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

GB 25534-2010

**The national food safety standards of food additives red rice
red**

食品添加剂 红米红

(English Translation)

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Foreword

Appendix A of this standard is a normative appendix.

National Food Safety Standard Red rice red food additives

1 Scope

This standard applies to red rice (*Oryza sativa* L.) as raw material, extraction, refining, can be diluted dextrin powder or extract Liquid food additives red rice red.

2 Normative references

The standard file referenced in the application of this standard is essential. For cited documents with dates, only the date of Version applies to this standard. For undated references, the latest edition (including any amendments) applies to this standard.

3 Technical requirements

3.1

Sensory requirements. comply with Table 1.

Table 1 Sensory requirements

Project requires test methods Color purple to red take appropriate sample is placed in a clean, dry white porcelain dish or beaker, in natural light, observe its color and state organizations. State organization powders, or liquid extract

3.2

Physical indicators. to comply with Table 2.

Table 2. Physical and chemical indicators

Item Index Test Method Extract powder, liquid Color value) 5535 (nmnmE cm $\pm \geq 15.0$ 8.0
Appendix A A.3 Residue on ignition, w /% ≤ 8.0 5.0 Appendix A A.4 Loss on drying, w /%

≤ 8.0 - GB 5009.3-2010 direct drying Arsenic (As)/(mg/kg) ≤ 1 1 GB/T 5009.11 Lead (Pb)/(mg/kg) ≤ 2 2 GB 5009.12 Appendix A (Normative) Testing method A.1 General Provisions Unless otherwise indicated in the analysis using only recognized as analytical reagents and GB/T 6682-2008 specified in the water. In the analysis Standard titration solution, impurities measured by standard solution, preparations and products, did not indicate when the other requirements, according to GB/T 601, GB/T 602, the provisions of preparation GB/T 603's. This solution was used in the test does not indicate what is formulated with solvent, it refers to an aqueous solution.

A.2 Identification Test A.2.1 solubility Soluble in water and ethanol solution, not soluble in non-polar solvents.

A.2.2 color reaction Solution at a pH of 1 to 6, reddish to purple; was purple to brown at a pH of 6 to 12 solution.

A.2.3 absorption maxima Take A.3 color value red rice red assay sample solution by spectrophotometer, at a wavelength of $535\text{nm} \pm 5\text{nm}$ range should be one of the most Large absorption peak.

A.2.4 paper chromatography A.2.4.1 Show layer solution N-butanol. acetic acid. water = 4.1.5 (volume ratio).

A.2.4.2 analysis step Extracted with hydrochloric acid in methanol (140) dyes, spotting and concentrated in a water bath. The filters were spotted after the exhibition has been put layer solution Saturated layer chromatography developing tank until the solvent front up to the desired level, will remove the filter paper to dry. Paper presents purple and red Two color spot with an R_f value of 0.32 and 0.47 respectively.

A.3 Determination of Color Value A.3.1 Reagents and materials Ethanol - hydrochloric acid solution. 95% ethanol solution and the mixture, the volume ratio of 0.15 mol/L hydrochloric acid solution was 85.15.

A.3.2 Instruments and Equipment Spectrophotometer.

A.3.3 Analysis step

Accurately weighed $0.15\text{g} \sim 0.2\text{g}$ sample (accurate to 0.0002g), with ethanol - dissolved in hydrochloric acid solution was transferred to a 100 mL volumetric flask, Add ethanol - hydrochloric acid solution to the mark, shake. Take this sample was placed in a 1 cm cuvette, ethanol - hydrochloric acid solution blank Controls, absorbance was measured with a spectrophotometer at $535\text{nm} \pm 5\text{nm}$ range at the maximum absorption wavelength (absorbance should be controlled at 0.3 to 0.7 Between, otherwise the sample concentration should be adjusted and re-measuring the absorbance).

A.3.4 Calculation Results Color value according to the formula (A.1) Calculated.

1) $5535 (x = \pm c)$

A_{535nm} (A.1)

Where.

A_{535nm} - sample concentration of 1%, with a 1cm cuvette in the range of 535nm $\pm$ 5nm maximal inspiratory Close wavelengths measured color value;

A-- actually measured;

c-- concentration of the sample solution to be tested, in grams per milliliter (g/mL).

The results parallel arithmetic mean of the measurement results shall prevail. Twice in the same condition absolutely independent determination results the difference is not more than 5% of the arithmetic mean.

A.4 Determination of residue on ignition A.4.1 Analysis step Weigh 2 g sample (accurate to 0.001 g), previously placed within the crucible constant weight (or liquid product to extract was evaporated to dryness), low heat Gradually heated to completely carbonized, then carefully transferred to a high temperature oven at 600 °C $\pm$ 25 °C calcined to constant weight.

A.4.2 Calculation Results Residue on ignition by the formula (A.2) Calculated.

twenty three

X (A.2)

Where.

X-- sample ignition residue content,%;

m1-- crucible and residue on ignition mass in grams (g);

m2-- crucible mass in grams (g);

m3-- crucible and the sample mass, in grams (g).

The results parallel arithmetic mean of the measurement results shall prevail. Twice in the same condition absolutely independent determination results the difference is not more than 5% of the arithmetic mean (powder) or 10% (or liquid extract).