

ICS 67. 040

C 53



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

中华人民共和国国家标准

GB/T 5009.18-2003

Replace GB/T 5009.18-1996

Determination of fluorine in foods

食品中氟的测定

Issued on August 11, 2003

Implemented on January 01, 2004

Issued by Ministry of Health (MOH) of the People's Republic of China

**Standardization Administration of the People's Republic of China
(SAC)**

Contents

Foreword.....	1
1 Scope	1
2 Principle	1
3 Reagents	1
4 Instruments	3
5 Analysis procedure	3
6 Principle	6
7 Reagents	6
8 Instruments	7
9 Analysis procedure	8
10 Principle	10
11 Reagents	10
12 Instruments	11
13 Analysis procedure	11

Foreword

This Standard will replace GB/T 5009.18-1996 *Method for determination of fluorine in foods*.

Comparison with GB/T 5009.18-1996, main changes of this Standard are as follows:

- Changed the Chinese title as *Determination of fluorine in foods*;
- Changed the structure of original standard according to GB/T 20001.4-2001 *Rules for drafting standards—Part 4: Methods of chemical analysis*.

This Standard is proposed and under the jurisdiction of the Ministry of Health (MOH) of the People's Republic of China.

Method I and Method III of this Standard are drafted by Institute of Nutrition and Food Hygiene, Chinese Academy of Medical Sciences and Institute of Food Safety Control and Inspection, Ministry of Public Health

Method II of this Standard is drafted by Mianyang Sanitation and Antiepidemic Station, Sichuan.

This standard was issued for the first time in 1985, revised for the first time in 1996 and revised now for the second time.

Determination of fluorine in foods

1 Scope

This standard specifies the determination method of fluorine in the grain, vegetables, fruits, legumes and their products, meat, fish, eggs and other foods.

This standard applies to the determination of fluorine in foods. Fluoride ion selects electrode method, which does not apply to the sample with high fat content and without ashing (such as peanuts, fat, etc.).

Detection limit of this method: The first method is 0.10mg/kg, the second method is 1.25mg/kg.

Method I: Diffusion-fluor reagent colorimetric

2 Principle

The fluoride in the food acts with acid in the diffusion box, generated hydrogen fluoride gas, absorbed by sodium hydroxide through diffusion. Fluoride ion react with lanthanum (III), fluor reagent (Alizarin complexone) at optimum pH and generated blue ternary complex, the color was deepen with the increase of the concentration of fluoride ions, extracted with or without an organic amine containing solvent, qualified and compared with standard series.

3 Reagents

The water used in this method is non- fluorine-containing deionized water, reagents were of analytical grade, and all the reagents were stored in a polyethylene bottle.

3.1 Acetone.

3.2 Silver sulfate-sulfuric acid solution (20g/L): Weigh 2g silver sulfate, dissolved in 100mL of sulfuric acid (3+1).

3.3 Sodium hydroxide-anhydrous ethanol solution (40g/L): Take 4g of sodium hydroxide, dissolved in anhydrous ethanol and diluted to 100mL.

3.4 Acetic acid solution (1 mol/L): 3mL of glacial acetic acid is diluted to 50mL with water.

完整版本请在线下单

或咨询：

TEL： 400-678-1309

QQ： 19315219

Email：info@lancarver.com

<http://www.lancarver.com>

对公账户：

单位名称：北京文心雕语翻译有限公司

开户行：中国工商银行北京清河镇支行

账 号：0200 1486 0900 0006 131

支付宝账户：info@lancarver.com

注：付款成功后，请预留电邮，完整版本将在一个工作日内通过电子 PDF 或 Word 形式发送至您的预留邮箱，如需索取发票，下单成功后的三个工作日内安排开具并寄出，预祝合作愉快！