

Pipet 1 mL of this solution, add hexane for Purity of crude drug to make exactly 100 mL, and use this solution as the standard solution. Perform the test with 1  $\mu$ L each of the sample solution and the standard solution as directed under Gas Chromatography according to the following conditions, and determine the peak areas corresponding to  $\alpha$ -BHC,  $\beta$ -BHC,  $\gamma$ -BHC,  $\delta$ -BHC, *o,p'*-DDT, *p,p'*-DDT, *p,p'*-DDD and *p,p'*-DDE from each solution,  $A_{TA}$  and  $A_{SA}$ ;  $A_{TB}$  and  $A_{SB}$ ;  $A_{TC}$  and  $A_{SC}$ ;  $A_{TD}$  and  $A_{SD}$ ;  $A_{TE}$  and  $A_{SE}$ ;  $A_{TF}$  and  $A_{SF}$ ;  $A_{TG}$  and  $A_{SG}$ ;  $A_{TH}$  and  $A_{SH}$ . Calculate the content of each of  $\alpha$ -BHC,  $\beta$ -BHC,  $\gamma$ -BHC,  $\delta$ -BHC, *o,p'*-DDT, *p,p'*-DDT, *p,p'*-DDD and *p,p'*-DDE by means of the following equations, and determine the content of total BHC's and that of total DDT's: the content of total BHC's and that of total DDT's are each not more than 0.2 ppm.

$$\text{Content (ppm) of } \alpha\text{-BHC} \\ = \frac{\text{amount (g) of } \alpha\text{-BHC}}{W} \times \frac{A_{TA}}{A_{SA}} \times 50$$

$$\text{Content (ppm) of } \beta\text{-BHC} \\ = \frac{\text{amount (g) of } \beta\text{-BHC}}{W} \times \frac{A_{TB}}{A_{SB}} \times 50$$

$$\text{Content (ppm) of } \gamma\text{-BHC} \\ = \frac{\text{amount (g) of } \gamma\text{-BHC}}{W} \times \frac{A_{TC}}{A_{SC}} \times 50$$

$$\text{Content (ppm) of } \delta\text{-BHC} \\ = \frac{\text{amount (g) of } \delta\text{-BHC}}{W} \times \frac{A_{TD}}{A_{SD}} \times 50$$

$$\text{Content (ppm) of } o,p'\text{-DDT} \\ = \frac{\text{amount (g) of } o,p'\text{-DDT}}{W} \times \frac{A_{TE}}{A_{SE}} \times 50$$

$$\text{Content (ppm) of } p,p'\text{-DDT} \\ = \frac{\text{amount (g) of } p,p'\text{-DDT}}{W} \times \frac{A_{TF}}{A_{SF}} \times 50$$

$$\text{Content (ppm) of } p,p'\text{-DDD} \\ = \frac{\text{amount (g) of } p,p'\text{-DDD}}{W} \times \frac{A_{TG}}{A_{SG}} \times 50$$

$$\text{Content (ppm) of } p,p'\text{-DDE} \\ = \frac{\text{amount (g) of } p,p'\text{-DDE}}{W} \times \frac{A_{TH}}{A_{SH}} \times 50$$

*W*: Amount (g) of Powdered Ginseng

Content (ppm) of total BHC's  
= content (ppm) of  $\alpha$ -BHC + content (ppm) of  $\beta$ -BHC + content (ppm) of  $\gamma$ -BHC + content (ppm) of  $\delta$ -BHC

Content (ppm) of total DDT's  
= content (ppm) of *o,p'*-DDT + content (ppm) of *p,p'*-DDT + content (ppm) of *p,p'*-DDD + content (ppm) of *p,p'*-DDE

#### Operating conditions—

Detector: An electron capture detector

Sample injection system: A splitless injection system

Column: A fused silica capillary column about 0.3 mm in inside diameter and about 30 m in length, coated the inside wall with 7% cyanopropyl-7% phenylmethylsilicone polymer for gas chromatography in a thickness of 0.25 to 1.0  $\mu$ m.

Column temperature: Maintain the temperature at 60°C for 2 minutes after injection, program to increase the temper-

ature at a rate of 10°C per minute to 200°C, and then program to increase the temperature at a rate of 2°C per minute to 260°C.

Carrier gas: Helium

Flow rate: Adjust the flow rate so that the retention times of the objective compounds are between 10 and 30 minutes.

Selection of column: Proceed with 1  $\mu$ L of the standard solution under the above operating conditions. Use a column clearly separating each peak.

System repeatability: Repeat the test 6 times with the standard solution under the above operating conditions: the relative standard deviation of the peak area is not more than 10% for any objective compound.

**Loss on drying** Not more than 13.0% (6 hours).

**Total ash** Not more than 4.2%.

**Acid-insoluble ash** Not more than 0.5%.

**Extract content** Dilute ethanol-soluble extract; not less than 14.0%.

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

## Glehnia Root

### *Glehniae Radix cum Rhizoma*

ハマボウフウ

Glehnia Root is the root and rhizome of *Glehnia littoralis* Fr. Schmidt ex Miquel (*Umbelliferae*).

**Description** Cylindrical to long conical root or rhizome, 10–20 cm in length, 0.5–1.5 cm in diameter; externally light yellow-brown to red-brown. Rhizome short, with fine ring nodes; roots having longitudinal wrinkles and numerous, dark red-brown, warty protrusions or transversely elongated protuberances. Brittle and easily breakable. A transverse section white and powdery, and under a magnifying glass, oil canals scattered as brown dots. Odor, slight; taste, slightly sweet.

**Total ash** Not more than 6.0%.

**Acid-insoluble ash** Not more than 1.5%.

## Glycerin and Potash Solution

グリセリンカリ液

#### Method of preparation

Potassium Hydroxide	3 g
Glycerin	200 mL
Ethanol	250 mL
Aromatic substance	a suitable quantity
Water or Purified Water	a sufficient quantity
To make 1000 mL	

Dissolve Potassium Hydroxide in a portion of Water or Purified Water, add Glycerin, Ethanol, a suitable quantity of