



GB 31604.47-2023

National Food Safety Standard

Food Contact Materials and Products Determination of Fluorescent Substances in Paper, Paperboard and Paper Products

食品安全国家标准 食品接触材料及制品 纸、纸板及纸制品中荧光性物质的测定

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

Release Date: Sept. 6, 2023
Implementation Date: Mar. 6, 2024

Translated by ChemLinked

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National Standard of the People's Republic of China

GB 31604.47-2023
In Replacement of GB 31604.47-2016

National Food Safety Standard Food Contact Materials and Products

Determination of Fluorescent Substances in Paper, Paperboard and Paper Products

食品安全国家标准

食品接触材料及制品

纸、纸板及纸制品中荧光性物质的测定

Date of publication: 2023-09-06

Date of implementation: 2024-03-06

Issued by:

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

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Foreword

This standard replaces GB31604.47-2016 "National Food Safety Standard Food Contact Materials and Products Paper, Paperboard and Paper Products Determination of Fluorescent Brighteners".

Compared with GB31604.47-2016, the main changes of this standard are as follows:

——The name of the standard was changed to "National Food Safety Standard - Food Contact Materials and Products - Determination of Fluorescent Substances in Paper, Paperboard and Paper Products"

——The detection wavelength has been increased by 254nm;

——Added the description of the role of standard control gauze;

——The expression of result judgment has been modified.

National Food Safety Standard

Food Contact Materials and Products

Determination of Fluorescent Substances in Paper, Paperboard and Paper Products

1 Scope

This standard specifies the determination method for fluorescent substances in food contact paper, paperboard and paper products.

This standard applies to the determination of fluorescent substances in food contact paper, paperboard and paper products.

2 Principle

Whether the food contact paper, paperboard and paper product samples contain fluorescent substances can be determined by directly observing them under ultraviolet light to see if there is obvious fluorescence (i.e. obvious blue or purple fluorescence). If the sample shows multiple discontinuous small spots of fluorescence or has fluorescence but it is not obvious, extract it with alkaline extract, then acidify the extract, and then use gauze to absorb the fluorescent substance in the extract. Under ultraviolet light, observe whether the gauze has obvious fluorescence to confirm whether the sample contains fluorescent substances.

3 Reagents and materials

Unless otherwise specified, all reagents used were of analytical grade and the water used was Grade-1 water as specified in GB/T6682. The reagents and materials used should not fluoresce under ultraviolet light.

3.1 Reagents

3.1.1 Acetonitrile (C_2H_3N): chromatographically pure.

3.1.2 Triethylamine ($C_6H_{15}N$).

3.1.3 Sodium hydroxide (NaOH): high purity.

3.1.4 Hydrochloric acid (HCl).



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