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

GB 11132-1989

Replacing GB/T 11132-2008

**Test method for hydrocarbon types in liquid petroleum
products - Fluorescent indicator adsorption
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" drafted.

This document replaces GB/T 11132-2008 "Fluorescent Indicator Adsorption Method for Determination of Hydrocarbons in Liquid Petroleum Products", and GB/T 11132-Compared with 2008, except for structural adjustment and editorial changes, the main technical changes are as follows.

- Deleted the chapter "Meaning and Use" (see Chapter 5 of the 2008 edition);
- Added an optional adsorption column pressure gas interface connection and schematic diagram (see 5.1.4 and Figure 2);
- Delete the fixing method of the adsorption column at the end of the ruler (see 10.2 of the 2008 edition);
- Change the determination of the pH value of silica gel to the footnote of the table (see Table 2, 7.1 of the 2008 edition);
- Added calculation instructions for samples containing oxygenates (see 10.2);
- Increased the content of the sample report containing oxygenated compounds (see 11.2);
- Changed the applicable sample range in Table 3 and Table 4 on the precision (see Note in Table 3, Note 1 in Table 4, 1.4 of the 2008 edition);
- Changed the applicable content range of hydrocarbons in Table 4 (see Table 4, Table 4 of the 2008 edition).

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document describes a method for the determination of hydrocarbons in petroleum fractions with a boiling point below 315°C using a fluorescent indicator adsorption method.

This document is applicable to the determination of hydrocarbons such as total aromatics, total olefins and total saturated hydrocarbons in petroleum fractions with a boiling point below 315°C. The determination range is as follows.

The volume fraction of aromatics is 5%~99%, the volume fraction of olefins is 1%~55%, and the volume fraction of saturated hydrocarbons is 1%~95%; this document it can also be used for samples with concentrations outside the above ranges, but the precision has not been determined. This document does not apply to substances containing hydrocarbons that affect chromatographic readings.

Samples of dark components.

This document is applicable to petroleum products over the full boiling range, but statistical test data show that the precision of this document is not applicable to boiling points close to Narrow petroleum fractions at 315°C, such samples cannot be separated normally, and the determination results are unstable.

This document may also be used for automotive spark plug ignition engine fuels (auto gasoline), with or without oxygenates such as alcohols and ethers (eg MTBE, ethanol), and gasoline is the major volume component in the blending components.

This document applies to samples containing certain oxygenate blend components. These oxygenates are. methanol, ethanol, methyl tert-butyl base ether (MTBE), tert-amyl methyl ether (TAME) and ethyl tert-butyl ether (ETBE), their concentrations in general blending products will not affect for the determination of hydrocarbons, it will not be detected along with the alcohol eluent, and other oxygen-containing compounds should be verified one by one. When the analysis contains oxygenated compounds when the sample of the components is blended, the results are corrected based on the whole sample.

It has not been determined whether this document applies to products derived from non-petroleum fossil fuels such as coal, shale or oil sands bitumen, the precision of which may be appropriate for such products, it may not be applicable.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 4756 Petroleum liquid manual sampling method GB/T 5816 Determination of Surface

Area of Catalysts and Adsorbents GB/T 6003.1 Technical requirements and inspection of
test sieves - Part 1: Wire woven mesh test sieves GB/T 6536-2010 Determination of
Atmospheric Distillation Characteristics of Petroleum Products GB/T 27867 Petroleum liquid
pipeline automatic sampling method NB/SH/T 0663 Determination of alcohol and ether
content in gasoline by gas chromatography SH/T 0720 Determination of Oxygenates in
Gasoline (Gas Chromatography and Oxygen Selective Flame Ionization Detector)