
Econo-Column[®] Product Guide

For Technical Service
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BIO-RAD

Econo-Column Chemical Resistance Guide

This chart is intended as a guide only. Many factors (concentration, temperature, intermittent or continuous exposure, etc.) will affect the stability of the plastic parts. Because of the wide diversity of possible reagents and service conditions, there is no effective substitute for a practical trial.

Chemical Resistance Classification

- E Excellent: 30 days of constant exposure causes no damage.
- G Good: little or no damage after 30 days of constant exposure to the reagent.
- F Fair: some effect after 7 days of constant exposure to the reagent.
- N Not recommended for continuous use. Immediate damage may occur.
- No data available.

The first letter of each pair applies to conditions at 20°C; the second to those at 50°C.

Reagent	Econo-Column		Flow Adaptor	
	20°C	50°C	20°C	50°C
Acetaldehyde	G	N	G	N
Acetic acid, 5%	E	E	E	E
Acetic acid, 50 %	E	E	E	E
Acetone	N	N	N	N
Acetonitrile	F	N	F	N
Aluminum salts	E	E	E	E
Ammonia	E	E	E	E
Amyl acetate	G	F	E	E
Aniline	G	F	G	F
Benzaldehyde	E	G	E	G
Benzene	G	F	G	F
Benzyl alcohol	N	N	N	N
n-Butyl acetate	G	F	G	F
n-Butyl alcohol	E	E	E	E
sec-Butyl alcohol	E	G	E	G
tert-Butyl alcohol	E	G	E	G
Carbon tetrachloride	G	F	G	F
Chlorine, 10% (moist)	F	N	F	N
Chloroacetic acid	E	-	E	-
Chlorobenzene	N	N	N	N
Chloroform	G	F	G	F
Chomic acid, 10%	E	E	E	E
Chromic acid, 50%	G	F	G	F

Reagent	Econo-Column		Flow Adaptor	
	20°C	50°C	20°C	50°C
Citric acid	E	E	E	E
Cresol	G	F	G	F
Cyclohexane	F	N	F	N
Cyclohexanone	F	N	F	N
Dimethyl formamide	N	N	N	N
Dimethylsulfoxide	-	-	-	-
Ethyl acetate	N	N	N	N
Ethyl alcohol	E	G	E	G
Ethyl benzene	-	-	-	-
Ethyl chloride, liquid	F	N	F	N
Formaldehyde, 40%	E	G	E	G
Formic acid, 98–100%	E	G	E	G
Glycerine	E	E	E	E
Hydrochloric acid, 35%	E	G	E	G
Hydrofluoric acid, 48%	E	E	E	E
Hydrogen peroxide, 90%	E	-	E	-
Isobutyl alcohol	E	E	E	E
Isopropyl alcohol	E	E	E	E
Lactic acid, 85%	G	F	G	F
Methylene chloride	N	N	N	N
Nitric acid, 10%	E	E	E	E
Nitric acid, 50%	F	N	F	N
Nitrobenzene	N	N	N	N
Perchloric acid	G	N	G	N
Phenol, liquid	N	N	N	N
Phosphoric acid, 5%	E	E	E	E
Phosphoric acid, 85%	E	G	E	G
Propionic acid	E	G	E	G
Sodium acetate, saturated	E	E	E	E
Sodium hydroxide, 1%	E	E	E	E
Sodium hydroxide, 50% to saturated	E	G	E	G
Sodium hypochlorite	G	F	G	F
Sulfuric acid, 6%	E	E	E	E
Sulfuric acid, 60%	E	G	E	G
Sulfuric acid, 98%	F	N	F	N
Toluene	G	F	G	F
Trichloroacetic acid	F	N	F	N
Trichloroethane	N	N	N	N
Trichloroethylene	N	N	N	N
Tris buffer, solution	E	G	E	G
Urea	E	E	E	E
Xylene	F	N	F	N

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Pressure Stability

Econo-Column chromatography columns are designed for low-pressure applications, i.e., less than 1.0 atm. Use caution when operating the column with a pump. A disruption in flow may cause a rapid rise in backpressure. If this occurs, immediately shut off the pump and check the gel bed for compression.

Temperature Stability

Econo-Column chromatography columns and flow adaptors can be operated at temperatures up to 50°C. For applications requiring temperature control, jacketed columns are available in various sizes and formats. Refer to the Bio-Rad Life Sciences Research Products catalog for more information.

Sterilization

Econo-Column chromatography columns and accessories can be sterilized with 2 N NaOH or 100% ethanol. The columns can also be autoclaved, wet or dry, at a maximum of 15 min at 121°C.

Column Cleaning

Econo-Column chromatography columns can be cleaned with 70% ethanol. The bed support pore size is 20 µm and may require intermittent cleaning. To clean the bed support, backwash with 1 N NaOH.

Accessories

A full range of Econo-Column accessories are also available. For more detailed ordering information, refer to the Bio-Rad Life Science Research Products catalog.

Flow Adaptors

Flow adaptors improve resolution and reduce mechanical disruption by delivering sample and buffer directly to the top of the gel bed.

Catalog#	Description
738-0014	Flow Adaptor , 1 cm ID, 7 cm long
738-0015	Flow Adaptor , 1 cm ID, 14 cm long
738-0016	Flow Adaptor , 1.5 cm ID, 14 cm long
738-0017	Flow Adaptor , 2.5 cm ID, 14 cm long
738-0018	Flow Adaptor , 5.0 cm ID, 14 cm long
738-0019	Econo-Pac® Flow Adaptor , 1.5 cm ID, 7 cm long

Reservoirs

Reservoirs are ideal for column packing, loading dilute samples, or delivering large quantities of buffer.

Catalog #	Description
731-0003	Econo-Column Funnel , 5
737-9112	Econo-Column Glass Reservoir , 500 ml
737-9113	Econo-Column Glass Reservoir , 1,000 ml

Tubing

Bio-Rad offers an extensive line of low-pressure tubing to meet fluid handling needs.

Catalog #	Description
731-8210	Silicone Tubing , 0.8 mm ID/0.8 mm wall, 10 m
731-8211	Silicone Tubing , 1.6 mm ID/0.8 mm wall, 10 m
731-8212	Silicone Tubing , 3.2 mm ID/0.8 mm wall, 10 m
731-8213	Tygon Tubing , 0.51 mm ID/0.8 mm wall, 10 m
731-8214	Tygon Tubing , 0.8 mm ID/0.8 mm wall, 10 m
731-8215	Tygon Tubing , 1.6 mm ID/0.8 mm wall, 10 m
731-8207	PharMed Tubing , 0.8 mm ID/1.0 mm wall, 10 m
731-8208	PharMed Tubing , 1.6 mm ID/1.0 mm wall, 10 m
731-8209	PharMed Tubing , 3.2 mm ID/1.0 mm wall, 10 m
750-0603	FEP Tubing , 1.6 mm ID/1.6 mm wall, 4.6 m

Fittings and Valves

Catalog #	Description
731-8220	Econo System Fittings Kit , 250 pieces

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