

## **Dialysis Membrane**

instructions

<ul> <li>Calculate length of tubing needed by referencing vol/cm. Allow at least 10% additional length to allow for expansion / contraction of sample. Also allow an addition 2-4 cm on either en for tubing clamps.</li> <li>Soak tubing in distilled water for 15-20 minutes, and rinse thoroughly in clean distilled water.</li> <li>Clamp one end of tubing, and inject sample into the open end. Clamp the other end of the tubing, and immerse the filled tube in dialysis buffer solution – typically distilled water.</li> <li>When dialysis is complete, remove tube fro buffer solution, release one clamp, and remove sample.</li> </ul>
Low molecular weight salts and buffers equilibrate within three hours with stirring. Equilibration times for viscous samples will be longer. Change the dialysis buffer as necessary. Usually two dialysis buffer changes are sufficient. Three changes may be necessary, depending on many factors, including temperature, filter gradient and concentration.
<ul> <li>If trace amounts of sulphur or other impurities will interfere with your procedure, the membrane should be prepared as described below:</li> <li>① Wearing gloves, cut the dialysis membrane into the desired length and fully immerse into 1L of 2% NaHCO<sub>3</sub>/1mM EDTA solution.</li> <li>② Boil the membrane for 10 minutes, and then rinse thoroughly in distilled Water.</li> <li>③ Boil the membrane in distilled Water for 10 minutes.</li> <li>④ Decant off water.</li> <li>⑤ Add enough 50% Ethanol/1mM EDTA solution to fully submerge the membrane.</li> <li>⑥ Before use, wash tubing inside and out with distilled water and condition in dialysis buffer (if necessary, tubing may be sterilized).</li> <li>Note: After this pre-treatment, membranes can be stored in the Ethanol/EDTA solution at 4°C for 1 week.</li> </ul>
Sterilization can be performed after initial soaking and preparation. Membranes should NEVER be allowed to dry out. The following methods are approved: Steam Autoclave Gamma-Irradiation Chemical Sterilization with Ethylene Oxide gas
When wet, membranes are most susceptible to microbes and fungi. Such microbial growths will impair the dialysis properties of the material and cause decreased yield and infection of the sample. Therefore, tubings should not be left without satisfactory protection against bacteria and fungi. Store unused, wet membranes submersed in a 20-50% ethanol solution pleaced in refrigeration.

Packing and StorageUnused membranes should be stored in the original bag or airtight container in a<br/>cool place, away from heating vents and direct sunlight.

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**Regenerated cellulose** has excellent resistance against organic solvents and is predominantly used for the filtration of non-aqueous liquids with which other materials are not compatible. Chemical compatibilities can be influenced by various factors. Therefore, we recommend that you confirm compatibility with the liquid you wish to use by performing a trial run before you begin with actual dialysis.

Chemical compatibility	<ul> <li>G - Compatible</li> <li>N - Not compatible</li> <li>F - Limited compatibility (sw</li> </ul>	elling or shrinkage may occur)	(Contact time: 24 hours at 20°C)
[ Solvents ]	Acetonitrile - G Benzene Benzyl alcohol - G n-Butanol - G n-Butyl acetate - G Carbon tetrachloride - G Cellosolve - G Chloroform - G Cyclohexane - G Cyclohexanone - G Diethyl ether - G Diethyl acetamide - F Dimethyl formamide - G	Dioxane - G Ethanol, 98% - G Ethyl acetate - G Ethylene glycol - G Gasoline - G Glycerol - G n-Heptane - G n-Heptane - G Isobutanol - G Isopropanol - G Isopropyl acetate - G Methanol, 98% - G	Methylene chloride - G Methyl ethyl ketone - G Methyl isobutyl ketone - G Monochlorbenzene - G Nitrobenzene - G n-Pentane - G Perchloroethylene - G Pyridine - G Toluene - G Trichlorethane - G Trichlorethylene - G Xylene - G
[ Acids ]	Acetic acid, 25% - G Acetic acid, 96% - G Hydrochloric acid, 25% - N Hydrochloric acid, 37% - N Hydrofluoric acid, 25% - F	Hydrofluoric acid, 50% - N Nitric acid, 25% - N Nitric acid, 65% - N Perchloric acid, 25% - F Phosphoric acid, 25% - F	Phosphoric acid, 85% - F Sulfuric acid, 25% - F Sulfuric acid, 98% - N Trichloracetic acid, 25%v - G
[ Bases ]	Ammonium hydroxide, 1N - F Ammonium hydroxide, 25% - F Potassium hydroxide, 32% - F	Sodium hydro Sodium hydro	ride, 32% - F ride, 1N - F
[ Aqueous Solutions ]	Ammonium fluoride, 20% - F Ammonium persulfate - G Ferric chloride, 25% - G	Formaldehyde Hydrogen perc Sodium hypocl	, 30% - F xide, 35% - F nlorite, 5% - G

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