Determination of Luteolin purity

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

A.2 Test instruments and appliances

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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 Acetonitrile, analytical pure

A.3.2 Water, secondary distilled water

A.3.3 Luteolin control comparison product.

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

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

A.4 Methods of operation

A.4.1 Preparation of reference solution: Luteolin comparison product solution (accurate to 0.01mg) was accurately weighed and added with methanol to prepare A solution containing 70μg per 1mL as comparison 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 comparison product solution and test solution, inject into liquid chromatograph, and got

A.5 Calculation of results

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

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

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 purityof the sample (%);

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