing with deionized water and buffer.

Regenerated Cellulose membranes are more stable in organic solvents, but the MWCO range is not as sharply defined as that of Cellulose Acetate membranes.

Cellulose Acetate membranes have a sharp MWCO range. They are intended only for aqueous solutions, and the presence of an organic solvent is not recommended.

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