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## Sophoricoside purity Detection Method

A.1 Methods The abstract samples were extracted by ultrasonic wave and detected by high performance liquid chromatography.

A.2 Test instruments and appliances

A.2.1 Analytical balance, accuracy is 1/100,000th

A.2.2 Ultrasonic Cleaning Instrument: 250W, 20KHz

A.2.3 High performance liquid chromatograph

A.3 Reagents and solutions

A.3.1 Methanol, analytical pure,

A.3.2 Acetonitrile, analytical pure

A.3.3 Water, secondary distilled water

A.3.4 Phosphoric acid, analytically pure

A.3.5 Sophoricoside reference substance

A.3.6 Preparation of mobile phase: mixed with the ratio of methanol-acetonitrile-0.07% phosphoric acid (12:20:68), and obtained by filtration with microporous membrane.

A.3.7 Detector and detection wavelength: UV spectrophotometer, detection wavelength 260nm.

A.4 Methods of operation

A.4.1 Preparation of reference solution: Sophorin reference solution was accurately weighed (accurate to 0.01mg), added with methanol and prepared into A solution containing 40 $\mu$ g per 1mL as reference solution.

A.4.2 Preparation of test product solution: Take the extract sample of Sophora sophora about 30mg, weigh it accurately, dissolve it with ultrasonic methanol, and use methanol as test product solution.

A.4.3 Determination methods

Precisely absorb 10 $\mu$ l of reference solution and test solution, inject into liquid chromatograph, and

determine.

#### A.5 Calculation of results

The content of sophoricoside was calculated according to Equation (B.1) :

$$\text{Sophoricoside (\%)} = \frac{S_1 \times C \times A}{S_0 \times (M - M \times B)} \times 100\% \dots\dots\dots(\text{B.1})$$

in:

S1-- Peak area value of test product solution;

S0-- Peak area value of comparison product solution;

C-- Concentration of comparison product solution (mg/ mL);

A-- Comparison product purity (%);

B-- Moisture purity of the sample (%);

M-- Concentration of test product solution (mg/ mL).