

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.

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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)	F	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 Hydroxide, 10% in glycerol	E	Ferric Nitrate, 60% in W	E	Lead Acetate, 35% in W	E
Allyl Alcohol	F	Calcium Hypochlorite, 20% in W	E	Ferric Sulfate, 5% in W	E	Lead Salts	E
Alum, 5% in W	E	Calcium Nitrate, 55% in W	E	Ferrous Chloride, 40% in W	E	Lemon Oil	N
Aluminum Chloride, 53% in W	E	Calcium Salts	E	Ferrous Sulfate, 5% in W	E	Limonene-D	N
Aluminum Hydroxide, 2% in W	E	Calcium Sulfate, 1% in W	E	Ferrous Sulfate, 5% in W	E	Linoleic Acid	F
Aluminum Salts	E	Carbon Dioxide, Wet/Dry	E	Fluoboric Acid, 48% in W	E	Linseed Oil	N
Aluminum Sulfate, 50% in W	E	Carbon Disulfide	N	Fluorine Gas	N	Magnesium Carbonate, 1% in W	E
Amines	F	Carbon Monoxide	E	Fluosilicic Acid, 25% in W	E	Magnesium Chloride, 35% in W	E
Ammonia Gas	E	Carbon Tetrachloride	N	Formaldehyde, 37% in W	E	Magnesium Hydroxide, 10% dilute acid	E
Ammonia, Anhydrous Liquid	E	Carbonic Acid	E	Formic Acid, 25% in W	E	Magnesium Nitrate, 50% in W	E
Ammonium Acetate, 45% in W	E	Castor Oil	F	Formic Acid, 40-50% in W	E	Magnesium Sulfate, 25% in W	E
Ammonium Carbonate, 50% in W	E	Cellosolve	N	Formic Acid, 98% in W	E	Maleic Acid, 30% in W	F
Ammonium Hydroxide, 5-10% in W	E	Cellosolve Acetate	N	Gelatin	E	Malic Acid, 36% in W	E
Ammonium Hydroxide, 30% in W	E	Chlorine, Dry Gas	G	Glucose, 50% in W	E	Manganese Salts	E
Ammonium Hydroxide, 30% in W	E	Chlorine, Wet Gas	F	Glycerol, (Glycerin)	E	Mercuric Chloride, 6% in W	E
Ammonium Persulfate, 30% in W	E	Chloroacetic Acid, 20% in w	E	Glycolic Acid, 70% in W	G	Mercuric Cyanide, 8% in W	E
Ammonium Salts	E	Chlorobenzene, Mono, Di, Tri	N	Heptane	N	Mercury	E
Ammonium Sulfate, 30% in W	E	Chloroform	N	Hexane	N	Mercury Salts	E
Antimony Salts	E	Chlorosulfonic Acid	E	Hydrazine	N	Methane Gas	E
Aqua Regia	E	Chromic Acid, 10-20% in W	E	Hydrobromic Acid, 100% in W	E	Methyl Acetate	N
Aromatic Hydrocarbons	N	Chromic Acid, 50% in W	G	Hydrobromic Acid, 20-50% in W	E	Methyl Alcohol (Methanol)	E
Arsenic Acid, 20% in W	F	Citric Acid, 10-20% in W	E	Hydrochloric Acid, 10% in W	E	Methyl Bromide	N
Arsenic Salts	E	Cresol (m, o, or p)	N	Hydrochloric Acid, 37% in W	E	Methyl Chloride	N
Barium Carbonate, 1% in W	E	Cresylic Acid	N	Hydrocyanic Acid	E	Methyl Ethyl Ketone (MEK)	N
Barium Hydroxide, 5% in W	E	Cupric Chloride, 40% in W	E	Hydrofluoric Acid, 10% in W	E	Methylene Chloride	N
Benzaldehyde	N	Cupric Nitrate, 70% in W	E	Hydrofluoric Acid, 25% in W	E	Milk	E
Benzene	N	Cupric Sulfate, 13% in W	E	Hydrofluoric Acid, 40-48% in W	E	Mineral Oil	F
Benzenesulfonic Acid	E	Dibutyl Phthalate	F	Hydrogen Gas	E	Monoethanolamine	E
Benzoic Acid	N	Diethylamine, 2.5% in W	E	Hydrogen Peroxide, 10% in W	E	Napthalene	N
Benzyl Alcohol	N	Diethylene Glycol	E	Hydrogen Peroxide, 3% in W	E	Nickel Chloride, 40% in W	E
Bleach Liquor, 22% in W	E	Dimethylformamide	E	Hydrogen Peroxide, 30% 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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