



W-TPE™ BIOPHARMACEUTICAL TUBING CHEMICAL RESISTANCE GUIDE

The extent to which extraction may occur, or the degree to which fluids may undergo any physical changes in properties or composition, as a result of coming into contact with the tubing **ARE NOT** reflected in the chart below. WHK BioSystems makes no representation or warranty with respect to the susceptibility of any fluid to become contaminated or undergo changes in properties or composition as a result of possible leaching of tubing ingredients by the substance being transmitted.

NOTE: It is the sole responsibility of the user to determine suitability and safety of all products for intended use, and information supplied in this chart is intended to provide guidance only. WHK BioSystems disclaims all liability regarding the product's fitness for use.

KEY: Excellent (E) | Good (G) | Fair (F) | Not Recommended (N) Environment, % Concentrate * W=water, A=alcohol

Acetaldehyde	F	Borax, 6% in W	E	Dimethylsulfoxide (DMSO)	N	Hydrogen Peroxide, 90% in W	E
Acetamide, 67% in W	G	Boric Acid, 4% in W	E	Ethyl Acetate	E	Hydrogen Sulfide	E
Acetic Acid, 10% in W	E	Bromine, Anhydrous Liquid	N	Ethyl Alcohol (Ethanol)	E	Hydroquinone, 7% in W	G
Acetic Acid, 50-60% in W	E	Butadiene	E	Ethyl Benzoate	N	Hypochlorous Acid, 25% in W	E
Acetic Acid, Glacial, 100%	F	Butane	E	Ethyl Chloride	E	Iodine, 50 ppm in W	E
Acetic Anhydride	E	Butyl Acetate	N	Ethylene Chlorohydrin	E	Isobutyl Alcohol	F
Acetone	N	Butyl Alcohol	E	Ethylene Dichloride	E	Isopropyl Alcohol	F
Acetylene Gas	E	Butyric Acid	E	Ethylene Glycol	E	Ketones	N
Acrylonitrile	N	Calcium Carbonate, 25% dilute acids	E	Ethylene Oxide	E	Lactic Acid, 3-10% in W	E
Adipic Acid, 100% in A	F	Calcium Chloride, 30% in W	E	Fatty Acids	E	Lactic Acid, 85% in W	E
Air	E	Calcium Hydroxide, 10% in glycerol	E	Ferric Chloride, 43% in W	E	Lard, Animal Fat	F
Alcohols General	F	Calcium Hypochlorite, 20% in W	E	Ferric Nitrate, 60% in W	E	Lead Acetate, 35% in W	E
Allyl Alcohol	F	Calcium Nitrate, 55% in W	E	Ferric Sulfate, 5% in W	E	Lead Salts	E
Alum, 5% in W	E	Calcium Salts	E	Ferrous Chloride, 40% in W	E	Lemon Oil	N
Aluminum Chloride, 53% in W	E	Calcium Sulfate, 1% in W	E	Ferrous Sulfate, 5% in W	E	Limonene-D	N
Aluminum Hydroxide, 2% in W	E	Carbon Dioxide, Wet/Dry	E	Fluoboric Acid, 48% in W	E	Linoleic Acid	F
Aluminum Salts	E	Carbon Disulfide	N	Fluorine Gas	N	Linseed Oil	N
Aluminum Sulfate, 50% in W	E	Carbon Monoxide	E	Fluosilicic Acid, 25% in W	E	Magnesium Carbonate, 1% in W	E
Amines	F	Carbon Tetrachloride	N	Formaldehyde, 37% in W	E	Magnesium Chloride, 35% in W	E
Ammonia Gas	E	Carbonic Acid	E	Formic Acid, 25% in W	E	Magnesium Hydroxide, 10% dilute acid	E
Ammonia, Anhydrous Liquid	E	Castor Oil	F	Formic Acid, 40-50% in W	E	Magnesium Nitrate, 50% in W	E
Ammonium Acetate, 45% in W	E	Cellosolve	N	Formic Acid, 98% in W	E	Magnesium Sulfate, 25% in W	E
Ammonium Carbonate, 50% in W	E	Cellosolve Acetate	N	Gelatin	E	Maleic Acid, 30% in W	F
Ammonium Hydroxide, 5-10% in W	E	Chlorine, Dry Gas	G	Glucose, 50% in W	E	Malic Acid, 36% in W	E
Ammonium Hydroxide, 30% in W	E	Chlorine, Wet Gas	F	Glycerol, (Glycerin)	E	Manganese Salts	E
Ammonium Persulfate, 30% in W	E	Chloroacetic Acid, 20% in w	E	Glycolic Acid, 70% in W	G	Mercuric Chloride, 6% in W	E
Ammonium Salts	E	Chlorobenzene, Mono, Di, Tri	N	Heptane	N	Mercuric Cyanide, 8% in W	E
Ammonium Sulfate, 30% in W	E	Chloroform	N	Hexane	N	Mercury	E
Antimony Salts	E	Chlorosulfonic Acid	E	Hydrazine	N	Mercury Salts	E
Aqua Regia	E	Chromic Acid, 10-20% in W	E	Hydrobromic Acid, 100% in W	E	Methane Gas	E
Aromatic Hydrocarbons	N	Chromic Acid, 50% in W	G	Hydrobromic Acid, 20-50% in W	E	Methyl Acetate	N
Arsenic Acid, 20% in W	F	Citric Acid, 10-20% in W	E	Hydrochloric Acid, 10% in W	E	Methyl Alcohol (Methanol)	E
Arsenic Salts	E	Cresol (m, o, or p)	N	Hydrochloric Acid, 37% in W	E	Methyl Bromide	N
Barium Carbonate, 1% in W	E	Cresylic Acid	N	Hydrocyanic Acid	E	Methyl Chloride	N
Barium Hydroxide, 5% in W	E	Cupric Chloride, 40% in W	E	Hydrofluoric Acid, 10% in W	E	Methyl Ethyl Ketone (MEK)	N
Benzaldehyde	N	Cupric Nitrate, 70% in W	E	Hydrofluoric Acid, 25% in W	E	Methylene Chloride	N
Benzene	N	Cupric Sulfate, 13% in W	E	Hydrofluoric Acid, 40-48% in W	E	Milk	E
Benzenesulfonic Acid	E	Dibutyl Phthalate	F	Hydrogen Gas	E	Mineral Oil	F
Benzoic Acid	N	Diethylamine, 2.5% in W	E	Hydrogen Peroxide, 10% in W	E	Monoethanolamine	E
Benzyl Alcohol	N	Diethylene Glycol	E	Hydrogen Peroxide, 3% in W	E	Naphthalene	N
Bleach Liquor, 22% in W	E	Dimethylformamide	E	Hydrogen Peroxide, 30% in W	E	Nickel Chloride, 40% in W	E

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Nickel Nitrate, 75% in W	E	Phosphoric Acid, 25% in W	E	Sodium Benzoate, 22% in W	E	Sulfur Trioxide, Wet	E
Nickel Salts	E	Phosphoric Acid, 85% in W	G	Sodium Bicarbonate, 7% in W	E	Sulfuric Acid, 10% in W	E
Nickel Sulfate, 25% in W	E	Phosphorous Trichloride Acid	G	Sodium Carbonate, 7% in W	E	Sulfuric Acid, 30% in W	E
Nitric Acid, 10% in W	E	Photographic Solutions	G	Sodium Chlorate, 45% in W	E	Sulfuric Acid, 95-98% in W	E
Nitric Acid, 35% in W	E	Phthalic Acid, 9% in A	N	Sodium Chloride, 20% in W	E	Sulfurous Acid	E
Nitric Acid, 68-71% in W	E	Picric Acid, 1% in W	N	Sodium Cyanide, 30% in W	E	Tannic Acid, 75% in W	E
Nitrous Acid, 10% in W	E	Plating Solutions	G	Sodium Fluoride, 3% in W	E	Tartaric Acid, 56% in W	E
Nitrous Oxide	E	Potassium Carbonate, 55% in W	E	Sodium Hydroxide, 10-15% in W	E	Tetrahydrofuran	N
Oils, Animal	F	Potassium Cyanide, 33% in W	E	Sodium Hydroxide, 2-5% in W	E	Thionyl Chloride	E
Oils, Hydrocarbon	N	Potassium Dichromate, 5% in W	E	Sodium Hydroxide, 30-40% in W	E	Tin Salts	E
Oils, Vegetable	F	Potassium Hydroxide, <10% in W	E	Sodium Hypochlorite, 12.2% in W	E	Titanium Salts	E
Oleic Acid	F	Potassium Hypochlorite, 70% in W	G	Sodium Hypochlorite, 5.5% in W	E	Toluene	N
Oleum, 25% in W	G	Potassium Iodide, 56% in W	E	Sodium Nitrate, 3.5% in W	E	Trichloroacetic Acid, 90% in W	E
Ortho Dichlorobenzene	N	Potassium Permanganate, 6% in W	E	Sodium Salts	E	Tricresyl Phosphate	G
Oxalic Acid, 12% in W	E	Potassium Salts	E	Sodium Sulfate, 5% in W	E	Triethanolamine	N
Oxygen	E	Propyl Alcohol (Propanol)	F	Sodium Sulfide, 45% in W	E	TrisodiXm Phosphate	E
Ozone, 300pphm	E	Propylene Glycol	E	Sodium Sulfite, 10% in W	E	Urea, 20% in W	E
Palmitic Acid, 100% in Ether	N	Propylene Oxide	E	Stannic Chloride, 50% in W	E	Uric Acid	E
Paraffins	N	Pyridine	E	Stannous Chloride, 45% in W	E	Vinegar	E
Perchloric Acid, 67% in W	E	Salicylic Acid, 1% in W	E	Stearic Acid, 5% in A	E	Vinyl Acetate	N
Perchloroethylene	F	Silicone Oils	E	Styrene Monomer	N	Water, Deionized	E
Phenol, 5-10% in W	N	Silver Nitrate, 55% in W	E	Sulfur Chloride	E	Water, Distilled	E
Phenol, 91% in W	N	Soap Solutions	E	Sulfur Dioxide, Gas Dry	E	Zinc Chloride, 80% in W	E
Phosphoric Acid, <10% in W	E	Sodium Acetate, 55% in W	E	Sulfur Dioxide, Gas Wet	E	Zinc Salts	E

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