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

GB/T 26636-2011

**Animal and vegetable fats and oils -- Determination of
polymerized triglycerides content by high-performance
size-exclusion chromatography (HPSEC)**

动植物油脂 聚合甘油三酯的测定 高效空间排阻色谱法(HPSEC)

(English Translation)

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Foreword

This standard is identical with ISO 16931:2001 "Animal and vegetable fats triglyceride measurement polymerization efficient size exclusion chromatography" (English Chinese Version).

For ease of use, the standard ISO 16931:2001 includes the following editorial changes.

- "This International Standard" by "this standard";
- Deleted international standards foreword;
- With a decimal point instead of the international standard as a decimal comma ",". ",";
- Normative documents with GB/T 15687 "Preparation of animal fat samples" instead of ISO 661. 1989 "Animal and vegetable fats and oils-Preparation of test sample";
- The ISO 16931:2001 Note 3.1 Adjustment to Chapter 4 in principle.

Appendix A of this standard is an informative annex.

The standard proposed by the National Food Authority.

This standard by the National Standardization Technical Committee OILS.

1 Scope

This standard specifies the method of application of efficient size exclusion chromatography animal fats polymerized triglyceride content. Applicable content in the range of not less than 3% (by peak area).

This standard applies to frying oil, heating oil treated, can also be used to determine the fat in animal feed in the polymer.

Note 1: The heating oil is formed during polymerization triglyceride (ie, dimeric and oligomeric

triglycerides), the method used to evaluate the thermal deterioration of frying oil level.

Note 2: In the analysis of animal feed fat extraction using influence on the result (see ISO 6492).

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 15687 animal and plant oils prepared sample (GB/T 15687-2008, ISO 661:2003, IDT)

3 Terms and definitions

The following terms and definitions apply to this standard.

Polymerization triglyceride polymerizedtriglycerides Under the conditions specified in this standard, the effective size exclusion chromatography (HPSEC) measured heated oil triglyceride poly Compound.

Principle 4

After the sample was dissolved in tetrahydrofuran, in the column packed with the gel, depending on the size of the molecular weight of the polymeric triglycerides identified by both A differential refractive index detector of its components. Polymerized triglycerides content to extract all triacylglycerides (triglycerides TAGs, polymerization Triglycerides PTAGs, the percentage diglycerides monoglycerides DAGs and MAGs) represents the peak area.

5 Reagents

The reagents used were of analytical grade.

Tetrahydrofuran 5.1. 0.1% 2,6-di-t-butyl-p-cresol (BHT) in order to maintain stability, degassed.

For the moisture content of tetrahydrofuran was dissolved in tetrahydrofuran and used as the mobile phase sample should be the same, there would be a negative peak.

5.2

toluene.

5.3

sodium sulfate. Anhydrous.

6 Equipment

Conventional laboratory equipment and the following special equipment.

6.1

accumulator. 250mL, with mobile phase filter (made of polytetrafluoroethylene, pore size 1 μ m).

6.2

HPLC pump. no pulse, flow rate 0.5mL/min ~ 1.5mL/min.

6.3

Injection valve. a 10 μ L loop and volume 50 μ L ~ 100 μ L syringes, or with 10 μ L sample loop autosampler.