

**A:** amount (mL) of 0.5 mol/L sodium hydroxide consumed

**W:** amount (g) of the test sample, calculated on the anhydrous basis

$$\text{Content (\% of acetyl group (C}_2\text{H}_3\text{O))} \\ = \frac{100 \times (P - 0.5182 \times B)}{100 - B} \times -0.5772 \times C$$

**B:** amount (%) of free acids obtained in Purity (2) Free acids

**C:** content (%) of carboxybenzoyl group

**P:** content (%) of free acids and bound acetyl group (C<sub>2</sub>H<sub>3</sub>O)

**Containers and storage** Containers—Tight containers.

## Cetanol

セタノール

Cetanol is a mixture of solid alcohols, and consists chiefly of C<sub>16</sub>H<sub>34</sub>O.

**Description** Cetanol occurs as unctuous, white flakes, granules, or masses. It has a faint, characteristic odor. It is tasteless.

It is very soluble in pyridine, freely soluble in ethanol (95), in ethanol (99.5) and in diethyl ether, very slightly soluble in acetic anhydride, and practically insoluble in water.

**Melting point** 47 – 53°C Prepare the sample according to Method 2, then attach tightly a capillary tube to the bottom of the thermometer by means of a rubber band or by any suitable means, and make the bottom of the capillary tube equal in position to the lower end of the thermometer. Insert this thermometer into a test tube 17 mm in inside diameter and about 170 mm in height, fasten the thermometer with cork stopper so that the lower end of the thermometer is about 25 mm distant from the bottom of the test tube. Suspend the test tube in a beaker containing water, and heat the beaker with constant stirring until the temperature rises to 5°C below the expected melting point. Then regulate the rate of increase to 1°C per minute. The temperature at which the sample is transparent and no turbidity is produced is taken as the melting point.

**Acid value** Not more than 1.0.

**Ester value** Not more than 2.0.

**Hydroxyl value** 210 – 232

**Iodine value** Not more than 2.0.

**Purity (1)** Clarity of solution—Dissolve 3.0 g of Cetanol in 25 mL of ethanol (99.5) by warming; the solution is clear.

(2) Alkali—To the solution obtained in (1) add 2 drops of phenolphthalein TS; no red color develops.

**Residue on ignition** Not more than 0.05% (2 g).

**Containers and storage** Containers—Well-closed containers.

## Chlorinated Lime

サラン粉

Chlorinated Lime contains not less than 30.0% of available chlorine (Cl: 35.45).

**Description** Chlorinated Lime occurs as a white powder. It has a chlorine-like odor.

It dissolves partially in water. The solution changes red litmus paper to blue, then gradually decolorizes.

**Identification (1)** To Chlorinated Lime add dilute hydrochloric acid: a gas, which has the odor of chlorine, evolves, and the gas changes moistened starch-potassium iodide paper to blue.

(2) Shake 1 g of Chlorinated Lime with 10 mL of water, and filter: the filtrate responds to the Qualitative Tests (2) and (3) for calcium salt.

**Assay** Weigh accurately about 5 g of Chlorinated Lime, transfer to a mortar, and triturate thoroughly with 50 mL of water. Transfer to a 500-mL volumetric flask with the aid of water, and add water to make 500 mL. Mix well, immediately take exactly 50 mL of the mixture in an iodine flask, add 10 mL of potassium iodide TS and 10 mL of dilute hydrochloric acid, and titrate the liberated iodine with 0.1 mol/L sodium thiosulfate VS (indicator: 3 mL of starch TS). Perform a blank determination, and make any necessary correction.

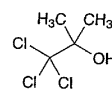
$$\text{Each mL of 0.1 mol/L sodium thiosulfate VS} \\ = 3.5453 \text{ mg of Cl}$$

**Containers and storage** Containers—Tight containers.

Storage—Light-resistant, and in a cold place.

## Chlorobutanol

クロロブタノール



C<sub>4</sub>H<sub>7</sub>Cl<sub>3</sub>O: 177.46

1,1,1-Trichloro-2-methylpropan-2-ol [57-15-8]

Chlorobutanol contains not less than 98.0% of C<sub>4</sub>H<sub>7</sub>Cl<sub>3</sub>O, calculated on the anhydrous basis.

**Description** Chlorobutanol occurs as colorless or white crystals. It has a camphoraceous odor.

It is very soluble in methanol, in ethanol (95) and in diethyl ether, and slightly soluble in water.

It slowly volatilizes in air.

Melting point: not lower than about 76°C.

**Identification (1)** To 5 mL of a solution of Chlorobutanol (1 in 200) add 1 mL of sodium hydroxide TS, then slowly add 3 mL of iodine TS: a yellow precipitate is produced and the odor of iodoform is perceptible.