



GB 31604.7-2023

National Food Safety Standard

Food Contact Materials and Articles

Decolorization Test

食品安全国家标准 食品接触材料及制品 脱色试验

National Health Commission of the People's
Republic of China
State Administration for Market Regulation of the
People's Republic of China

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National Standard of the People's Republic of China

GB 31604.7-2023
In Replacement of GB 31604.7-2016

National Food Safety Standard

Food Contact Materials and Articles Decolorization Test

食品安全国家标准

食品接触材料及制品 脱色试验

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Foreword

This standard replaces GB 31604.7-2016 National Food Safety Standard Food Contact Materials and Articles Discoloration Test.

Compared with GB 31604.7-2016, the main changes of this standard are as follows:

- the scope has been modified;
- the principle has been modified;
- the reagents and materials have been added;
- the instruments and equipment have been added;
- the analysis steps have been modified;
- the result statement has been modified.

National Food Safety Standard

Food Contact Materials and Articles Discoloration Test

1. Scope

This standard specifies the testing method for discoloration of plastic materials and products intended for food contact.

This standard applies to the determination of immersion liquid coloration and wiping discoloration of food contact plastic materials and products to which colorants are added.

2. Principle

The discoloration test is divided into two parts: soaking liquid coloration and wiping discoloration. The soaking liquid coloration uses food simulants obtained from the migration test or chemical replacement solvents, and the soaking liquid coloration level is evaluated using the gray sample card for staining or the six-color nine-level card. For wiping decolorization, use absorbent cotton moistened and saturated with food simulant to wipe the food contact surface of the sample, and use the gray sample card for assessing staining or the six-color nine-level card to evaluate the color level of the absorbent cotton after wiping.

3. Reagents and Materials

Unless otherwise specified, all reagents used in this method are of analytical grade and the water is secondary water as specified in GB/T 6682.

3.1 Reagents

3.1.1 Glacial acetic acid ($C_2H_4O_2$).

3.1.2 Anhydrous ethanol (C_2H_6O).

3.1.3 Isooctane (C_8H_{18}).

3.1.4 95% ethanol.

3.1.5 Vegetable oil (olive oil, corn oil): in accordance with the requirements of GB 5009.156.

3.1.6 Coconut oil (CAS No.: 8001-31-8): chemically pure.



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