

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

SN/T 1743-2006

**Determination of allure red AC, carmosine, brilliant blue FCF,
sunset yellow FCF in food. High performance liquid
chromatographic method**

食品中诱惑红、酸性红、亮蓝、日落黄的含量检测 高效液相色谱法
(English Translation)

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Table of Contents

- Foreword
- 1 Scope
- 2 Sample preparation
- 3 Determination method
 - 3.1 Method summary
 - 3.2 Reagents and materials
 - 3.3 Instruments and equipment
 - 3.4 Analysis steps

Foreword

Appendix A of this standard is an informative annex.

This standard is proposed and managed by the National Certification and Accreditation Administration.

This standard was drafted. Shanghai Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China.

1 Scope

This standard specifies the liquid chromatographic detection method for tempting red, acid red, bright blue and sunset yellow in food.

This standard applies to the detection of temptation red, acid red, bright blue and sunset yellow in candy and beverage.

2 Sample preparation

2.1

Sample preparation. Take the edible part from the extracted original sample, evenly mash, and mix the liquid sample. Mix the sample thoroughly and separate it.

500 g, as a sample, was placed in a clean container and marked with a mark.

2.2

Sample storage. Store the sample in cold storage.

2.3

Samples must be protected from contamination during sampling and sample preparation.

3.1 Method summary

Synthetic colorants in candy and beverages are extracted by polyamide adsorption, filtered, and then subjected to reversed-phase high performance liquid chromatography.

From the determination, the external standard method is quantified.

3.2 Reagents and materials

Unless otherwise stated, the reagents used were of analytical grade and the water was secondary deionized water.

3.2.1

Polyamide powder..200 mesh.

3.2.2

Ethanol-Ammonia solution. Take 1 mL of ammonia water and add 70% of 100 mL of ethanol.

3.2.3

Methanol-formic acid solution. Mix 60 mL of methanol and 40 mL of formic acid.

3.2.4 20% citric acid solution..200 g of citric acid was dissolved in 1 L of water.

3.2.5

Sulfuric acid. Mix 10mL of sulfuric acid and 100mL of water.

3.2.6 10% sodium tungstate aqueous solution. 10 g of sodium tungstate was dissolved in 100 mL of water.

3.2.7

Acetic acid. chromatographically pure.

3.2.8

Methanol. Chromatographically pure.

3.2.9

Ammonium acetate.

3.2.10

Sunset yellow, tempting red, bright blue, acid red standard. purity greater than 98%.

3.2.11

Standard solution. accurately weigh the appropriate amount of colorant standard, and prepare it into a standard stock solution of 1.0 mg/mL with water.

It should be diluted with water and formulated into a standard working solution of appropriate concentration.

3.3 Instruments and equipment

3.3.1

Liquid chromatograph with UV detector.

3.3.2

Vortex mixer.

3.3.3

Centrifuge. Maximum speed 5000r/min.

3.4.1 Extraction, purification

3.4.1.1

Samples such as juice and soda. Heat 50mL sample to remove carbon dioxide, then dilute with water to make a volume of 0.45μm filter.