

## D. MONOGRAPHS

### Bees Wax

**Definition** Bees Wax mainly consists of myricyl palmitate, obtained from honeycombs.

**Description** Bees Wax occurs as a white to yellowish white or yellow to light brown solids, and has characteristic odor of honey .

**Identification** To 1 g of Bees Wax, add 50 ml of isopropyl alcohol and dissolve by warming to 65 in a water bath. Add 5 ml of slight warm water under stirring. White flocculent substances are formed .

**Purity** (1) Melting point 60 - 67 .

(2) Acid value 5 - 24

Proceed as directed under Purity test (2) for Candelilla Wax.

(3) Peroxide value Not more than 5

Weigh accurately about 5 g of Bees Wax, transfer into a 200 ml Erlenmeyer flask with a ground-glass stopper. Add 30 ml of a mixture of chloroform and acetic acid (2 : 3), stopper, heat in warm water and dissolve to a transparent state while gentle shaking.

Cool, replace air in the flask to clean nitrogen. While the nitrogen is passing through, add exactly 1 ml of Potassium Iodide TS into the flask. Then, stop passing the nitrogen, stopper immediately, shake for 1 minute and allow to stand for 5 minutes in a dark place. Add 30 ml of water to this solution, stopper again, and shake vigorously. Titrate with 0.01 mol/l Sodium Thiosulfate. Calculate the content by the following formula. Perform the blank test in the same manner, and make any necessary correction.

$$\text{Peroxide value} = \frac{\text{consumption of 0.01 mol/l Sodium Thiosulfate}}{\text{weight of sampling Bees Wax}} \times 10$$

(4) Saponification value 77 - 103 (Fats and Related Substances Tests)

(5) Heavy metals Not more than 40 µg/g as Pb (0.50 g, Method 2, Control solution Lead Standard Solution 2.0 ml).

(6) Lead Not more than 10 µg/g (1.0 g, Method 1).

(7) Arsenic Not more than 4.0 µg/g as As<sub>2</sub>O<sub>3</sub> (0.50 g, Method 3, Apparatus B).

(8) Fats, Japan wax, rosin and soap To 1 g of Bees Wax, add 35 ml of sodium hydroxide solution (1 7). Heat for 30 minutes adding volatile volume of water and shaking occasionally on a water bath. Cool, and filter the solution. Acidify the filtrate with hydrochloric acid. No precipitate is formed.

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**Residue on Ignition** Not more than 0.1 % .