

ICS 75.100  
CCS E 34



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

**GB/T 8926-2012**

Replacing GB/T 8926-1988

---

**Standard test method for insoluble in used lubricating oils  
(English Translation)**

**Issued on: January 1, 1970**

**Implemented on: January 1, 1970**

---

**Issued by: Standardization Administration of China**

## Table of Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and Definitions

### Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard replaces GB/T 8926-1988 "Used Lubricating insolubles determination," this standard and GB/T 8926-1988 compared to the main technical changes in addition to editorial changes outside as follows.

--- The standard name changed to "with lubricating oil insolubles determination";

--- Increased Chapter 2, "Normative references";

Chapter 3 --- Added "cohesion" Terminology and definitions (see 3.3);

--- Increased 5.2 centrifuge proof requirements in order to ensure the safety of the trial;

--- The standard delete GB/T 8926-1988 in relation to 50mL centrifuge tube (3rd edition, 1988, Chapter 7 and Chapter Chapter 8), using only 100mL graduated centrifuge tube, and increases the correction 100mL conical centrifuge tube contents (see 5.1);

--- The standard Chapter 7 sample to note the increase in the form of "If the sample is clear and transparent and no precipitation was evident, the filter step can be omitted "(see note 7.2);

--- The standard sample is mixed with a solvent use of "plug stoppered tubes were centrifuged and vibrated until the mixture is uniformly mixed" (see Chapter 8), GB/T 8926-1988 mixed sample and solvent use "glass rod stirring the sample and solvent to mix" (1988 edition Chapter 7);

--- This standard adds "note in the test procedure. When operating flammable substances, for security reasons should be able to use centrifugal refrigeration or use the centrifuge tube with a screw cap and seal "(see Note 8.1.2);

--- Increasing the deviation content (see 12.2);

--- Remove the GB/T 8926-1988 Appendix A "rotational speeds of the various centrifuge

rotational diameter," writes the part of the contents of this standard Quasi Chapter 5 instruments.

This standard uses redrafted law revision by the United States Society for Testing and Materials standard ASTM D893:2005 (2010) "with lubricating Oil insolubles determination. " this standard ASTM D893:2005 (2010) and the technical differences for the following reasons.

--- Removed ASTM D893:2005 (2010) in the description of 1.4 units of content, due to the present standard units are international units Metric units;

--- The ASTM D893:2005 (2010) 1.5 standard warnings placed at the beginning of the text, in order to meet the requirements for the preparation of national standards;

--- To facilitate the use of this standard Chapter 2 ASTM D893:2005 (2010) as a reference standard corresponding modification of the existing National standards and industry standards. The ASTM D1193 "reagent water standard" was changed to GB/T 6682-2008 "Analysis Experiment Room water specifications and test methods ", ASTM D4057 "petroleum and petroleum product manual sampling method "was changed to GB/T 4756" Stone Oil liquid manual sampling method "will ASTM D4177" petroleum and petroleum products automatic sampling method "was revised to SY/T 5317" Petroleum Liquid pipeline automatic sampling method ";

--- In order to meet the national standard preparation of requirements, ASTM D893:2005 (2010) Chapter 5 of the meaning and purpose of content as Standard introduction, followed by reg number amended accordingly;

--- In the "tube 5.1" add "Note. You can also use the routine analysis made of heat-resistant glass, with a capacity of 100mL scale Ordinary tubes ", ASTM D893:2005 (2010) using only 100mL conical, graduated centrifuge tubes, centrifuge tubes can be for ordinary the same determination to meet the daily requirement of the analysis, and more accessible;

--- Increased 5.2 centrifuge proof requirements in order to ensure the safety of the trial;

--- In Chapter 5, the instrument adds "5.5 cylinder. with scale, capacity 100mL", to facilitate the test operation;

--- Used in this standard "95% Ethanol" (see 6.4) instead of ASTM D893. in 2005 (2010) "denatured ethanol" 7.4 Both test Agent consistent performance;

--- Removed ASTM D893:2005 (2010) Chapter 14 keywords, because the section does not belong to the state content standards.

This standard by the National Standardization Technical Committee on products and lubricant oil (SAC/TC280) proposed.

This standard by the National Standardization Technical Committee on Petroleum Products and Lubricants Lubricant oil change indicator Technical Committee (SAC/TC280/SC6)

centralized.

This standard was drafted. China Petroleum & Chemical Corporation Research Institute of Petroleum.

## Introduction

N-pentane insolubles can include certain oil insolubles resulting from the decomposition of oil and (or) oil additives and some insoluble gum.

Toluene insolubles may come from. (1) external contamination; (2) a high degree of decomposition of carbon and carbonized material produced from the fuel, oil and additives; or (3) engine wear and corrosion of materials.

Significant change in n-pentane insolubles, toluene insolubles (with or without coagulant) and an insoluble gum, leading to problems with the lubrication system of the original One reason.

Measured insolubles can also help evaluate oil performance reasons or to help determine the cause of equipment failure.

With oil insolubles assay Warning. This standard relates to certain hazardous materials, operations and equipment, but has no intention of all safety issues are related to this proposed construction Meeting. Therefore, the user prior to application of this standard to establish appropriate safety and protective measures, and determine the applicability of regulatory limitations related.

## 1 Scope

### 1.1

standard specifies the use of lubricating oil measured in Chiang pentane insolubles and toluene insolubles of the two methods.

### 1.2

A standard method for the determination of the lubricating oil without coagulant n-pentane insolubles and toluene insolubles. This method uses isolated Heart oil - solvent mixture insolubles were separated.

### 1.3

This standard applies to method B containing clean dispersant in the lubricating oil, measured after adding coagulant cohesion n-pentane insolubles and cohesion Toluene insolubles. A method of separating substances in addition, the present method may also be separated some small material suspended in oil.

**Note:** Due to methods A and B often come to different values, and therefore, the results from the methods A and B was not suitable for comparison with each other. When a sample Periodic

measurement results were compared with the measurement results or to compare two or more laboratories, using the same method.

## 2 Normative references

The following documents for the application of this document is essential. For cited documents with dates, only the dated edition applies to this document.

For undated references, the latest edition (including any amendments) applies to this document.

GB/T 4756 petroleum liquids hand sampling method (GB/T 4756-1998, eqv ISO 3170. 1988) GB/T 6682-2008 analytical laboratory use specifications and test methods (ISO 3696. 1987, MOD) SY/T 5317 petroleum liquids pipeline automatic sampling (SY/T 5317-2006, ISO 3171. 1988, IDT)

## 3 Terms and Definitions

The following terms and definitions apply to this document.

N-pentane insolubles pentaneinsolubles in the analysis of the oil in the oil mixed with n-pentane, the separated substances.

**NOTE:** In this standard, the method of separation by centrifugation.

Toluene insolubles in the analysis of the oil, n-pentane insolubles substances insoluble in toluene.

Cohesion coagulate

Causing material viscosity and consistency changes become sticky substance phenomenon.

After agglomeration n-pentane insolubles coagulatedpentaneinsolubles in the analysis of oil, the coagulant is added n-pentane and after oil substances, isolated.

**NOTE:** coagulant is added to make some fine material separated from the original due to the nature of these substances in the clean dispersant oil suspended in the oil.

Toluene Insolubles coagulated coagulatedtolueneinsolubles in the analysis of the oil, condensed and separated by insoluble substances n-pentane and toluene.