

alkalies. Soluble in dilute solutions of alkalies; very slightly soluble in water, in alcohol, and in isotonic sodium chloride solution; insoluble in ether and in chloroform.

**Riboflavin 5'-Phosphate Sodium:** Fine, orange-yellow, crystalline powder, having a slight odor. Sparingly soluble in water. When dry, it is not affected by diffused light, but when in solution, light induces deterioration rapidly. Is hygroscopic.

**Rifabutin:** Amorphous red-violet powder. Soluble in chloroform and in methanol; sparingly soluble in alcohol; very slightly soluble in water.

**Rifampin:** Red-brown, crystalline powder. Freely soluble in chloroform; soluble in ethyl acetate and in methanol; very slightly soluble in water.

**Riluzole:** White to slightly yellow powder or crystalline powder. Freely soluble in acetonitrile, in alcohol, and in methylene chloride; slightly soluble in hexane; very slightly soluble in water.

**Rimexolone:** White to off-white powder. Freely soluble in chloroform; sparingly soluble in methanol.

**Risedronate Sodium:** White to off-white powder. Soluble in water and in aqueous solutions; insoluble in common organic solvents.

**Risperidone:** White or almost white powder. Soluble in methylene chloride; sparingly soluble in alcohol; practically insoluble in water.

**Ritodrine Hydrochloride:** White to nearly white, odorless or practically odorless, crystalline powder. Melts at about 200°. Freely soluble in water and in alcohol; soluble in *n*-propyl alcohol; practically insoluble in ether.

**Ritonavir:** White to light tan powder. Freely soluble in methanol and in methylene chloride; very slightly soluble in acetonitrile; practically insoluble in water.

**Rivastigmine Tartrate:** White to off-white powder. Very soluble in water and in methanol; very slightly soluble in ethyl acetate.

**Rizatriptan Benzoate:** White to almost white crystalline powder. Soluble in water; sparingly soluble in alcohol; slightly soluble in methylene chloride.

**Rocuronium Bromide:** Almost white or pale yellow. Slightly hygroscopic powder. Freely soluble in water and in dehydrated alcohol.

**Ropinirole Hydrochloride:** Pale cream to yellow powder. Soluble in water.

**Ropivacaine Hydrochloride:** White, crystalline powder. Soluble in water.

**Rose Oil:** Colorless or yellow liquid, having the characteristic odor and taste of rose. At 25° is a viscous liquid. Upon gradual cooling, changes to a translucent, crystalline mass, easily liquefied by warming. *NF category:* Flavors and perfumes.

**Rose Water Ointment:** *NF category:* Ointment base.

**Stronger Rose Water:** Practically colorless and clear, having the pleasant odor and taste of fresh rose blossoms. Is free from empyreuma, mustiness, and fungal growths. *NF category:* Flavors and perfumes.

**Roxarsone:** Pale yellow, crystalline powder. Freely soluble in acetic acid, in acetone, in alkalies, in methanol, and in dehydrated alcohol; soluble in boiling water; sparingly soluble in dilute mineral acids; slightly soluble in cold water; insoluble in ether and in ethyl acetate. Puffs up and deflagrates on heating.

**Rubella Virus Vaccine Live:** Solid having the characteristic appearance of substances dried from the frozen state. Undergoes loss of potency on exposure to sunlight. The Vaccine is to be constituted with a suitable diluent just prior to use.

**Saccharin:** White crystals or white, crystalline powder. Is odorless or has a faint, aromatic odor. In dilute solution, it is intensely sweet. Its solutions are acid to litmus. Soluble in

boiling water; sparingly soluble in alcohol; slightly soluble in water, in chloroform, and in ether. Is readily dissolved by dilute solutions of ammonia, by solutions of alkali hydroxides, and by solutions of alkali carbonates with the evolution of carbon dioxide. *NF category:* Sweetening agent.

**Saccharin Calcium:** White crystals or white, crystalline powder. Is odorless, or has a faint, aromatic odor, and has an intensely sweet taste even in dilute solutions. Its dilute solution is about 300 times as sweet as sucrose. Freely soluble in water. *NF category:* Sweetening agent.

**Saccharin Sodium:** White crystals or white, crystalline powder. Is odorless, or has a faint, aromatic odor, and has an intensely sweet taste even in dilute solutions. Its dilute solution is about 300 times as sweet as sucrose. When in powdered form, it usually contains about one-third the theoretical amount of water of hydration as a result of efflorescence. Freely soluble in water; sparingly soluble in alcohol. *NF category:* Sweetening agent.

**Saccharin Sodium Oral Solution:** Clear, colorless, odorless liquid, having a sweet taste.

**Safflower Oil:** Light yellow oil. Thickens and becomes rancid on prolonged exposure to air. Insoluble in water. Miscible with ether and with chloroform. *NF category:* Vehicle (oleaginous).

**Salicylamide:** White, practically odorless, crystalline powder. Freely soluble in ether and in solutions of alkalies; soluble in alcohol and in propylene glycol; slightly soluble in water and in chloroform.

**Salicylic Acid:** White crystals, usually in fine needles, or fluffy, white, crystalline powder. Has a sweetish, followed by an acid, taste and is stable in air. The synthetic form is white and odorless. When prepared from natural methyl salicylate, it may have a slightly yellow or pink tint, and a faint, mint-like odor. Freely soluble in alcohol and in ether; soluble in boiling water; sparingly soluble in chloroform; slightly soluble in water and in benzene.

**Salmeterol Xinafoate:** White to off-white powder. Soluble in methanol; slightly soluble in alcohol, in isopropanol, and in chloroform; practically insoluble in water (pH 8), and in saline solution (0.9% w/w).

**Scopolamine Hydrobromide:** Colorless or white crystals or white, granular powder. Melts at about 197°, with decomposition. Is odorless, and slightly efflorescent in dry air. Freely soluble in water; soluble in alcohol; slightly soluble in chloroform; insoluble in ether.

**Secobarbital:** White, amorphous or crystalline, odorless powder, having a slightly bitter taste. Its saturated solution has a pH of about 5.6. Freely soluble in alcohol, in ether, and in solutions of fixed alkali hydroxides and carbonates; soluble in chloroform; very slightly soluble in water.

**Secobarbital Sodium:** White powder. Is odorless, has a bitter taste, and is hygroscopic. Its solutions decompose on standing, heat accelerating the decomposition. Very soluble in water; soluble in alcohol; practically insoluble in ether.

**Selegiline Hydrochloride:** White, odorless, crystalline powder. Freely soluble in water, in chloroform, and in methanol.

**Selenium Sulfide:** Reddish-brown to bright orange powder, having not more than a faint odor. Practically insoluble in water and in organic solvents.

**Sennosides:** Brownish powder.

**Serine:** White, odorless crystals, having a sweet taste. Soluble in water; practically insoluble in absolute alcohol and in ether.

**Sertraline Hydrochloride:** White or off-white crystalline powder. Freely soluble in absolute alcohol; slightly soluble in water, in acetone, and in isopropanol.

**Sesame Oil:** Pale yellow, oily liquid. Is practically odorless, and has a bland taste. Slightly soluble in alcohol. Miscible with ether, with chloroform, with solvent hexane,

and with carbon disulfide. *NF category:* Solvent, vehicle (oleaginous).

**Sevoflurane:** Clear, colorless, volatile, nonflammable liquid. Slightly soluble in water. Miscible with alcohol, with chloroform, and with ether.

**Shellac:** *Orange Shellac*—Thin, hard, brittle, transparent, pale lemon-yellow to brownish orange flakes, having little or no odor; *Bleached Shellac*—Opaque, amorphous cream to yellow granules or coarse powder, having little or no odor. Soluble (very slowly) in alcohol, 85% to 95% (w/w), in ether, 13% to 15%, in benzene, 10% to 20%, in petroleum ether, 2% to 6%; soluble in aqueous solutions of ethanalamines, alkalies, and borax; sparingly soluble in oil of turpentine; insoluble in water. *NF category:* Coating agent.

**Sibutramine Hydrochloride Monohydrate:** White to cream crystalline powder. Slightly soluble in pH 5.2 water.

**Dental-Type Silica:** Fine, white, hygroscopic, odorless, amorphous powder, in which the diameter of the average particles ranges between 0.5 and 40  $\mu\text{m}$ . Soluble in hot solutions of alkali hydroxides; insoluble in water, in alcohol, and in acid (except hydrofluoric acid). *NF category:* Glidant and/or anticaking agent; suspending and/or viscosity-increasing agent.

**Hydrophobic Colloidal Silica:** Light, fine, white or almost white, amorphous powder, not wettable by water. Dissolves slowly in hot solutions of alkali hydroxides. Practically insoluble in water and in mineral acids, except hydrofluoric acid. *NF category:* Glidant and/or anticaking agent; suspending and/or viscosity-increasing agent.

**Purified Siliceous Earth:** Very fine, white, light gray, or pale buff mixture of amorphous powder and lesser amounts of crystalline polymorphs, including quartz and cristobalite. Is gritty, readily absorbs moisture, and retains about four times its weight of water without becoming fluid. Insoluble in water, in acids, and in dilute solutions of the alkali hydroxides. *NF category:* Filtering aid; sorbent.

**Silicon Dioxide:** Fine, white, hygroscopic, odorless, amorphous powder, in which the diameter of the average particles ranges between 2 and 10  $\mu\text{m}$ . Soluble in hot solutions of alkali hydroxides; insoluble in water, in alcohol, and in other organic solvents. *NF category:* Desiccant; suspending and/or viscosity-increasing agent.

**Colloidal Silicon Dioxide:** Light, white, nongritty powder of extremely fine particle size (about 15 nm). Soluble in hot solutions of alkali hydroxides; insoluble in water and in acid (except hydrofluoric). *NF category:* Glidant and/or anticaking agent; suspending and/or viscosity-increasing agent.

**Silver Nitrate:** Colorless or white crystals. The pH of its solutions is about 5.5. On exposure to light in the presence of organic matter, it becomes gray or grayish black. Very soluble in water and even more so in boiling water; freely soluble in boiling alcohol; sparingly soluble in alcohol; slightly soluble in ether.

**Toughened Silver Nitrate:** White, crystalline masses generally molded as pencils or cones. It breaks with a fibrous fracture. Its solutions are neutral to litmus. It becomes gray or grayish black upon exposure to light. Soluble in water to the extent of its nitrate content (there is always a residue of silver chloride); partially soluble in alcohol; slightly soluble in ether.

**Simethicone:** Translucent, gray, viscous fluid. The liquid phase is soluble in chloroform, in ether, and in benzene, but silicon dioxide remains as a residue in these solvents. Insoluble in water and in alcohol. *NF category:* Antifoaming agent; water repelling agent.

**Simvastatin:** White to off-white powder. Freely soluble in chloroform, in methanol, and in alcohol; sparingly soluble in propylene glycol; very slightly soluble in hexane; practically insoluble in water.

**Smallpox Vaccine:** Liquid Vaccine is a turbid, whitish to greenish suspension, which may have a slight odor due to

the antimicrobial agent. Dried Vaccine is a yellow to grayish pellet, which may or may not become fragmented when shaken.

**Soda Lime:** White or grayish-white granules. May have a color if an indicator has been added. *NF category:* Sorbent, carbon dioxide.

**Sodium Acetate:** Colorless, transparent crystals, or white, granular crystalline powder, or white flakes. Is odorless or has a faint acetous odor, and has a slightly bitter, saline taste. Is efflorescent in warm, dry air. Very soluble in water; soluble in alcohol. *NF category:* Buffering agent.

**Sodium Alginate:** Practically odorless and tasteless, coarse or fine powder, yellowish white in color. Soluble in water, forming a viscous, colloidal solution; insoluble in alcohol and in hydroalcoholic solutions in which the alcohol content is greater than about 30% by weight, in chloroform, in ether, and in acids when the pH of the resulting solution becomes lower than about 3. *NF category:* Suspending and/or viscosity-increasing agent.

**Sodium Ascorbate:** White or very faintly yellow crystals or crystalline powder. Is odorless or practically odorless. Is relatively stable in air. On exposure to light it gradually darkens. Freely soluble in water; very slightly soluble in alcohol; insoluble in chloroform and in ether.

**Sodium Benzoate:** White, odorless or practically odorless, granular or crystalline powder. Is stable in air. Freely soluble in water; soluble in 90% alcohol; sparingly soluble in alcohol. *NF category:* Antimicrobial preservative.

**Sodium Bicarbonate:** White, crystalline powder. Is stable in dry air, but slowly decomposes in moist air. Its solutions, when freshly prepared with cold water, without shaking, are alkaline to litmus. The alkalinity increases as the solutions stand, as they are agitated, or as they are heated. Soluble in water; insoluble in alcohol. *NF category:* Alkalizing agent.

**Sodium Bisulfite:** White, crystalline powder. Freely soluble in cold water and in hot water; sparingly soluble in alcohol. *NF category:* Antioxidant.

**Sodium Borate:** Colorless, transparent crystals or white, crystalline powder. Is odorless. Its solutions are alkaline to phenolphthalein TS. As it effloresces in warm, dry air, the crystals are often coated with white powder. Freely soluble in boiling water and in glycerin; soluble in water; insoluble in alcohol. *NF category:* Alkalizing agent.

**Sodium Bromide:** White, crystalline powder or colorless, cubic crystals. Freely soluble in water; soluble in alcohol.

**Sodium Butyrate:** Clear, colorless, hygroscopic powder. Soluble in water and in methanol. Melting range is about 250° to 253°.

**Sodium Caprylate:** A white, crystalline powder. Very soluble or freely soluble in water; freely soluble in acetic acid; sparingly soluble in alcohol; practically insoluble in acetone.

**Sodium Carbonate:** Colorless crystals, or white, crystalline powder or granules. Is stable in air under ordinary conditions. When exposed to dry air above 50°, the hydrous salt effloresces and, at 100°, becomes anhydrous. Very soluble in boiling water; freely soluble in water. *NF category:* Alkalizing agent.

**Sodium Cetostearyl Sulfate:** A white or pale yellow, amorphous or crystalline powder. Soluble in hot water giving an opalescent solution; slightly soluble in alcohol; practically insoluble in cold water.

**Sodium Chloride:** Colorless, cubic crystals or white crystalline powder. Has a saline taste. Freely soluble in water; soluble in glycerin; slightly soluble in alcohol. *NF category:* Tonicity agent.

**Sodium Chloride Inhalation Solution:** Clear, colorless solution.

**Bacteriostatic Sodium Chloride Injection:** Clear, colorless solution, odorless or having the odor of the bacteriostatic substance. *NF category:* Vehicle (sterile).

**Sodium Chloride Irrigation:** Clear, colorless solution.

**Sodium Citrate:** Colorless crystals, or white, crystalline powder. Hydrous form very soluble in boiling water; freely soluble in water; insoluble in alcohol. *NF category:* Buffering agent.

**Sodium Citrate and Citric Acid Oral Solution:** Clear solution having the color of any added preservative or flavoring agents.

**Sodium Dehydroacetate:** White or practically white, odorless powder, having a slight characteristic taste. Freely soluble in water, in propylene glycol, and in glycerin. *NF category:* Antimicrobial preservative.

**Sodium Fluoride:** White, odorless powder. Soluble in water; insoluble in alcohol.

**Sodium Formaldehyde Sulfoxylate:** White crystals or hard, white masses, having the characteristic odor of garlic. Freely soluble in water; slightly soluble in alcohol, in ether, in chloroform, and in benzene. *NF category:* Antioxidant.

**Sodium Hydroxide:** White, or practically white, fused masses, in small pellets, in flakes, or sticks, and in other forms. Is hard and brittle and shows a crystalline fracture. Exposed to the air, it rapidly absorbs carbon dioxide and moisture. Freely soluble in water and in alcohol. *NF category:* Alkalizing agent.

**Sodium Hypochlorite Solution:** Clear, pale greenish-yellow liquid, having the odor of chlorine. Is affected by light.

**Sodium Iodide:** Colorless, odorless crystals, or white, crystalline powder. Is deliquescent in moist air, and develops a brown tint upon decomposition. Very soluble in water; freely soluble in alcohol and in glycerin.

**Sodium Lactate Solution:** Clear, colorless or practically colorless, slightly viscous liquid, odorless or having a slight, not unpleasant odor. Miscible with water. *NF category:* Buffering agent.

**Sodium Lauryl Sulfate:** Small, white or light yellow crystals having a slight, characteristic odor. Freely soluble in water, forming an opalescent solution. *NF category:* Emulsifying and/or solubilizing agent; tablet and/or capsule lubricant; wetting and/or solubilizing agent.

**Sodium Metabisulfite:** White crystals or white to yellowish, crystalline powder, having the odor of sulfur dioxide. Freely soluble in water and in glycerin; slightly soluble in alcohol. *NF category:* Antioxidant.

**Sodium Monofluorophosphate:** White to slightly gray, odorless powder. Freely soluble in water.

**Sodium Nitrite:** White to slightly yellow, granular powder, or white or practically white, opaque, fused masses or sticks. Has a mild, saline taste and is deliquescent in air. Its solutions are alkaline to litmus. Freely soluble in water; sparingly soluble in alcohol.

**Sodium Nitrite Injection:** Clear, colorless liquid.

**Sodium Nitroprusside:** Reddish-brown, practically odorless, crystals or powder. Freely soluble in water; slightly soluble in alcohol; very slightly soluble in chloroform; insoluble in benzene.

**Dibasic Sodium Phosphate (dried):** White powder that readily absorbs moisture. Freely soluble in water; insoluble in alcohol. *NF category:* Buffering agent.

**Dibasic Sodium Phosphate (heptahydrate):** Colorless or white, granular or caked salt. Effloresces in warm, dry air. Its solutions are alkaline to phenolphthalein TS, a 0.1 M solution having a pH of about 9. Freely soluble in water; very slightly soluble in alcohol. *NF category:* Buffering agent.

**Monobasic Sodium Phosphate:** Colorless crystals or white, crystalline powder. Is odorless and is slightly deliquescent. Its solutions are acid to litmus and effervesce with so-

dium carbonate. Freely soluble in water; practically insoluble in alcohol. *NF category:* Buffering agent.

**Tribasic Sodium Phosphate:** The formula for a crystalline material is approximately  $4(\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O})\text{NaOH}$ . It occurs as white, odorless crystals or granules or as a crystalline powder. Freely soluble in water; insoluble in alcohol. The pH of a 1 in 100 solution is between 11.5 and 12.0.

**Sodium Polystyrene Sulfonate:** Golden brown, fine powder. Is odorless and has a characteristic taste. Insoluble in water.

**Sodium Propionate:** Colorless, transparent crystals or granular, crystalline powder. Is odorless, or has a faint acetic-butyric odor and is deliquescent in moist air. Very soluble in water; soluble in alcohol. *NF category:* Antimicrobial preservative.

**Sodium Salicylate:** Amorphous or microcrystalline powder or scales. Is colorless, or has not more than a faint, pink tinge. Is odorless, or has a faint, characteristic odor, and is affected by light. A freshly made solution (1 in 10) is neutral or acid to litmus. Very soluble in boiling water and in boiling alcohol; freely (and slowly) soluble in water and in glycerin; slowly soluble in alcohol.

**Sodium Starch Glycolate:** White, tasteless, odorless, relatively free-flowing powder; available in several different viscosity grades. A 2% (w/v) dispersion in cold water settles, on standing, in the form of a highly hydrated layer. *NF category:* Tablet disintegrant.

**Sodium Stearate:** Fine, white powder, soapy to the touch, usually having a slight, tallow-like odor. Is affected by light. Its solutions are alkaline to phenolphthalein TS. Slowly soluble in cold water and in cold alcohol; readily soluble in hot water and in hot alcohol. *NF category:* Emulsifying and/or solubilizing agent.

**Sodium Stearyl Fumarate:** Fine, white powder. Slightly soluble in methanol; practically insoluble in water. *NF category:* Tablet and/or capsule lubricant.

**Sodium Sulfate:** Large, colorless, odorless, transparent crystals, or a granular powder. Effloresces rapidly in air, liquefies in its water of hydration at about 33°, and loses all of its water of hydration at about 100°. Freely soluble in water; soluble in glycerin; insoluble in alcohol.

**Sodium Sulfite:** Colorless crystals. Freely soluble in water; very slightly soluble in alcohol. *NF category:* Antioxidant.

**Sodium Tartrate:** Transparent, colorless, odorless crystals. Freely soluble in water; insoluble in alcohol. *NF category:* Sequestering agent.

**Sodium Thiosulfate:** Large, colorless crystals or coarse, crystalline powder. Is deliquescent in moist air and effloresces in dry air at temperatures exceeding 33°. Its solutions are neutral or faintly alkaline to litmus. Very soluble in water; insoluble in alcohol. *NF category:* Antioxidant.

**Sorbic Acid:** Free-flowing, white, crystalline powder, having a characteristic odor. Soluble in alcohol and in ether; slightly soluble in water. *NF category:* Antimicrobial preservative.

**Sorbitan Monolaurate:** Yellow to amber-colored, oily liquid, having a bland, characteristic odor. Soluble in mineral oil; slightly soluble in cottonseed oil and in ethyl acetate; insoluble in water. *NF category:* Emulsifying and/or solubilizing agent; tablet and/or capsule lubricant; wetting and/or solubilizing agent.

**Sorbitan Monooleate:** Viscous, yellow to amber-colored, oily liquid, having a bland, characteristic odor. Insoluble in water and in propylene glycol. Miscible with mineral and vegetable oils. *NF category:* Emulsifying and/or solubilizing agent; tablet and/or capsule lubricant; wetting and/or solubilizing agent.

**Sorbitan Monopalmitate:** Cream-colored, waxy solid having a faint fatty odor. Soluble in warm absolute alcohol; soluble, with haze, in warm peanut oil and in warm mineral

oil; insoluble in water. *NF category*: Emulsifying and/or solubilizing agent; tablet and/or capsule lubricant; wetting and/or solubilizing agent.

**Sorbitan Monostearate**: Cream-colored to tan, hard, waxy solid, having a bland odor and taste. Soluble, with haze, above 50° in mineral oil and in ethyl acetate; insoluble in cold water and in acetone. Dispersible in warm water. *NF category*: Emulsifying and/or solubilizing agent; tablet and/or capsule lubricant; wetting and/or solubilizing agent.

**Sorbitan Sesquileate**: Viscous, yellow to amber-colored, oily liquid. Soluble in alcohol, in isopropyl alcohol, in cottonseed oil, and in mineral oil; insoluble in water and in propylene glycol. *NF category*: Emulsifying and/or solubilizing agent; tablet and/or capsule lubricant; wetting and/or solubilizing agent.

**Sorbitan Trioleate**: Yellow to amber-colored, oily liquid. Soluble in methyl alcohol, in alcohol, in isopropyl alcohol, in corn oil, in cottonseed oil, and in mineral oil; insoluble in water, in ethylene glycol, and in propylene glycol. *NF category*: Emulsifying and/or solubilizing agent; tablet and/or capsule lubricant; wetting and/or solubilizing agent.

**Sorbitol**: D-Sorbitol occurs as white granules, powder, or crystalline masses. Is odorless, and has a sweet taste with a cold sensation. Very soluble in water; sparingly soluble in alcohol; and practically insoluble in ethyl ether. Is hygroscopic. *NF category*: Humectant; sweetening agent; tablet and/or capsule diluent.

**Sorbitol Solution**: Clear, colorless, syrupy liquid. Is odorless and has a sweet taste. It sometimes separates into crystalline masses. Miscible with water, with alcohol, with glycerin, and with propylene glycol. Is neutral to litmus. *NF category*: Sweetening agent; vehicle (flavored and/or sweetened).

**Sorbitol Sorbitan Solution**: A clear, colorless to pale yellow, syrupy liquid. Is odorless and has a sweet taste. Insoluble in mineral oil and in vegetable oil. Miscible with water, with alcohol, with glycerin, and with propylene glycol. *NF category*: Humectant; plasticizer.

**Sotalol Hydrochloride**: White to off-white powder. Freely soluble in water; soluble in alcohol; very slightly soluble in chloroform.

**Soybean Oil**: Clear, pale yellow, oily liquid having a characteristic odor and taste. Insoluble in water. Miscible with ether and with chloroform. *Specific gravity* (841): between 0.916 and 0.922. *Refractive index* (831): between 1.465 and 1.475. *NF category*: Vehicle (oleaginous).

**Hydrogenated Soybean Oil**: A white mass or powder that melts to a clear, pale yellow liquid when heated. Freely soluble in methylene chloride, in hexane after heating, and in toluene; very slightly soluble in alcohol; practically insoluble in water. *NF category*: Emollient.

**Spectinomycin Hydrochloride**: White to pale-buff crystalline powder. Freely soluble in water; practically insoluble in alcohol, in chloroform, and in ether.

**Spironolactone**: Light cream-colored to light tan, crystalline powder. Has a faint to mild mercaptan-like odor; is stable in air. Freely soluble in benzene and in chloroform; soluble in ethyl acetate and in alcohol; slightly soluble in methanol and in fixed oils; practically insoluble in water.

**Squalane**: Colorless, practically odorless transparent oil. Slightly soluble in acetone; very slightly soluble in absolute alcohol; insoluble in water. Miscible with ether and with chloroform. *NF category*: Ointment base; vehicle (oleaginous).

**Stannous Chloride**: White, crystalline powder or colorless crystals, efflorescent in air. Freely soluble in water (the solution becomes cloudy after standing or on dilution) and in alcohol. Dissolves in dilute hydrochloric acid. *NF category*: Emulsifying agent; antioxidant.

**Stannous Fluoride**: White, crystalline powder, having a bitter, salty taste. Melts at about 213°. Freely soluble in

water; practically insoluble in alcohol, in ether, and in chloroform.

**Stanozolol**: Odorless, crystalline powder, occurring in two forms: as needles, melting at about 155°, and as prisms, melting at about 235°. Soluble in dimethylformamide; sparingly soluble in alcohol and in chloroform; slightly soluble in ethyl acetate and in acetone; very slightly soluble in benzene; insoluble in water.

**Starch**: Irregular, angular, white masses or fine powder. Is odorless, and has a slight, characteristic taste. Insoluble in cold water and in alcohol. *NF category*: Tablet and/or capsule diluent; tablet disintegrant; tablet and/or capsule lubricant.

**Corn Starch**: Irregular, angular, white masses or fine powder. Is odorless, and has a slight, characteristic taste. Insoluble in cold water and in alcohol. *NF category*: Tablet and/or capsule diluent; tablet disintegrant; tablet binder; suspending and/or viscosity-increasing agent.

**Hydroxypropyl Corn Starch**: White or slightly yellowish powder. Practically insoluble in cold water and in alcohol. *NF category*: Tablet binder; tablet and/or capsule diluent; tablet disintegrant; suspending and/or viscosity-increasing agent.

#### Add the following:

**▲Hydrogenated Starch Hydrolysate**: Concentrated, aqueous solution or spray-dried or dried powder. Very soluble in water; insoluble in alcohol. *NF category*: Sweetening agent; humectant; tablet binder; tablet and/or capsule diluent. ▲*NF30*

**Pea Starch**: White or almost white, very fine powder. Practically insoluble in cold water and in alcohol. *NF category*: Suspending and/or viscosity-increasing agent; tablet binder; tablet and/or capsule diluent; tablet disintegrant.

**Hydroxypropyl Pea Starch**: White or slightly yellowish powder. Practically insoluble in cold water and in alcohol. *NF category*: Tablet binder; tablet and/or capsule diluent; tablet disintegrant; suspending and/or viscosity-increasing agent.

**Potato Starch**: Irregular, angular, white masses or fine powder. Is odorless, and has a slight, characteristic taste. Insoluble in cold water and in alcohol. *NF category*: Tablet and/or capsule diluent; tablet disintegrant; tablet binder; suspending and/or viscosity-increasing agent.

**Hydroxypropyl Potato Starch**: White or slightly yellowish powder. Practically insoluble in cold water and in alcohol. *NF category*: Tablet binder; tablet and/or capsule diluent; tablet disintegrant; suspending and/or viscosity-increasing agent.

**Pregelatinized Starch**: Moderately coarse to fine, white to off-white powder. Is odorless and has a slight, characteristic taste. Slightly soluble to soluble in cold water; insoluble in alcohol. *NF category*: Tablet binder; tablet and/or capsule diluent; tablet disintegrant.

**Pregelatinized Modified Starch**: Moderately coarse to fine, white to off-white powder. Is odorless and has a slight, characteristic taste. Soluble to slightly soluble in cold water; insoluble in alcohol. *NF category*: Tablet binder; tablet and/or capsule diluent; tablet disintegrant.

**Tapioca Starch**: Irregular, angular, white to pale yellow masses or fine powder. Insoluble in cold water and in alcohol. *NF category*: Suspending and/or viscosity-increasing agent; tablet binder; tablet and/or capsule diluent; tablet disintegrant.

**Wheat Starch**: Irregular, angular, white masses or fine powder. Is odorless and has a slight, characteristic taste. Insoluble in cold water and in alcohol. *NF category*: Tablet and/or capsule diluent; tablet disintegrant; tablet binder; suspending and/or viscosity-increasing agent.

**Stavudine:** White to off-white, crystalline powder. Soluble in water, in dimethylacetamide, and in dimethyl sulfoxide; sparingly soluble in methanol, in alcohol, and in acetonitrile; slightly soluble in dichloromethane; insoluble in hexane.

**Stearic Acid:** Hard, white or faintly yellowish, somewhat glossy and crystalline solid, or white or yellowish-white powder. Its odor and taste are slight, suggesting tallow. Freely soluble in chloroform and in ether; soluble in alcohol; practically insoluble in water. *NF category:* Emulsifying and/or solubilizing agent; tablet and/or capsule lubricant.

**Purified Stearic Acid:** Hard, white or faintly yellowish, somewhat glossy and crystalline solid, or white or yellowish-white powder. Its odor and taste are slight, suggesting tallow. Freely soluble in chloroform and in ether; soluble in alcohol; practically insoluble in water. *NF category:* Tablet and/or capsule lubricant.

**Stearoyl Polyoxylglycerides:** Pale yellow, waxy solids. Dispersible in warm water and in warm paraffin. Freely soluble in methylene chloride; soluble in warm methanol. *NF category:* Ointment base; solvent.

**Stearyl Alcohol:** Unctuous, white flakes or granules. Has a faint, characteristic odor and a bland, mild taste. Soluble in alcohol and in ether; insoluble in water. *NF category:* Stiffening agent.

**Storax:** Semiliquid, grayish to grayish-brown, sticky, opaque mass depositing on standing a heavy dark brown layer (Levant Storax); or semisolid, sometimes a solid mass, softened by gently warming (American Storax). Is transparent in thin layers, has a characteristic odor and taste, and is more dense than water. Soluble, usually incompletely, in an equal weight of warm alcohol, in acetone, in carbon disulfide, and in ether, some insoluble residue usually remaining; insoluble in water.

**Streptomycin Sulfate:** White or practically white powder. Is odorless or has not more than a faint odor. Is hygroscopic, but is stable in air and on exposure to light. Its solutions are acid to practically neutral to litmus. Freely soluble in water; very slightly soluble in alcohol; practically insoluble in chloroform.

**Streptomycin Sulfate Injection:** Clear, colorless to yellow, viscous liquid. Is odorless or has a slight odor.

**Strontium Chloride:** Colorless, odorless crystals or white granules. Effloresces in air; deliquesces in moist air. Very soluble in water; soluble in alcohol.

**Succinic Acid:** White, odorless crystals. Freely soluble in boiling water; soluble in water, in alcohol, and in glycerin. *NF category:* Buffering agent.

**Succinylcholine Chloride:** White, odorless, crystalline powder. Its solutions have a pH of about 4. The dihydrate form melts at about 160°; the anhydrous form melts at about 190°, and is hygroscopic. Freely soluble in water; slightly soluble in alcohol and in chloroform; practically insoluble in ether.

**Sucralose:** White to off-white, crystalline powder. Freely soluble in water, in methanol, and in alcohol; slightly soluble in ethyl acetate. *NF category:* Sweetening agent.

**Sucrose:** White, crystalline powder or lustrous, dry, colorless or white crystals. Very soluble in water; slightly soluble in alcohol; practically insoluble in dehydrated alcohol. *NF category:* Coating agent; sweetening agent; tablet and/or capsule diluent.

**Sucrose Palmitate:** White or almost white, unctuous powder. Sparingly soluble in ethanol (96%); very slightly soluble in water. *NF category:* Suspending and/or viscosity-increasing agent.

**Sucrose Octaacetate:** White, practically odorless powder, having an intensely bitter taste. Is hygroscopic. Very soluble in methanol and in chloroform; soluble in alcohol and in ether; very slightly soluble in water. *NF category:* Alcohol denaturant.

**Sucrose Stearate:** White or almost white, unctuous powder. Sparingly soluble in ethanol (96%); very slightly soluble in water. *NF category:* Tablet and/or capsule lubricant; emulsifying and/or solubilizing agent.

**Sufentanil Citrate:** White powder. Freely soluble in methanol; soluble in water; sparingly soluble in acetone, in alcohol, and in chloroform. Melts between 133° and 140°.

**Compressible Sugar:** Practically white, crystalline, odorless powder, having a sweet taste. Is stable in air. The sucrose portion of Compressible Sugar is very soluble in water. *NF category:* Sweetening agent; tablet and/or capsule diluent.

**Confectioner's Sugar:** Fine, white, odorless powder, having a sweet taste. Is stable in air. The sucrose portion of Confectioner's Sugar is soluble in cold water. Confectioner's Sugar is freely soluble in boiling water. *NF category:* Sweetening agent; tablet and/or capsule diluent.

**Sugar Spheres:** Hard, brittle, free-flowing, spherical masses ranging generally in size from 10- to 60-mesh. Usually white, but may be colored. Solubility in water varies according to the sugar-to-starch ratio. *NF category:* Vehicle (solid carrier).

**Sulbactam Sodium:** White to off-white, crystalline powder. Freely soluble in water and in dilute acid; sparingly soluble in acetone, in ethyl acetate, and in chloroform.

**Sulconazole Nitrate:** White to off-white, crystalline powder. Melts at about 130°, with decomposition. Freely soluble in pyridine; sparingly soluble in methanol; slightly soluble in alcohol, in chloroform, in acetone, and in methylene chloride; very slightly soluble in water, in toluene, and in dioxane.

**Sulfabenzamide:** Fine, white, practically odorless powder. Soluble in alcohol, in acetone, and in sodium hydroxide TS; insoluble in water and in ether.

**Sulfacetamide:** White, crystalline powder, odorless and having a characteristic sour taste. Its aqueous solutions are sensitive to light, and are unstable when acidic or strongly alkaline. Freely soluble in dilute mineral acids and in solutions of potassium and sodium hydroxides; soluble in alcohol; slightly soluble in water and in ether; very slightly soluble in chloroform; practically insoluble in benzene.

**Sulfacetamide Sodium:** White, crystalline powder. Is odorless and has a bitter taste. Freely soluble in water; sparingly soluble in alcohol; practically insoluble in chloroform and in ether.

**Sulfadiazine:** White or slightly yellow powder. Is odorless or nearly odorless and is stable in air, but slowly darkens on exposure to light. Freely soluble in dilute mineral acids, in solutions of potassium and sodium hydroxides, and in ammonia TS; sparingly soluble in alcohol and in acetone; slightly soluble in human serum at 37°; practically insoluble in water.

**Silver Sulfadiazine:** White to creamy-white, crystalline powder, odorless to having a slight odor. Is stable in air, but turns yellow on exposure to light. Freely soluble in 30% ammonium solution; slightly soluble in acetone; practically insoluble in alcohol, in chloroform, and in ether. Decomposes in moderately strong mineral acids.

**Sulfadiazine Sodium:** White powder. On prolonged exposure to humid air it absorbs carbon dioxide with the liberation of sulfadiazine and becomes incompletely soluble in water. Its solutions are alkaline to phenolphthalein. Is affected by light. Freely soluble in water; slightly soluble in alcohol.

**Sulfadimethoxine:** Practically white, crystalline powder. Soluble in 2 N sodium hydroxide; sparingly soluble in 2 N hydrochloric acid; slightly soluble in alcohol, in ether, in chloroform, and in hexane; practically insoluble in water.

**Sulfamethazine:** White to yellowish-white powder, which may darken on exposure to light. Has a slightly bitter taste and is practically odorless. Soluble in acetone; slightly

soluble in alcohol; very slightly soluble in water and in ether.

**Sulfamethizole:** White crystals or powder, having a slightly bitter taste. Is practically odorless, and has no odor of hydrogen sulfide. Freely soluble in solutions of ammonium, potassium, and sodium hydroxides; soluble in dilute mineral acids and in acetone; sparingly soluble in alcohol; very slightly soluble in water, in chloroform, and in ether; practically insoluble in benzene.

**Sulfamethoxazole:** White to off-white, practically odorless, crystalline powder. Freely soluble in acetone and in dilute solutions of sodium hydroxide; sparingly soluble in alcohol; practically insoluble in water, in ether, and in chloroform.

**Sulfapyridine:** White or faintly yellowish-white crystals, granules, or powder. Is odorless or practically odorless, and is stable in air, but slowly darkens on exposure to light. Freely soluble in dilute mineral acids and in solutions of potassium and sodium hydroxides; sparingly soluble in acetone; slightly soluble in alcohol; very slightly soluble in water.

**Sulfasalazine:** Bright yellow or brownish-yellow, odorless, fine powder. Melts at about 255°, with decomposition. Soluble in aqueous solutions of alkali hydroxides; very slightly soluble in alcohol; practically insoluble in water, in ether, in chloroform, and in benzene.

**Sulfathiazole:** Fine, white or faintly yellowish-white, practically odorless powder. Soluble in acetone, in dilute mineral acids, in solutions of alkali hydroxides, and in 6 N ammonium hydroxide; slightly soluble in alcohol; very slightly soluble in water.

**Sulfipyrazone:** White to off-white powder. Soluble in alcohol and in acetone; sparingly soluble in dilute alkali; practically insoluble in water and in solvent hexane.

**Sulfisoxazole:** White to slightly yellowish, odorless, crystalline powder. Soluble in boiling alcohol and in 3 N hydrochloric acid; very slightly soluble in water.

**Sulfisoxazole Acetyl:** White or slightly yellow, crystalline powder. Sparingly soluble in chloroform; slightly soluble in alcohol; practically insoluble in water.

**Precipitated Sulfur:** Very fine, pale yellow, amorphous or microcrystalline powder. Is odorless and tasteless. Very soluble in carbon disulfide; slightly soluble in olive oil; very slightly soluble in alcohol; practically insoluble in water.

**Sublimed Sulfur:** Fine, yellow, crystalline powder, having a faint odor and taste. Sparingly soluble in olive oil; practically insoluble in water and in alcohol.

**Sulfur Dioxide:** Colorless, nonflammable gas, possessing a strong, suffocating odor characteristic of burning sulfur. Under pressure, it condenses readily to a colorless liquid that boils at -10° and has a density of approximately 1.5. At 20° and at standard pressure, approximately 36 volumes dissolve in 1 volume of water and approximately 114 volumes dissolve in 1 volume of alcohol. Soluble also in ether and in chloroform. *NF category:* Antioxidant.

**Sulfuric Acid:** Clear, colorless, oily liquid. Miscible with water and with alcohol with the generation of much heat. Is very caustic and corrosive. Specific gravity is about 1.84. *NF category:* Acidifying agent.

**Sulindac:** Yellow, crystalline powder, which is odorless or practically so. Slightly soluble in methanol, in alcohol, in acetone, and in chloroform; very slightly soluble in isopropanol and in ethyl acetate; practically insoluble in hexane and in water.

**Sulisobenzene:** Light tan powder, with a melting point of about 145°. Freely soluble in methanol, in alcohol, and in water; sparingly soluble in ethyl acetate.

**Sumatriptan:** White to pale yellow powder. Very slightly soluble in water.

**Sumatriptan Succinate:** White or almost white powder. Freely soluble in water; sparingly soluble in methanol; practically insoluble in methylene chloride.

**Suprofen:** White to off-white powder, odorless to having a slight odor. Sparingly soluble in water.

**Syrup:** *NF category:* Sweetening agent; tablet binder; vehicle (flavored and/or sweetened).

**Tacrine Hydrochloride:** White powder. Freely soluble in water, in 0.1 N hydrochloric acid, in pH 4.0 acetate buffer, in phosphate buffer (pH between 7.0 and 7.4), in methanol, in dimethylsulfoxide, in alcohol, and in propylene glycol; sparingly soluble in linoleic acid and in polyethylene glycol 400.

**Tagatose:** White or almost white crystals, having a sweet taste. Very soluble in water; very slightly soluble in alcohol. *NF category:* Sweetening agent; humectant.

**Talc:** Very fine, white or grayish-white, crystalline powder. Is unctuous, adheres readily to the skin, and is free from grittiness. *NF category:* Glidant and/or anticaking agent; tablet and/or capsule lubricant.

**Tamoxifen Citrate:** White, fine, crystalline powder. Soluble in methanol; very slightly soluble in water, in acetone, in chloroform, and in alcohol. Melts at about 142°, with decomposition.

**Tamsulosin Hydrochloride:** White or almost white crystalline powder. Melts with decomposition at approximately 230°. Freely soluble in formic acid; sparingly soluble in methanol; slightly soluble in water and in dehydrated alcohol; practically insoluble in ether.

**Tannic Acid:** Amorphous powder, glistening scales, or spongy masses, varying in color from yellowish-white to light brown. Is odorless or has a faint, characteristic odor, and has a strongly astringent taste. Very soluble in water, in acetone, and in alcohol; freely soluble in diluted alcohol; slightly soluble in dehydrated alcohol; practically insoluble in benzene, in chloroform, in ether, and in solvent hexane; 1 g dissolves in about 1 mL of warm glycerin.

**Tartaric Acid:** Colorless or translucent crystals or white, fine to granular, crystalline powder. Is odorless, has an acid taste, and is stable in air. Very soluble in water; freely soluble in alcohol. *NF category:* Acidifying agent.

**Taurine:** White crystals or crystalline powder. Soluble in water.

**Tazobactam:** White to pale yellow, nonhygroscopic, crystalline powder. Soluble in dimethylformamide; slightly soluble in water, in methanol, in acetone, and in alcohol; very slightly soluble in ethyl acetate, in ethyl ether, and in chloroform; insoluble in hexane.

**Technetium Tc 99m Aggregated Albumin Injection:** Milky suspension, from which particles settle upon standing.

**Technetium Tc 99m Pentetate Injection:** Clear, colorless solution.

**Sodium Pertechnetate Tc 99m Injection:** Clear, colorless solution.

**Technetium Tc 99m (Pyro- and trimeta-) Phosphates Injection:** Clear solution.

**Technetium Tc 99m Sulfur Colloid Injection:** Colloidal dispersion. Slightly opalescent, colorless to light tan liquid.

**Telmisartan:** White or slightly yellowish, crystalline powder. Sparingly soluble in methylene chloride; slightly soluble in methanol; practically insoluble in water. It dissolves in 1 M sodium hydroxide.

**Temazepam:** White or nearly white, crystalline powder. Sparingly soluble in alcohol; very slightly soluble in water. Melts between 157° and 163°, within a 3° range.