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Determination of Luteolin Purity

A. 1 Methods: The samples are extracted by ultrasonic wave and detected by high performance liquid chromatography (HPLC).

A.2 Test instruments and appliances

A.2. 1 Analytical balance with accuracy of 0.00001g.

A.2.2 Ultrasonic cleaner: 250W, 20kHz

A.2.3 High performance liquid chromatograph

A.3 Reagents and solutions

A.3. 1 Acetonitrile, analytical pure water

A.3.2 Secondary distilled water

A.3.3 Luteolin control product.

A.3.4 Preparation of mobile phase: mixed with acetonitrile-water (30:70ratio) and obtained by filtration with microporous membrane.

A.3.5 Detector and detection wavelength: UV spectrophotometer with wavelength of detection 360nm.

A.4 Methods of operation

A.4. 1 Preparation of control solution: Luteolin control product (accurate to 0.01mg) is accurately weighed and added with methanol to prepare a solution containing 70μg per 1mL as control product solution.

A.4.2 Preparation of test solution: Take A sample of luteolin (about 10mg), weigh it accurately, dissolve it with ultrasonic methanol, and use it as the test solution.

A.4.3 Determination methods

Precisely absorb 10μl of control solution and test solution respectively, inject them into the liquid chromatograph for determination.

A.5 Calculation of results

The purity of luteolin is calculated according to Equation (B. 1) :

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

Where,

S_1-- Peak area value of the test product solution;

S_0-- Peak area value of the control product solution;

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

A-- Control product purity (%);

B-- Moisture purity of the test product (%);

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