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

**GB/T 17376-2008**

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**Animal and vegetable fats and oils -- Preparation of methyl  
esters of fatty acids**

动植物油脂 脂肪酸甲酯制备

**(English Translation)**

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# Table of Contents

|                                                             |    |
|-------------------------------------------------------------|----|
| Foreword .....                                              | 3  |
| 1 Scope .....                                               | 5  |
| 2 Normative references .....                                | 5  |
| 3 General method using boron trifluoride .....              | 5  |
| 4 Trimethylsulfonium hydroxide (TMSH) method.....           | 10 |
| 5 Trans-esterification method .....                         | 12 |
| 6 Precision .....                                           | 15 |
| Annex A (Normative) General analytical procedures .....     | 16 |
| Annex B (Informative) Results of interlaboratory test ..... | 18 |
| Bibliography .....                                          | 31 |

## 1 Scope

This Standard specifies methods of preparing the methyl esters of fatty acids.

It includes methods for preparing fatty acid methyl esters from animal and vegetable fats and oils, fatty acids and soaps. To cover different requirements, three methylation methods are specified, as follows:

- a) boron trifluoride (BF<sub>3</sub>) method (see clause 3);
- b) trimethylsulfonium hydroxide (TMSH) method (see clause 4);
- c) trans-esterification method (see clause 5).

Methyl esters so produced are used in various analytical procedures requiring such derivatives, for example gas- liquid chromatography (GLC), thin-layer chromatography (TLC) and infrared spectrometry (IR).

## 2 Normative references

The articles contained in the following documents have become part of this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this

Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 6682 Water for analytical laboratory use - Specification and test methods (GB/T 6682-2008, ISO 3696:1987, MOD)

GB/T 15687 Animal and vegetable fats and oils - Preparation of test sample (GB/T 15687-2008, ISO 661:2003, IDT)

### 3 General method using boron trifluoride

WARNING - The method described involves the use of potentially hazardous reagents. Normal precautions shall be taken for eye protection and for protection from the dangers of corrosive chemical burns.

Boron trifluoride is poisonous. For this reason, it is not recommended that the analyst

GB 17376-2008

Page 31 of 31

#### Bibliography

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- [3] SCHULTE and WEBER. Fat Sci. Technol., 91, 1989, p. 181.

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