



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 1886.261-2016

**National Food Safety Standard -- Food Additives -- Phloretin
food additives phloretin**

食品安全国家标准食品添加剂 根皮素食品添加剂 根皮素

(English Translation)

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1 Scope

This standard applies to the phlorizin or trilobatin for raw materials of food additives phloretin.

2.1 Chemical Name

3- (4-hydroxyphenyl) -1- (2,4,6-hydroxyphenyl) - propan-1 Formula 2.2 C₁₅H₁₄O₅

2.4 Molecular Weight

274.27 (according to 2007 international relative atomic mass)

3.1 Sensory requirements

Sensory requirements shall comply with the requirements in Table 1.

Table 1 Sensory requirements

Project requires test methods Color pearl white to pale pink or yellow Status powder the sample was placed on a clean white paper, were visually observed Aroma sweet aroma GB/T 14454.2

3.2 Physical and Chemical Indicators

Physical and chemical indicators should be consistent with the provisions of Table 2.

Table 2. Physical and chemical indicators

Item Index Test Method Phloretin content, w /% >= 95 Appendix A Melting point/°C 260 ~ 262 GB/T 14457.3 Appendix A Determination of the content of the root mesothelin A.1

Reagents and materials A.1.1 Acetonitrile. chromatographically pure.

A.1.2 acid. chromatography.

A.1.3 phloretin reference substance. purity of at least 98%.

A.1.4 Water. a water GB/T 6682 provisions.

A.2 instruments and equipment HPLC. as specified in GB/T 27579-2011 Chapter 5, equipped with an ultraviolet detector, or other equivalent detectors.

A.3 Reference chromatographic conditions A.3.1 Column. C18 HPLC column, length 150mm, internal diameter 4.6mm, 5 μ m particle size; column or other equivalent.

A.3.2 Mobile phase. a volume fraction of 40% acetonitrile and 60% aqueous formic acid (0.5% volume fraction) composition.

A.3.3 Column temperature. 30 °C.

A.3.4 Pumps. isocratic pump.

A.3.5 flow rate. 1.0mL/min.

A.3.6 Injection volume. 10 μ L.

A.3.7 Detection wavelength. 285nm.

A.3.8 Running time. about 10min.

A.4 analysis step

Preparation of the reference solution A.4.1 Accurately weighed 0.01g phloretin reference substance, the nearest 0.0001g, dissolved in mobile phase, transferred to 100mL volumetric flask, add the mobile phase Volume to 100mL, 0.45 μ m membrane resulting solution was filtered and the filtrate set aside.

A.4.2 Preparation of sample solution 0.01g sample was accurately weighed, to the nearest 0.0001g, dissolved in mobile phase, transferred to a 100mL volumetric flask, add the mobile phase to the volume 100mL, 0.45 μ m membrane resulting solution was filtered and the filtrate set aside.

A.4.3 Determination

In reference A.3 chromatographic conditions, respectively, the reference solution and the sample solution is measured, the peak area recorded.

A.5 calculation results Mass fraction content mesothelin root w1, calculated according to formula (A.1).

$A_1 \times m_2 \times w_2$

$A_2 \times m_1 \times$

100% (A.1)

Where.

Peak area of the main peak in the chromatogram of the sample solution A1 ---;

m2 --- reference mass, in grams (g);

--- reference w2 of mesothelin root mass fraction content,%;

Peak area of the main peak in the chromatogram of the reference solution A2 ---;

M1 --- sample mass, in grams (g).