

Microdialyzer™ System 100

Microdialyzer™ System 500

66320 66350

0493

Product Description

NUMBER	DESCRIPTION
66320	Microdialyzer™ System 100
66350	Microdialyzer™ System 500
	Contents:
	Microdialyzer™ Unit, complete
	Storage box
	60 cc Luer-Lok® syringe
	Three 1-way Luer valves with caps
	Two thumb screw replacements
	Two Luer Lok tubing adaptors
	Two silicone O-ring replacements
	Two Nylon sample well liner replacements
	One dialyzer membrane; MW cutoff 8,000
66321	Replacement Parts System 100
66351	Replacement Parts System 500
	12 silicone O-rings, 1 Luer-Lok hose adaptor,
	12 Nylon sampler well liners, two 1-way valves

Framed dialysis membranes of various molecular weight cut-offs available. Please see catalog.

The Microdialyzer™ System 100 dialyzes 12 x 20-100 µl samples.

The Microdialyzer™ System 500 dialyzes 5 x 100-500 µl samples.

Instructions for the Microdialyzer™

Care and Cleaning

To clean the Microdialyzer™, rinsing with distilled/deionized (DD) water is sufficient for most applications. For more demanding situations, soak the unit in a mild detergent, followed by a thorough rinsing with DD water. Avoid using materials that may damage the surface.

To sterilize, a 5% hypochlorite bleach solution is recommended.

Refer to the Chemical Compatibility Chart on page 6 to assure that a solvent is recommended for use.

A Delrin® Sample Well Plate (Product No. 66322 and 66352 for system 100 & 500 respectively) must be used if autoclaving is necessary for your application. The Delrin Sample Well Plate is the only portion of the Microdialyzer™ that is autoclavable.

Instructions for Use

1. Remove Luer outlet cap and cap from a 1-way valve. Insert the 1-way valve into the outlet. Close valve and attach tubing adaptor.
2. Place a length of tubing onto the tubing adaptor on the dialysate outlet.
3. Remove the evaporation lid by lifting up past the thumb screws.
4. Remove the screws and the sample well plate.
5. Remove Luer inlet cap and cap from a 1-way valve. Attach 1-way valve to inlet. Valve should be in the closed position.
6. Remove precut and framed dialysis membrane from packet and rinse with deionized water. Place membrane frame, *membrane side down*, over the silicone O-rings. Alternatively, membranes can be prepared by cutting an appropriate MW cut-off dialysis membrane to measure 4.0 cm x 11.0 cm. If dialysis tubing is used, slit along fold to yield a single sheet. A minimum flat width of 1/2" will cover the silicone O-rings when converted to a single sheet by slitting along fold.
7. Position sample well plate over membrane and O-rings. Put the 4 thumb screws into place. Lightly tighten 2 of the thumb screws at diagonal corners. Then alternate to the other 2 thumb screws and tighten them to a slightly greater degree. Continue this alternating and tightening action until membrane is secured firmly in place.
8. Remove the piston from the syringe, converting the syringe cylinder into a reservoir. Thread the syringe tightly onto the 1-way valve attached to the inlet port.
9. With the inlet valve closed, fill the syringe cylinder with fresh *degassed* buffer. Buffer should be the same temperature as the conditions under which the samples are to be dialyzed.
10. Lift the dialysate outlet end of the unit so a 30-45 degree angle is achieved between the unit and the bench top. Either hold the unit at this angle during the filling procedure or place an object under the Microdialyzer™ to maintain the recommended angle.
11. Place the tubing from the dialysate outlet into a beaker to capture the dialysis buffer outflow from the filling procedure.
12. Open the dialysate outlet valve.
13. Open the inlet valve under the syringe. Allow the buffer to slowly fill the cavity. After the buffer has passed the third row of sample wells on the Microdialyzer™, close the valve from the syringe. (Avoid letting the reservoir run out of buffer before you refill).
14. Maintain the unit at the 30-45 degree angle and refill the syringe cylinder with buffer.
15. The fill is complete when only buffer and not air is flowing from the dialysate outlet valve.
16. When the fill is complete, close the dialysate outlet valve.
17. Lower the Microdialyzer to rest level on the bench top. Check to see that there are no air bubbles under the membrane.
18. Apply 20-100 µl samples to the sample wells with a micropipette or other suitable device.
19. Replace the evaporation lid. For additional protection, apply Parafilm wrap over the sample wells before replacing cover.
20. Stirring will increase dialysis efficiency. To stir, place Microdialyzer™ on stir plate. Stir slowly, taking care not to incorporate air bubbles which may hinder dialysis. Dialyze for about 60 minutes or other time established to be suitable for your sample.
21. Recover sample with micropipette or other suitable device.

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Parafilm is a registered trademark of American Can Company.

Nylon is a registered trademark of E.I. DuPont.

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Telephone 800-8-PIERCE or 815-968-0747

Fax 815-968-7316 or 800-842-5007

Chemical Compatibility Chart for Acrylic Based Products

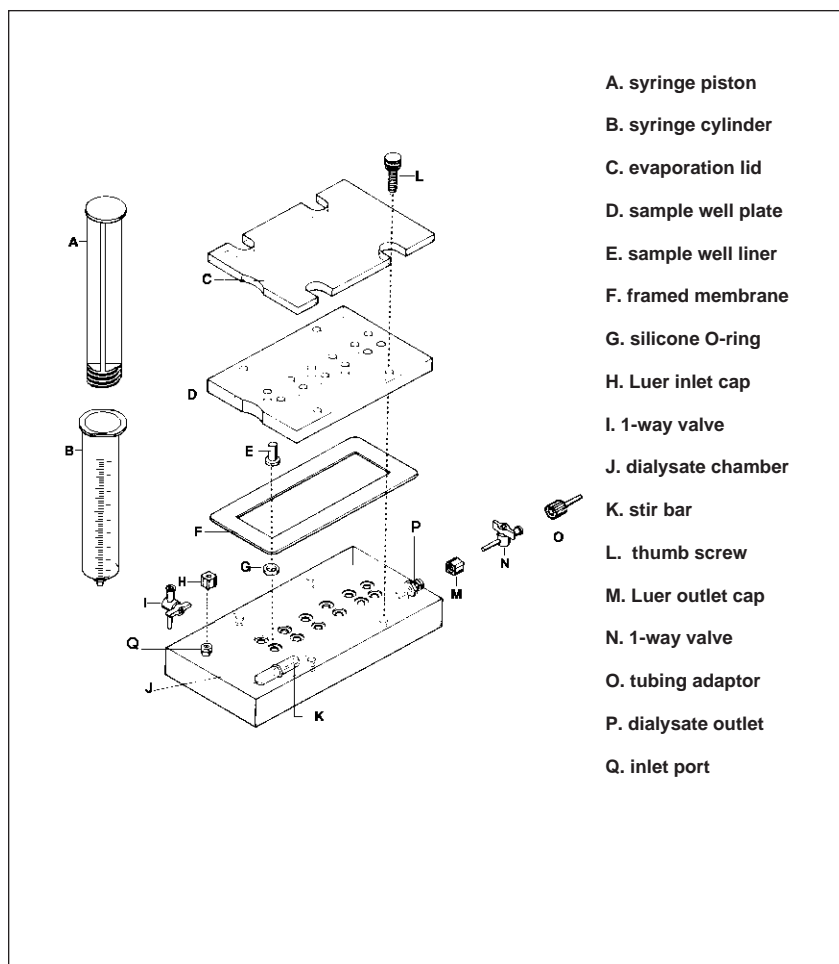
CHEMICAL	CODE	CHEMICAL	CODE
Acetic Acid (5%)	S	Hydrofluoric Acid (40%)	U
Acetic Acid (Glacial)	D	Hydrogen Peroxide, 3% solution	S
Acetic Anhydride	A	Hydrogen Peroxide, 28% solution	U
Acetone	D	Isooctane	S
Ammonia (see Ammon. Hydrox.)	S	Isopropyl Alcohol (100%)	A
Ammonium Chloride (saturated)	S	Kerosene (No. 2 Fuel Oil)	S
Ammonium Hydroxide (10%)	S	Lacquer Thinner	D
Ammonium Hydroxide (concentrated)	S	Methyl Alcohol (50%)	A
Aniline	D	Methyl Alcohol (100%)	U
Benzene	D	Methyl Ethyl Ketone (M.E.K.)	U
Butyl Acetate	D	Methylene Chloride	D
Calcium Chloride (saturated)	S	Mineral Oil (White)	S
Carbon Tetrachloride	U	Naphtha (VM&P)	S
Chloroform	D	Nitric Acid (10%)	S
Chromic Acid (40%)	U	Nitric Acid (40%)	A
Citric Acid (10%)	S	Nitric Acid (concentrated)	U
Cottonseed Oil (edible)	S	Oleic Acid	S
Detergent Solution (Heavy Duty)	S	Olive Oil (edible)	S
Diesel Oil	S	Phenol Solution (5%)	U
Diethyl Ether	U	Soap Solution (Ivory)	S
Dimethyl Formamide	U	Sodium Carbonate, 2% solution	S
Diocetyl Phthalate	A	Sodium Carbonate, 20% solution	S
Ethyl Acetate	D	Sodium Chloride, 10% solution	S
Ethyl Alcohol (50%)	A	Sodium Hydroxide, 1% solution	S
Ethyl Alcohol (95%)	U	Sodium Hydroxide, 10% solution	S
Ethylene Dichloride	D	Sodium Hydroxide, 60% solution	S
Ethylene Glycol	S	Sodium Hypochlorite, 5% solution	S
2-Ethylhexyl Sebacate	S	Sulfuric Acid (3%)	S
Formaldehyde (40%)	S	Sulfuric Acid (30%)	S
Gasoline, regular, leaded	S	Sulfuric Acid (concentrated)	U
Glycerine	S	Toluene	D
Heptane (commercial grade)	S	Trichloroethylene	D
Hexane	S	Turpentine	D
Hydrochloric Acid (10%)	S	Water (Distilled)	S
Hydrochloric Acid (concentrated)	S	Xylene	D

Explanation of Code:

<i>S - Safe</i>	No effect, except possibly some staining.
<i>A - Attacked</i>	Slight attack by, or absorption of, the liquid. Slight crazing swelling, but acrylic has retained most of its strength.
<i>U - Unsatisfactory</i>	Softened, swollen, slowly dissolved.
<i>D - Dissolved</i>	In seven days or less.

Telephone 800-8-PIERCE or 815-968-0747

Fax 815-968-7316 or 800-842-5007



- A. syringe piston
- B. syringe cylinder
- C. evaporation lid
- D. sample well plate
- E. sample well liner
- F. framed membrane
- G. silicone O-ring
- H. Luer inlet cap
- I. 1-way valve
- J. dialysate chamber
- K. stir bar
- L. thumb screw
- M. Luer outlet cap
- N. 1-way valve
- O. tubing adaptor
- P. dialysate outlet
- Q. inlet port