

## § 21.120

mixture distilled in a current of steam until the distillate is no longer alkaline (about 500 ml). The distillate is then titrated with 0.1 N H<sub>2</sub>SO<sub>4</sub> using rosolic acid or methyl red as indicator. Not less than 23.2 ml should be required for neutralization.

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

### § 21.120 Nitropropane, mixed isomers of.

(a) *Nitropropane content.* A minimum of 94 percent by weight.

(b) *Total nitroparaffin content.* A minimum of 99 percent by weight.

(c) *Distillation range.* 119° to 113 °C.

(d) *Specific gravity at 20°/20 °C.* 0.992 to 1.003.

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

### § 21.121 Phenyl mercuric benzoate.

(a) *Assay (as phenyl mercuric benzoate).* Not less than 99.0 percent by weight.

(b) *Melting point.* Not less than 94 °C.

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

### § 21.122 Pyridine bases.

(a) *Alkalinity.* One ml of pyridine bases dissolved in 10 ml of water is titrated with 1 N H<sub>2</sub>SO<sub>4</sub> until a drop of the mixture placed upon Congo paper shows a distinct blue border, which soon disappears. A minimum of 9.5 ml of the acid must be required for the end point. (Congo paper: filter paper treated with 0.1 percent aqueous solution of Congo red and dried.)

(b) *Distillation range.* One hundred ml of the denaturant are distilled in the following manner: The sample is placed in a short-necked glass flask of about 200 ml capacity which is rested on an asbestos plate having a circular opening of 30 mm in diameter. The neck of this flask is fitted with a fractionating tube 12 mm in diameter and 170 mm long and having a bulb just 1 cm below the side tube which is connected with a Liebig condenser having a water jacket not less than 400 mm in length. A standardized thermometer is placed in

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the fractionating tube so that the mercury bulb is suspended in the center of the fractionating bulb. Heat is applied slowly and in such manner that 5 ml of distillate is collected per minute in a graduated cylinder. At least 50 ml must distill at or below 140 °C. and at least 90 ml below 160 °C.

(c) *Reactions.* Dissolve 1 ml of pyridine bases in 100 ml of water.

(1) Ten ml of this solution are treated with 5 ml of 5 percent aqueous solution of anhydrous fused CaCl<sub>2</sub> and the mixture vigorously shaken. An abundant crystalline separation should occur within 10 minutes.

(2) Ten ml of the pyridine solution mixed with 50 ml of Nessler's reagent must give a white precipitate.

(d) *Water content.* Twenty ml of pyridine bases are shaken with 20 ml of a caustic soda solution having a specific gravity of 1.40 (15.56 °/15.56 °C.) and the mixture allowed to stand until completely separated into two layers. The amount of pyridine base layer should be 18.5 ml, minimum.

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

### § 21.123 Pyronate.

Pyronate is a product of the destructive distillation of hardwood meeting the following requirements:

(a) *Acidity (as acetic acid).* Not more than 0.1 percent by weight, determined as follows:

Add 5.0 ml sample to 100 ml distilled water in an Erlenmeyer flask and titrate with 0.1 N NaOH to a bromthymol blue endpoint.

(b) *Color.* The color shall be no darker than the color produced by 2.0 grams of potassium dichromate in 1 liter of water. The comparison shall be made in 4-ounce oil sample bottles viewed crosswise.

(c) *Distillation range.* When 100 ml are distilled not more than 5 ml shall distill below 70 °C., not less than 50 ml below 160 °C., and not less than 90 ml below 205 °C.

NOTE. Any material submitted as pyronate must agree in color, odor, taste and denaturing value with a standard sample furnished