

ICS 75.040  
CCS E21



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

**GB/T 18610.1-2015**

Replacing GB/T 18610-2001

---

**Crude oil - Determination of carbon residue - Part 1: Conradson  
method**

原油 残炭的测定 第1部分：康氏法

**Issued on: July 3, 2015**

**Implemented on: October 1, 2015**

---

**Issued by: General Administration of Quality Supervision, Inspection and  
Quarantine of the People's Republic of China;  
Standardization Administration of China**

## Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 5 Reagents and materials

### Foreword

This standard GB/T 18610 "Determination of carbon residue of crude oil" is divided into two parts.

--- Part 1. Conradson method;

--- Part 2. Micro Method. This section GB/T 18610 Part 1. This section drafted in accordance with GB/T 1.1-2009 given rules. This Part replaces GB/T 18610-2001 "oil Determination of carbon residue Conradson method", compared with the GB/T 18610-2001, the main Technical changes are as follows:

--- Added "Warning" content;

--- Increased from 0.01% to 30.0% is described in this section applies to crude oil carbon residue (mass) (see Chapter 1, 2001 edition Chapter 1);

--- Modify the calculation rounding the contents (see 102, Chapter 10, 2001 edition.);

--- Added "Table 2 precision" (see Chapter 11);

--- Added "Quality Assurance and Control" (see Chapter 12). This part of the National Oil and Gas Standardization Technical Committee (SAC/TC355) and focal points. This section is drafted. Liaohe Petroleum Engineering Co., Ltd., Daqing Oilfield Engineering Co., Ltd., Sinopec Petroleum Institute Study hospital. The main drafters of this section. Tan Hongzhi, Zhang Xiaoqi, Wei Che-ho, Li Shuang, Gu Jie, Zhao Hui Ling. This part of the standard replaces the previous editions are.

--- GB/T 18610-2001. Determination of carbon residue of crude oil Part 1. Conradson method Warning. Use of this standard shall have a person experiences regular laboratory work. This standard does not point out all possible security issues. Users have the responsibility to take appropriate safety and health practices and to ensure compliance with the conditions relevant national regulations.

### 1 Scope

GB/T 18610.1-2015 is the Chinese national standard on crude oil - determination of carbon residue - part 1: conradson method, in the field of petroleum and related technologies. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 3 July 2015 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 October 2015. Classification: ICS 75.040, CCS E21. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

GB/T 18610 provisions of this part of the assay using the Conradson Carbon Residue crude methods. This section applies to a water content (mass fraction) of not more than 0.5% carbon residue (mass fraction) of 0.01% to 30.0% of the oil.

## 2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 4756 petroleum liquids hand sampling method Determination of

GB/T 8929 water content of crude oil distillation

GB/T 27867 liquid petroleum pipeline automatic sampling SY/T 6520 Standard Test Method for crude oil dehydration autoclave method

## 3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Char carbonresidue Under the conditions specified in this part of the sample after evaporation and pyrolysis of the resulting residue. The value of this residue mass fraction of the sample FIG. 4. Summary In a porcelain crucible weighed 3g ~ 10g sample was preheated to about 10min smoke point of the oil vapor fuel vapor and combustion of about 13min, to The residue was strengthened heat about 7min, then placed in a porcelain crucible after weighing the dryer to cool, calculated crude oil carbon residue.

## 5 Reagents and materials

5.1 with dilute hydrochloric acid. chemically pure concentrated hydrochloric acid aqueous solution formulated by volume of 14 percent.

5.2 Glass beads. phi2.5mm.