Spectra/Por®

Float-A-Lyzer® G2

READY-TO-USE DIALYSIS DEVICES

Product Information & Operating Instructions

SPECTRUMLABS.COM
Leading the Way in Bioseparation

Table of Contents

Introduction 1
Applications 2
Specifications and Dimensions 3
Instructions for Use 4
Concentrate with Spectra/Gel® Absorbent 5
Storage and Shelf Life 6
Sterilization 6
Membrane Compatibility Table 7
Ordering Information 9
- Spectra/Por® Float-A-Lyzer® G2 9
- Spectra/Gel® Absorbent 9

Introduction

Designed to combine and maximize efficiency, convenience and sample protection, the new Float-A-Lyzer G2 is the next generation in Ready-to-Use Dialysis Devices, featuring Spectrum's proprietary Biotech Grade Cellulose Ester (CE) membrane.

CE is a low-protein binding synthetic membrane available in 9 precise MWCO's with no heavy metal and sulfide contaminants. The cylindrical tubing geometry prevents sample dilution and provides open access for total volume retrieval. Only Float-A-Lyzer G2 assures a 95-98% sample recovery while maintaining 99% sample purity and <1% sample dilution.

The leak-proof screw-on cap with sealing o-ring provides easy access with included pipette (5 ml and 10 ml volume sizes) or pipette tip (1ml volume size) for loading, in-process testing and sample retrieval without the risk of needle punctures. The included floatation ring improves sample buoyancy and vertical orientation during dialysis. The sleek design allows multiple samples to be dialyzed in the same buffer reservoir.

The Float-A-Lyzer G2 is packaged dry with glycerol and ready-to-go with all components included.

Spectra/Por® Float-A-Lyzer® G2

Applications

The Float-A-Lyzer G2 dialysis devices can be used for a variety of applications such as:

- Buffer change and desalting
- Sample preparation prior to electrophoresis, HPLC: removing salts such as sodium chloride, detergents, ammonium sulfate, cesium chloride, surfactants, etc.
- Separation and purifications of substances such as DNA, proteins, viruses, antibodies, peptides, polymers, etc., from low molecular weight contaminants.
- Sample concentration when using a solvent absorbent powder such as Spectra/Gel® Absorbent
- Measure the diffusion rates for ions
- Binding studies

Specifications

Screw-on Cap:	Open & close for in-process sampling Color-coded for MWCO Polypropylene
Silicon O-ring:	Leak proof & resealable
Floatation Ring:	Device body inserts through center to maintain buoyancy in buffer Polyethylene
Top/Bottom Piece:	Sealed Polycarbonate
Membrane:	Biotech Grade Cellulose Ester (CE)
Potting:	Polyurethane
9 MWCO's:	0.1-0.5 kD, 0.5-1.0 kD, 3.5-5 kD, 8-10 kD, 20 kD, 50 kD, 100 kD, 300 kD, 1000 kD
3 Volume Sizes:	1 ml, 5 ml 10 ml
Pkg & Qty:	Dry with glycerol, 12/pkg
Sample Loading:	Disposable pipette for 5 & 10 ml (included) Pipette tip for 1 ml (not included)

Dimensions

3 Volume Sizes:	1 ml	5 ml	10 ml
Total Length:	5 cm	10 cm	16 cm
Membrane Dia.:	10 mm	10 mm	10 mm
Top Piece Dia.:	23 mm	23 mm	23 mm
Flotation Ring:	38 mm	38 mm	38 mm

Spectra/Por® Float-A-Lyzer® G2

Instructions for Use

1. Remove the Float-A-Lyzer G2 from the packaging. Firmly holding the collar of the top-piece with one hand and the packaging tube with the other hand, slowly twist in opposite directions. When the packaging separates from the device, carefully pull the device straight out of the tube to avoid wrinkling the membrane. Note: the Float-A-Lyzer G2 should only be handled by the top-piece collar to prevent membrane damage.
2. The Float-A-Lyzer G2 membrane is impregnated with glycerine for protection and dry packaging. Unscrew the cap and submerge open in deionized water. Discard water and repeat several times. Alternatively, the open device can be submerged and allowed to soak in deionized water for 15-30 minutes. Once wetted, do not allow membrane to dry out.
3. After rinsing with water, the Float-A-Lyzer G2 may be conditioned if necessary by rinsing inside the membrane with dialysate buffer. Do not allow wetted membrane to dry out.
4. Using a pipette carefully load the sample inside and at the bottom of the membrane, slowly withdrawing the pipette as you dispense. Note: a disposable pipette is included for the 5ml and 10 ml volume sample size. Screw the cap back in place to create a closed seal.
5. Thread the body of the Float-A-Lyzer G2 through the hole in the floatation ring and snugly pull the ring up

beneath the collar of the top-piece. Float the Float-A-Lyzer vertically in the dialysate reservoir containing a stir bar and adjust the stirring rate to form a gentle rotating current. Be careful not to create a strong vortex that can pull the device down and interfere with the stir bar.

6. Dialyze according to specific application requirements. Typically, the samples are dialyzed at room temperature, over-night (12-20 hr) and with 3-4 complete buffer changes (after 2-4, 6-8 and 10-14 hours). Note: in-process testing can be done by simply removing the device from the dialysis reservoir, opening the cap, aspirating out a small volume for testing, and then returning the closed device back to the dialysis reservoir.
7. After dialysis, open screw-on cap, and retrieve total sample volume by slowly aspirating while inserting pipette toward bottom of membrane. Make sure to retrieve every drop of sample.
8. Dispense sample in appropriate receptacle and discard used Float-A-Lyzer G2.

Concentrate sample with Spectra/Gel® Absorbent

Use Spectra/Gel Absorbent to concentrate the sample and reduce the volume in the Float-A-Lyzer G2 dialysis device. Simply pack the dry Spectra/Gel around the outside of the membrane to draw away and permanently bind water. Since the molecular weight of the polyacrylate-polyalcohol compound is significantly larger than the membrane MWCO's, it does not pass through the membrane into the

sample. When the desire volume has been achieved, brush away the hydrated Spectra/Gel compound and retrieve reduced volume from the Float-A-Lyzer G2.

Volume can be reduced from 5 mL to 0.5 mL in 60 minutes with 100 grams of the Spectra/Gel Absorbent.

Storage and Shelf Life

Storage: Store new and unused Float-A-Lyzer G2 devices in a dry place at room temperature. Care must be taken to avoid humid environments. If the membrane becomes wet or moist and then dries out, it can crack and cause leaks during use.

Shelf Life: Approximately two years depending on storage conditions.

Sterilization

The following methods are approved for sterilizing the Float-A-Lyzer G2.

Gamma Irradiation at 20 KG

Ethylene Oxide Gas exposure

Autoclaving is not recommended since it will likely have adverse affects on the membrane porosity and MWCO.

Membrane Compatibility Table

This chemical resistance chart is intended for use as a guide, not as a guarantee of chemical compatibility. Variables in temperature, concentrations, durations of exposure and other factors may affect the use of the product. It is recommended to test under your own conditions.

The following codes are used to rate chemical resistance:

R	Recommended
L	Limited Exposure
NR	Not Recommended
U	Unknown

Cellulose Ester (CE)		Cellulose Ester (CE)	
Acetic acid (diluted-5%)	L	Cellosolve	NR
Acetic acid (med conc-25%)	NR	Chloracetic acid	NR
Acetic acid (glacial)	NR	Chloroform	L
Acetone	NR	Chromic acid	NR
Acetonitrile	NR	Cresol	NR
Ammonium hydroxide (diluted)	NR	Cyclohexane	L
Ammonium hydroxide (med conc)	NR	Cyclohexanone	NR
Amyl acetate	NR	Diacetone alcohol	NR
Amyl alcohol	L	Dichloromethane	L
Aniline	NR	Dimethyl formamide	NR
Benzene	NR	Dimethylsulfoxide	NR
Benzyl alcohol	NR	“1,4 Dioxane”	NR
Boric acid	R	Ethers	NR
Brine	R	Ethyl acetate	NR
Bromoform	NR	Ethyl Alcohol	L
Butyl acetate	NR	Ethyl alcohol (15%)	R
Butyl alcohol	L	Ethyl alcohol (95%)	L
Butyl cellosolve	NR	Ethylene dichloride	NR
Butylraldehyde	NR	Ethylene glycol	L
Carbon tetrachloride	NR	Ethylene oxide	NR
		Formaldehyde (2%)	L

Spectra/Por® Float-A-Lyzer® G2

Cellulose Ester (CE)		Cellulose Ester (CE)	
Formaldehyde (30%)	L	Nitric acid (concentrated)	NR
Formic acid (25%)	NR	Nitrobenzene	NR
Formic Acid (50%)	NR	Nitropropane	NR
Freon®	R	Oils, mineral	R
Gasoline	R	Pentane	R
Glycerine	R	Perchloric acid (25%)	NR
Glycerol	R	Perchloroethylene	NR
Hexane	R	Petroleum based oils	R
Hexanol	L	Petroleum ether	R
Hydrochloric acid (diluted-5%)	R	Phenol (0.5%)	R
Hydrochloric acid (med conc-25%)	NR	Phenol (10%)	NR
Hydrochloric acid (con-37%)	NR	Phosphoric acid (25%)	NR
Hydrofluoric acid (25%)	NR	Potassium hydroxide (1N)	L
Hydrogen peroxide (30%)	NR	Potassium hydroxide (25%)	NR
Iodine solutions	NR	Potassium hydroxide (50%)	NR
Isobutyl alcohol	R	Propanol	R
Isopropanol	L	Pyridine	NR
Isopropyl acetate	NR	Silicone oil	R
Isopropyl alcohol	L	Sodium hydroxide (0.1N)	L
Isopropyl ether	L	Sodium hydroxide (diluted-5%)	NR
Jet Fuel 640A	R	Sodium hydroxide (25%)	NR
Kerosene	R	Sodium hydroxide (conc-50%)	NR
Lactic acid	R	Sodium Hydroxide(Concentrated)	NR
Methyl acetate	NR	Sodium Hypochlorite	R
Methyl alcohol	L	Sulfuric acid (diluted-5%)	L
Methyl alcohol (98%)	L	Sulfuric acid (med conc-25%)	NR
Methyl cellosolve	L	Sulfuric acid (6N)	NR
Methyl Chloride	NR	Sulfuric Acid (concentrated)	NR
Methyl ethyl ketone	NR	Tetrahydrofuran	NR
Methyl formate	NR	Toluene	R
Methyl isobutyl ketone	NR	Trichloroacetic acid (25%)	NR
Methylene chloride	L	Trichlorobenzene	NR
N-Methyl-2-Pyrrolidone	NR	Trichloroethane	L
Mineral spirits	R	Trichloroethylene	R
Monochlorobenzene	L	Triethylamine	NR
Nitric acid (diluted-5%)	L	Turpentine	NR
Nitric acid (med conc-25%)	NR	Urea	R
Nitric acid (6N)	NR	Urea (6N)	NR
Nitric acid (conc-70%)	NR	Water	R
		Xylene	NR

Ordering Information

Spectra/Por® Float-A-Lyzer® G2

- Biotech CE Membrane
- Individually packaged dry with glycerine
- 12/package

MWCO	Color Code	Part No. 1 ml	5 ml	10 ml
0.1 - 0.5 kD	Green	G235025	G235049	G235061
0.5 - 1.0 kD	Orange	G235027	G235051	G235063
3.5 - 5 kD	Black	G235029	G235053	G235065
8 - 10 kD	Yellow	G235031	G235055	G235067
20 kD	Red	G235033	G235057	G235069
50 kD	Violet	G235034	G235058	G235070
100 kD	Blue	G235035	G235059	G235071
300 kD	Amber	G235036	G235060	G235072
1,000 kD	Pink	G235037	G235062	G235073

Spectra/Gel® Absorbent

Part No.	Description
292600	Spectra/Gel® Absorbent, 500 g

To place an order go to www.spectrumlabs.com or:

THE AMERICAS

Spectrum Laboratories Inc.
18617 South Broadwick Street
Rancho Dominguez, CA 90220-6435, USA

voice (800) 634-3300 (US & Canada)
(310) 885-4600 (world-wide)

fax (800) 445-7330 (US & Canada)
(310) 885-4666 (worldwide)

e-mail customerservice@spectrumlabs.com

EUROPE

Spectrum Europe B.V.
P.O. Box 3262
4800 DG Breda, The Netherlands

voice 00 31 (0)76 5719 419

fax 00 31 (0)76 5719 772

e-mail info@spectrumeurope.nl

JAPAN

Spectrum Japan
3-12-18, Shimosakamoto
Otsu-City, Shiga
520-0105, Japan

phone/fax 00 81 (0)77 578 0166

e-mail spectrum.j@gol.com