



GB 5009.270-2023

National Food Safety Standard

Determination of Inositol in Food

食品安全国家标准 食品中肌醇的测定

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

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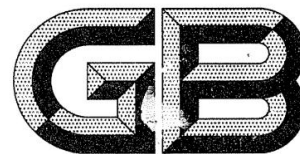
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National Standard of the People's Republic of China

GB 5009.270-2023
In Replacement of GB 5009.270-2016

National Food Safety Standard Determination of Inositol in Food

食品安全国家标准

食品中肌醇的测定

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

Foreword

This standard replaces GB 5009.270-2016 “National Food Safety Standard - Determination of Inositol in Foods”.

Compared with GB 5009.270-2016, the main changes of this standard are as follows:

——The gas chromatography method was adjusted to the first method, and the microbiological method was adjusted to the second method;

——Added Annex B and Annex C;

——The applicable scope of gas chromatography, silanization reagents, sample pretreatment methods and instrument reference conditions were modified;

——The principle description, name of bacterial strains and preparation methods, equipment materials and test steps of the microbiological method have been modified.

National Food Safety Standard

Determination of Inositol in Food

1 Scope

This standard specifies the determination method of inositol (cyclohexanehexol, myo-inositol) in foods.

The first method, gas chromatography, is applicable to the determination of inositol in infant formula, special medical purpose formula, milk, dairy products and beverages.

The second method, microbiological method, is applicable to the determination of inositol in food.

Method 1 Gas Chromatography

2 Principle

The inositol in the sample is extracted with water and precipitated with ethanol. The supernatant is centrifuged and dried, and then derivatized with a silanization reagent. The derivative is extracted with n-hexane, separated by gas chromatography, detected by a hydrogen flame ionization detector, and quantified by an external standard method.

3 Reagents and materials

Unless otherwise specified, all reagents used in this method were of analytical grade and the water was first-grade water as specified in GB/T6682.

3.1 Reagents

3.1.1 Anhydrous ethanol (C_2H_6O).

3.1.2 95% ethanol (C_2H_6O).

3.1.3 Acetonitrile (C_2H_3N).

3.1.4 n-Hexane (C_6H_{14}).

3.1.5 Trimethylchlorosilane (C_3H_9ClSi).



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