variation from those specifications. The application shall be accompanied by an 8-ounce sample of the proposed denaturing material for analysis. The authorization of a substitute denaturant may be published in a TTB Ruling.

[T.D. ATF–133, 48 FR 24673, June 2, 1983, as amended by T.D. ATF–442, 66 FR 12854, Mar. 1, 2001; T.D. TTB–140, 81 FR 59461, Aug. 30, 2016]

§ 21.92 Denaturants listed as U.S.P. or N.F.

Denaturing materials and products listed in this part as ''U.S.P.'' or ''N.F.'' shall meet the specifications set forth in the current United States Pharmacopoeia or National Formulary, or the latest volume of these publications in which the denaturants appeared as official preparations.

§ 21.93 Acetaldehyde.

(a) *Aldehyde content (as acetaldehyde)*. Not less than 95.0 percent by weight.

(b) *Color*. Colorless.

(c) *Odor*. Characteristic pungent, fruity odor.

(d) *Specific gravity at 15.56 °/15.56 °C*. Not less than 0.7800.

§ 21.94 Acetaldol.

(a) *Purity*. Not less than 90 percent by weight acetaldol as determined by the following method:

Dissolve 15 grams of the acetaldol in distilled water and dilute to 1 liter in a volumetric flask. Transfer 5 mL of this solution to a 250 mL glass-stoppered flask containing 25 mL distilled water. Add 25 mL of a freshly prepared 1 percent sodium bisulfite solution. Prepare a blank omitting the acetaldol solution. Place the flasks in a dark place away from excessive heat or cold and allow to stand six hours. Remove flasks and titrate free bisulfite with 0.1 N iodine solution using starch indicator.

Percent acetaldol by weight = (mL blank − mL test) × 200 × 0.44 / weight of sample

Titrations in excess of 100 percent may be obtained if the sample contains appreciable amounts of acetaldehyde.

(b) *Specific gravity at 20 °C*. 1.098 to 1.105.

§ 21.94–T Alkylate.

(a) *API gravity at 60 °F*. 70.4.

(b) *Reid vapor pressure (PSI)*. 5.60 maximum.

(c) *Distillation (°F):*

(i) *I.B.P*. 109.0.

(ii) *10 percent*. 186.6.

(iii) *50 percent*. 221.1.

(iv) *90 percent*. 271.8.

(v) *End point distillation*. 375.7.

[T.D. TTB–140, 81 FR 59461, Aug. 30, 2016]

§ 21.95 Alpha terpineol.

(a) Boiling point at 752mm 218.8–219.4 °C.

(b) Density at 15° 0.9386.

(c) Refractive index at 20° 1.4831.

[T.D. ATF–442, 66 FR 12854, Mar. 1, 2001]

§ 21.96 Ammonia, aqueous.

(a) *Alkalinity*. Strongly alkaline to litmus.

(b) *Ammonia content*. 27 to 30 percent by weight. Accurately weigh a glass-stoppered flask containing 25 mL of water, add about 2 mL of the sample, stopper, and weigh again. Add methyl red indicator, and titrate with 1 N sulfuric acid. Each mL of 1 N sulfuric acid is equivalent to 17.03 mg of NH_3

(c) *Color*. Colorless liquid.

(d) *Non-volatile residue*. 2 mg maximum. Dilute a portion of the sample with 1½ times its volume of distilled water. Evaporate 10 mL of this product to dryness in a tared platinum or porcelain dish. Dry residue at 105 °C. for 1 hour, cool and weigh.

(e) *Odor*. Characteristic (exceedingly pungent).

(f) *Specific gravity at 20 °/4 °C*. 0.8920 to 0.9010.

[T.D. ATF–133, 48 FR 24673, June 2, 1983. Redesignated by T.D. ATF–442, 66 FR 12854, Mar. 1, 2001]

§§ 21.97–21.98 [Reserved]

§ 21.99 Brucine alkaloid.

(a) *Identification test*. Add a few drops of concentrated nitric acid to about 10 mg of brucine alkaloid. A vivid red color is produced. Dilute the red solution with a few drops of water and add a few drops of freshly made dilute stannous chloride solution. A reddish purple (violet) color is produced.

(b) *Melting point*. 178 °±1 °C. Dry the alkaloid in an oven for one hour at 100 °C., increase the temperature to 110°