

# Float-A-Lyzer<sup>®</sup> Dialysis Device

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## User Guide



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**Abbreviations**

CE	Cellulose Ester
EtO	Ethylene oxide
HPLC	High-performance liquid chromatography
IPA	Isopropyl alcohol
kD	Kilodalton
ml	Milliliter
mm	Millimeter
MWCO	Molecular weight cut-off
pkg	Package

## 1. Introduction

The Float-A-Lyzer® Device from Repligen is ideal for the easy and convenient dialysis of small sample volumes. Available in 1 ml, 5 ml and 10 ml volume sizes, the Float-A-Lyzer Device features proprietary Biotech Grade Cellulose Ester (CE) Membrane from Repligen incorporated into a pre-assembled and leak-proof dialysis device.

Biotech CE is a low protein-binding membrane with no heavy metal or sulfide impurities, available in nine MWCOs ranging from 100 to 1,000,000 daltons.

The Float-A-Lyzer Device assures a 95 – 98% sample recovery while maintaining 99% sample purity and <5% sample dilution.

The single-use device is designed for easy loading, in-process testing and sample retrieval without the risk of needle punctures. The included floatation ring maintains sample buoyancy and vertical orientation during dialysis. The narrow tubular design allows multiple samples to be dialyzed in the same buffer reservoir.

SpectraPor® Biotech CE Membranes have good chemical resistance. Variables in temperature, concentration, and duration of exposure and other factors may affect the performance of the membrane. It is recommended to test the membrane under your application conditions. These membranes are generally compatible with the following groups: common alcohols (low to mid concentration), many dilute acids and bases and some dilute organics. It is incumbent upon user to verify compatibility prior to use with membrane. For membrane compatibility and purchasing information visit [www.repligen.com](http://www.repligen.com).

## 2. Applications

The Float-A-Lyzer Device is used for a variety of applications, including:

- Drug dissolution (controlled drug release)
- Buffer change and desalting
- HPLC Sample preparation
- Nanoparticle and liposome purification
- Removing sulfate, cesium chloride, low molecular weight contaminants or surfactants
- Separation and purifications of DNA, proteins, viruses, antibodies and peptides
- Biopolymer purification and removal of monomers
- Binding studies

### 3. Specifications

**Table 1. Specifications and Materials of Construction**

Screw-on cap	Color-coded for MWCO polypropylene
O-ring	Silicone
Flotation ring	Polyethylene
Top/bottom piece	Polycarbonate
Membrane	Biotech Grade Cellulose Ester
Potting	Polyurethane
MWCO	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
Volumes	1 ml, 5 ml and 10 ml
Packing and quantity	Dry with glycerin, 12/pkg
Sample loading	Disposable pipette included for 5 and 10 ml only

**Table 2. Dimensions**

Device Volume Size	1 ml Volume	5 ml Volume	10 ml Volume
Approx. working volume	0.7 – 1.5 ml	3.5 – 6 ml	8 – 11 ml
Total length	5 cm	10 cm	16 cm
Membrane diameter	10 mm	10 mm	10 mm
Top piece diameter	23 mm	23 mm	23 mm
Flotation ring	38 mm	38 mm	38 mm

**Table 3. MWCO and Cap Colors**

MWCO	Color Code
0.1 – 0.5 kD	Green
0.5 – 1.0 kD	Orange
3.5 – 5 kD	Black
8 – 10 kD	Yellow
20 kD	Red
50 kD	Violet
100 kD	Blue
300 kD	Amber
1,000 kD	Pink

## 4. Instructions for Use

### 4.1 Handling

1. Remove the Float-A-Lyzer Device from the packaging box.
2. Firmly holding the top piece of the Float-A-Lyzer Device with one hand and the clear packaging tube with the other hand, gently twist in opposite directions.
3. When the packaging tube separates from the device, carefully pull the device straight out of the tube to avoid wrinkling the membrane.
4. The Float-A-Lyzer Device should only be handled by the top piece to prevent membrane damage.

### 4.2 Membrane Preparation

1. Unscrew the cap and fill the device with 10 – 20% isopropanol (IPA) or ethanol (EtOH).
2. Replace cap and submerge device in the same alcohol solution for 10 – 30 minutes.
3. Remove the device, unscrew the cap and aspirate the alcohol from the device. Invert and shake out any remaining drops.
4. Use DI water to flush thoroughly and fill the device. Replace the cap and then soak the device in DI water for 15 – 30 minutes.
5. Remove rinse water.
6. Flush the device again with DI water or condition with dialysate buffer.
7. Once wetted, do not allow membrane to dry out.

### 4.3 Loading and Dialyzing

1. Using a pipette, load the sample. Slowly withdraw the pipette as you dispense.
2. Replace cap.
3. Thread the body of the Float-A-Lyzer Device through the hole in the flotation ring and pull the ring up snug beneath the collar of the top-piece.  
Place the Float-A-Lyzer Device vertically in the dialysis reservoir. If using a stir-bar and magnetic stirrer, adjust the stirring rate to create a gentle vortex.
4. Dialyze sample according to specific application requirements. Typically, the samples are dialyzed at room temperature, overnight (12 – 20 hr) and with 3 – 4 buffer changes (after 2 – 4, 6 – 8 and 10 – 14 hours).
5. Optional: In-process sampling can be achieved by 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.
6. After dialysis, open the cap, and retrieve the sample by slowly aspirating while inserting pipette toward the bottom of membrane.
7. Discard the used Float-A-Lyzer Device. It is intended for single use only.

## 5. Storage and Shelf Life

**Storage:** Store new and unused Float-A-Lyzer Devices in a dry place at room temperature. Care should be taken to avoid humid environments.

**Shelf Life:** 2 years when stored properly.

**Sterilization:** The common methods of membrane sterilization include exposure to ethylene oxide (EtO) gas and ebeam or gamma-irradiation. Repligen does not recommend autoclaving as it may lead to changes in membrane performance.

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