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

GB 28312-2012

Food additives -- Roselle red

食品添加剂 玫瑰茄红

(English Translation)

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1 Scope

This standard is applicable to the treatment of dried hamata of Hibiscussabdariffa Linn.

Mention, refined from the food additives rose eggplant red.

2.1 Molecular formula

Ficososide-3-Dipigoside. C₂₇H₃₁O₁₇ Cyanidinux-3-bisglucoside. C₂₇H₃₀O₁₆

2.2 Relative molecular mass

Ficososide-3-Dipigoside. 627.53 (according to 2007 International Relative Atomic Mass)

Cyanidin-3-bisglucoside. 610.53 (according to 2007 International Relative Atomic Mass)

3 Technical requirements

3.1

sensory requirements. should be consistent with the provisions of Table 1.

Table 1 sensory requirements

The project requires a test method Colorful purple to red State powder or liquid Take the appropriate amount of sample placed in a clean, dry white porcelain dish, in the natural light, Observe its color and state

3.2

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

Table 2 Physical and chemical indicators

project

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Powder liquid

Testing method

Color Price E1 m520nm Compliant in Appendix A A.3 Dry reduction, w /% ≤ 10 - GB 5009.3 direct drying method a Burning residue, w /% ≤ 9 6 Appendix A A.4 Total arsenic (in As)/(mg/kg) ≤ 3 GB/T 5009.11 Lead (Pb)/(mg/kg) ≤ 2 GB 5009.12 Note. Commercial rosewood products should be in line with this standard rose eggplant red as raw material, can be made of edible dextrin and made, the color indicators meet the claim.

a Drying temperature and time are 105 °C and 3h respectively.

Appendix A

Testing method

A.1 General provisions the reagents and water used in this standard, when not specified in other requirements, refer to the analysis of pure reagents and GB/T 6682-2008 in the provisions of the three Water level. Standard titration solution used in the test, the standard solution for the determination of impurities, preparations and products, without any other requirements, GB/T 601, GB/T 602, GB/T 603. The solution used in the test refers to water when it is not specified with the formulation of the solvent Solution.

A.2 Identification test A.2.1 Solubility can be dissolved in water and ethanol aqueous solution, insoluble in non-polar solvent.

A.2.2 Color response to pH3.0 citric acid - disodium hydrogen phosphate buffer solution as the solvent, the preparation of the concentration of 1% of the sample solution, the sample solution should be red; take appropriate Sample solution, with 1mol/L sodium hydroxide solution into alkaline, the solution was dark green.

A.2.3 Determination of absorption peak A pH of 3.0 citric acid-disodium hydrogen phosphate buffer solution was used as the solvent to prepare the concentration of 1% of the sample solution, the sample solution at 520nm wavelength Near maximum absorption peak.

A.3 Determination of color price A.3.1 Reagents and materials A.3.1.1 0.2mol/L disodium hydrogen phosphate solution. accurately charged with disodium hydrogen phosphate ($\text{Na}_2\text{HPO}_4 \cdot 2\text{H}_2\text{O}$) 35.60g, dissolved in water and Constant volume to 1000mL.

A.3.1.2 0.1 mol/L citric acid solution. 21.0140 g of citric acid ($\text{C}_6\text{H}_8\text{O}_7 \cdot \text{H}_2\text{O}$) was accurately weighed and dissolved in water and allowed to 1000mL.

A.3.1.3 pH3.0 citric acid - disodium hydrogen phosphate buffer solution. take 0.2mol/L disodium hydrogen phosphate solution 4.11mL and 0.1mol/L Citric acid solution 15.89mL mixed.

A.3.2 Instruments and equipment Spectrophotometer.

A.3.3 Analysis steps Accurately weighed 0.1g ~ 0.2g sample, accurate to 0.0001g, with

pH3.0 citric acid - disodium hydrogen phosphate buffer solution dissolved, transfer to 100mL volumetric flask, add pH3.0 citric acid - disodium hydrogen phosphate buffer solution volume to the scale, shake. Take this sample solution at 1cm Cistern, pH3.0 citric acid - disodium hydrogen phosphate buffer solution as a blank control, with a spectrophotometer in the vicinity of 520nm maximum suction Absorbance measured absorbance (absorbance should be controlled between 0.3 to 0.7, or should adjust the concentration of sample solution, and then re-measured absorbance).

A.3.4 Calculation of results the color price is calculated as $E1_{m520nm}$ according to the formula (A.1) $E1_{m520nm} = A_c \times (A.1)$ where.

A - the actual determination of the absorbance of the sample solution;

c - the value of the test solution concentration in grams per milliliter (g/mL);

100 --- concentration conversion factor.

The experimental results are based on the arithmetic mean of the parallel measurement results. The absolute difference between the two independent determinations obtained under repeatability conditions the value is not greater than 2.5%.

A.4 Determination of burning residue A.4.1 Analysis steps Weigh 2g sample, accurate to 0.001g, placed in the constant weight of the crucible (liquid products first evaporated), first with a small fire slowly heated to the end all carbonized, and then carefully into the high temperature furnace at 550 °C ~ 600 °C burning to constant weight.

A.4.2 Result calculation the ignition residue is expressed in terms of mass fraction w_1 and the value in%, calculated according to formula (A.2) $w_1 = \frac{m_1 - m_2}{m_3 - m_2} \times 100\%$ (A.2) where.

m_1 - the value of crucible and burning residue, in grams (g);

m_2 - the value of the crucible, in grams (g);

m_3 --- crucible and sample quality values, in grams (g).

The experimental results are based on the arithmetic mean of the parallel measurement results. The absolute difference between the two independent determinations obtained under repeatability conditions the value must not exceed 5% (powder) or 10% (liquid) of the arithmetic mean.