

Tube-O-Dialyzer (No Loss Dialyzer for Small Samples)

G-Biosciences

Abstract

This protocol is for Tube-O-DIALYZER™, a mini dialysis system for small sample volumes (20µl-2.5ml). Follow this protocol for dialysis devices Cat. # [786-610 to 786-624](#).

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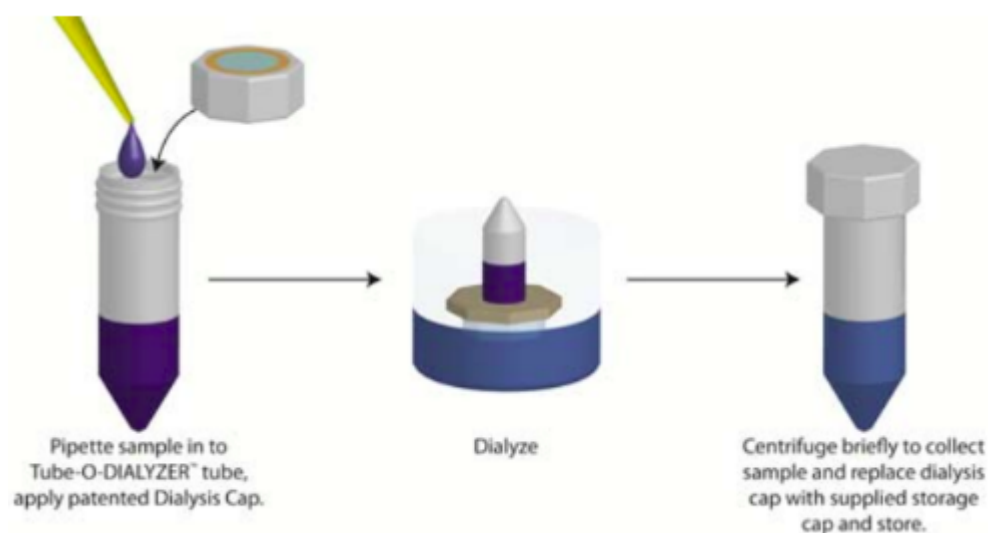
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Guidelines

INTRODUCTION

Tube-O-DIALYZER™ is a mini dialysis system for small sample volumes (20µl-2.5ml) that ensures 100% sample recovery, even if precipitation occurs. Tube-O-DIALYZER™ is based on a patented tube design that permits easy sample handling and a dialysis cap. Simply pipette your sample into the Tube-O-DIALYZER™ tube, seal with the Tube-O-DIALYZER™ dialysis cap and invert in your dialysis solution and dialyze. Following dialysis, briefly centrifuge the complete Tube-O-DIALYZER™ for five seconds and collect 100% of your sample. For storage of the dialyzed sample, replace the dialysis cap with the supplied storage caps.

Tube-O-DIALYZER™ consists of a regenerated cellulose dialysis membrane, a neutral non binding dialysis membrane, with Molecular Weight Cut Offs (MWCO) of 1,000, 4,000, 8,000, 15,000, or 50,000 Daltons.



ITEM(S) SUPPLIED

Tube-O-DIALYZER™, Micro For 20-250µl Samples

Cat. #	786-610	786-611	786-612	786-613	786-614
MWCO (Da)	1,000	4,000	8,000	15,000	50,000
Tube-O-DIALYZER™, Micro	20	20	20	20	20
Floats (Micro)	6	6	6	6	6
Storage Caps (Micro)	20	20	20	20	20

Tube-O-DIALYZER™, Medi For 0.2-2.5ml Samples

Cat. #	786-615	786-616	786-617	786-618	786-619
MWCO (Da)	1,000	4,000	8,000	15,000	50,000
Tube-O-DIALYZER™, Medi	20	20	20	20	20
Floats (Medi)	6	6	6	6	6
Storage Caps (Medi)	20	20	20	20	20

Tube-O-DIALYZER™ , Mixed For 20-250µl & 0.2-2.5ml Samples

Cat. #	786-620	786-621	786-622	786-623	786-624
MWCO (Da)	1,000	4,000	8,000	15,000	50,000
Tube-O-DIALYZER™ , Micro	10	10	10	10	10
Tube-O-DIALYZER™ , Medi	10	10	10	10	10
Floats (Micro)	3	3	3	3	3
Floats (Medi)	3	3	3	3	3
Storage Caps (Micro)	10	10	10	10	10
Storage Caps (Medi)	10	10	10	10	10

STORAGE CONDITIONS

The kit is shipped at ambient temperature. Upon arrival, store at 4°C. Stable for 1 year, if stored correctly.

Please see [G-Biosciences Tube-O-DIALYZER™](#) for details on Membrane Compatibility.

OPTIONAL ACCESSORIES

- **Centrifuge Tube Adaptor [Cat # 786-145]:** Optional adaptor for centrifugation in bench top centrifuges. Pack of 2.
- **Micro Dialysis Cups [Cat # 786-145C]:** For dialysis of small sample volumes, equilibrium dialysis, dialysis of single use preparations, and other dialysis applications. Dialysis buffer capacity of 2-10ml.
- **Tube-O-Tanks [Cat # 786-145D & 786-145E]:** A dialysis tank specifically designed for use with Tube-O-DIALYZER™ . Two sizes are available, small and large tanks, suitable for Micro and Medi size Tube-O-DIALYZER™ , respectively. Each tank will accommodate seven Tube-O-DIALYZER™ .
- **Tube-O-Array™ Dialyzer [Cat # 786-145A]:** Specifically developed for dialysis- equilibration of samples prior to 2D-gel analysis or other applications. Optimize up to 12 samples at a time. Consists of a tray for holding up to 12 Tube-O-DIALYZER™ assemblies. Suitable for 20µl to 2.5ml samples each.
- **Floats:** Additional Tube-O-DIALYZER floats, both Micro [Cat # 786-141F] and Medi [Cat # 786-

142F] sizes are also available separately

TROUBLESHOOTING

- 1. Reusing Tube-O-DIALYZER™ :** Tube-O-DIALYZER™ is not recommended for re-use because of obvious reason of cross contamination.
- 2. Precipitate Forms in Sample:** As with all dialysis methods, precipitation may occur in your sample. The unique tube format means the entire Tube-O-DIALYZER™ can be centrifuged to collect the precipitate. We recommend centrifuging for 5-6 seconds at 500-1,000xg. Check the sample and if necessary repeat the centrifugation. Do not spin longer as this may cause the membrane to rupture.
- 3. Mishandling Dislodges White Gasket:** In some cases the white gasket inside the Tube-O-DIALYZER™ cap can be dislodged by mishandling. In this event, we recommend using the base of the Tube-O-DIALYZER™ tube to push the gasket back in to position.

Materials

Tube-O-DIALYZER™ Micro 1K MWCO [786-610](#) by [G-Biosciences](#)

Protocol

PREPARATION BEFORE USE

Step 1.

Tube-O-DIALYZER™ are supplied in a preservative to maintain quality. Prior to use discard the preservative from the tube and place the dialysis cap upside down in a beaker or other suitable container.

PREPARATION BEFORE USE

Step 2.

Add 1-2ml DI water or dialysis buffer to rinse. Keep the Tube-O-DIALYZER™ membrane wet until required.

Step 3.

Pipette your sample directly into the Tube-O-DIALYZER™ tube. For Tube-O-DIALYZER™ Micro use 20-250µl and for Tube-O-DIALYZER™ Medi use 0.2-2.5ml.

Step 4.

Remove the Tube-O-DIALYZER™ dialysis cap from the rinse water/buffer and carefully remove excess liquid with a pipette tip.

Step 5.

Screw the dialysis cap on to the Tube-O-DIALYZER™ tube until finger tight. Invert the Tube-O-DIALYZER™, ensuring the entire sample rests upon the membrane.

📌 NOTES

Colin Heath 07 Jun 2016

NOTE: If sample is too viscous, centrifuge the Tube-O-DIALYZER™ in an inverted position (i.e. the dialysis membrane facing downward). We recommend inverting the Tube-O-DIALYZER™ in the Tube-O-DIALYZER™ centrifuge adaptor (Cat. # 786-145) or a 50ml centrifuge tube and centrifuging for 5 seconds at 500-1,000g. Do not spin longer as this may cause the membrane to rupture.

Step 6.

Keeping the Tube-O-DIALYZER™ in an inverted position, slide the supplied float onto the Tube-O-DIALYZER™ tube. Place the Tube-O-DIALYZER™ in the dialysis buffer.

Step 7.

Ensure that the dialysis membrane contacts the dialysis buffer. If there are large air bubbles trapped underneath the dialysis membrane surface, tilt the tube or squirt buffer to remove the air bubbles.

Step 8.

Gently, stir the dialysis buffer. For efficient and complete dialysis we recommend inverting or gently tapping the Tube-O-DIALYZER™ 1-2 times during dialysis to mix the sample.

📌 NOTES

Colin Heath 08 Jun 2016

If necessary, centrifuge the Tube-O-DIALYZER™ in an inverted position (i.e. the dialysis membrane facing downward). We recommend inverting the Tube-O-DIALYZER™ in the Tube-O-DIALYZER™ centrifuge adaptor (Cat. # 786-145) or a 50ml centrifuge tube and centrifuging for 5 seconds at 500- 1,000g. Do not spin longer as this may cause the membrane to rupture.

Step 9.

Dialysis Time: Dialysis time will depend on the nature of sample, MWCO of the Tube-O-DIALYZER™, sample and dialysis buffer volume and concentration. Higher MWCO will allow faster dialysis. As a guide, the sample should be dialyzed for 2-12h. Dialysis buffer should also be replaced at least once during dialysis.

Step 10.

After dialysis, remove the Tube-O-DIALYZER™ from the float and immediately spin the Tube-O-DIALYZER™ (in up-right position) for 5-6 seconds at 500-1,000xg.

🕒 DURATION

00:00:05

NOTE: Do not spin longer as this may cause the membrane to rupture.

Step 11.

Discard the dialysis cap and replace with the supplied Storage Cap.