



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

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**Animal and vegetable fats and oils -- Determination of moisture
and volatile matter content
(English Translation)**

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Foreword

This Standard serves as a replacement of GB/T 9696-2008 Animal and Vegetable Fats and Oils - Determination of Moisture and Volatile Matter Content; GB/T 5528-2008 Animal and Vegetable Fats and Oils - Determination of Moisture and Volatile Matter Content.

In comparison with GB/T 9696-2008 and GB/T 5528-2008, there are certain main changes as follows.

---The title of this Standard is modified into "National Food Safety Standard - Animal and Vegetable Fats and Oils - Determination of Moisture and Volatile Matter";

---This Standard combines methods in GB/T 9696-2008 and GB/T 5528-2008.

National Food Safety Standard - Animal and Vegetable Fats and Oils - Determination of Moisture and Volatile

Matter

1 Scope

This Standard specifies two methods for the determination of moisture and volatile matter in animal and vegetable fats and oils.

In this Standard, Method I [sand bath (electric heating plate) method] is applicable to all animal and vegetable fats and oils. Method II (electric drying oven method) is merely applicable to non-dry fats and oils whose acid value is lower than 4 mg/g; it is not applicable to lauric acid type of oils (palm kernel oil and coconut oil).

Method I -- Sand Bath (electric heating plate) Method

2 Principle

Under the condition of $103\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$, heat up the test sample, till moisture and volatile matter completely dissipate.

4.1 Sample Preparation

In a pre-dried plate, which is weighed together with the thermometer, weigh-take around 20 g of sample, accurate to 0.001 g.

4.2 Sample Determination

Heat up the plate, which is loaded with the test sample, in sand bath, or on an electric heating plate to $90\text{ }^{\circ}\text{C}$. The rate of temperature rise shall be controlled at around

5 Expression of Analytical Result

The content (X) of moisture and volatile matter shall be expressed in mass fraction, and be calculated in accordance with Formula (1).

6 Precision

The absolute difference of two independent determination results obtained under repeatability condition shall not exceed 10% of the arithmetic mean value.

7 Principle

Same as Chapter 2.

9.1 Sample Preparation

In a pre-dried and pre-weighed glass container, in accordance with the predicted content of moisture and volatile matter in the sample, weigh-take 5 g or 10 g of sample, accurate to 0.001 g.

9.2 Sample Determination

Place the glass container, which holds the sample, into an electric drying oven at

103 °C ± 2 °C for 1 h. Then, transfer it into a dryer; cool it down to room temperature.

Weigh it, accurate to 0.001 g. Repeat the steps of heating, cooling down and weighing.

10 Expression of Analytical Result

The content (X) of moisture and volatile matter shall be expressed in mass fraction, and be calculated in accordance with Formula (2).

11 Precision

The absolute difference of two independent determination results obtained under repeatability condition shall not exceed 10% of the arithmetic mean value.

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