

How to use a dialysis chamber ?

3 mL Dialysis Chamber
15 mL Dialysis Chamber

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SPL Dialysis chamber

Dialysis Chamber is used for various dialysis applications such as desalting, buffer exchange, reagent removal, drug binding experiment, cell growth and supply, virus purifications, blood transformation, etc. It can rapidly and effectively dialysis various volumes from 3 mL to 15 mL, and has a higher recovery rate of 95 to 98% than the commonly used Dialysis tubing type.



- Excellent pH and chemical stability, the membranes are stable in weak acids and bases (pH 5 ~ 9)
- Membrane composition: Regenerated cellulose
- Membrane Weight Cut-Off (MWCO): 3.5K, 7K, 14K
- 3 mL Dialysis Chamber (Cat. No. 97003, 97007, 97014)
- 15 mL Dialysis Chamber (Cat. No. 97103, 97107, 97114)
- Float buoys for floating 3 mL dialysis Chamber (Cat. No. 97099)

3 mL dialysis chamber

3 ml dialysis chamber.

1. Insert syringe needle through the gasket via one of the corner ports. Inject the sample, withdraw the excess air and remove the syringe.
2. Attach a float buoy dialyze. (Buoys also serve as convenient bench-top stands for the cassettes.)
3. Insert empty syringe needle at a second corner port. Inject air to expand the cassette chamber, then withdraw the dialyzed sample.

15 mL dialysis chamber for pipette

A pipette with 15 ml dialysis chamber.

1. Immerse the cassette in dialysis buffer for 2 minutes.
2. Remove cassette from buffer. ((Do not blot the membrane)
3. Open the cassette by gently unscrewing the cap and then gently pulling out the cap.
4. Using appropriate device add the sample to the cassette, slowly withdrawing the pipette while dispensing.
5. Remove the excess air in the cassette by simultaneously pressing the membrane gently on both sides using your gloved thumb and forefinger and inserting the cap.
6. Insert cap and lock by gently twisting it clockwise.
7. Float cassette vertically in the dialysis buffer and stir gently.
8. A typical dialysis procedure is as follows: dialyze for 2 hours at room temperature or 4°C; change the dialysis buffer and dialyze for another 2 hours; change the dialysis buffer and dialyze overnight.
9. If the cassette is swollen recover the sample using a syringe and as described in the procedure for using a syringe with the 15ml dialysis chamber, section 11-12. Opening a swollen cassette will cause the sample to rise into the loading port and a portion may be lost.
10. Remove cassette from buffer. To remove excess buffer, gently tap the cassette on a paper towel.
11. Open the cassette by gently turning the cap counter-clockwise and then pulling out the cap.
12. Using an appropriate sized serological pipette, retrieve the sample by slowly aspirating while inserting pipette toward bottom of the cassette.

15 mL dialysis chamber for syringe

A syringe with 15 ml dialysis chamber.

1. Immerse the cassette in dialysis buffer for 2 minute.
2. Remove cassette from buffer. ((Do not blot the membrane)
3. Fill the syringe with the sample, leaving a small of air in the syringe.
4. Penetrate the gasket through a syringe port at the cassette's corner. Overextending the needle into the sample chamber. Slowly extend the needle minimally into the cavity so that the open end of the needle is barely visible.
5. Inject approximately half of the sample. For samples with high protein concentrations (e.g. 10 mg/mL), avoid foaming by filing the cassette slowly.
6. Withdraw some air from the cassette by pulling back on the syringe piston and then inject remaining sample.
7. With the needle inserted into the cassette cavity, withdraw remaining air to compress the membrane windows so the sample contacts the greatest possible membrane surface area. A small amount of air left inside the cassette will not significantly affect dialysis efficiency.
8. Remove needle from the cassette while retaining air in the syringe. The gasket will reseal and the membrane cavity will contain minimal or no air. Place a mark on the cassette corner with a permanent marker to note which needle port was used.
9. Float cassette vertically in the dialysis buffer and stir gently
10. A typical dialysis procedure is as follows: dialyze for 2 hours at room temperature or 4°C; change the dialysis buffer and dialyze for another 2 hours; change the dialysis buffer and dialyze overnight.
11. Penetrate gasket with the needle through an unused syringe guide port and slowly inject air into the sample chamber to maximum allowed sample volume to separate membranes, which prevents membrane needle puncture.
12. With the needle in place, turn the unit so that needle is at the bottom. Allow sample to collect near the port and withdraw sample into the syringe.

SPL Dialysis Chamber



Cat.No.	Materials	Color	MWCO	Working Volume (ml)	Packaging
97003	PC	Green	3.5 K	3.00 - 5.00	1 / 10
97007	PC	Blue	7 K	3.00 - 5.00	1 / 10
97014	PC	White	14 K	3.00 - 5.00	1 / 10
97099	Sponge	White	-	-	10
97103	PC	Green	3.5 K	13.00 - 15.00	1 / 8
97107	PC	Blue	7 K	13.00 - 15.00	1 / 8
97114	PC	White	14 K	13.00 - 15.00	1 / 8