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

GB 3405-1989

Petroleum benzene
(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 for standardization documents" Drafting.

This document replaces GB/T 3405-2011 "Petroleum Benzene". Compared with GB/T 3405-2011, except for structural adjustments and editorial changes, in addition, the main technical changes are as follows.

- a) The scope has been changed (see Chapter 1, Chapter 1 of the 2011 edition);
- b) The test methods for purity, toluene, non-aromatic hydrocarbons and 1,4-dioxane have been changed (see Table 1, Table 1 of the 2011 edition);
- c) The color test method and arbitration test method have been changed (see Table 1, Table 1 of the 2011 edition);
- d) The quality index of petroleum benzene-535 thiophene was changed from "report" to " $\leq 1.0\text{mg/kg}$ ", and the test method of petroleum benzene-535 thiophene content was changed.

Methods (see Table 1, Table 1 of the 2011 edition);

- e) Added the bromine index quality index of petroleum benzene-535 (see Table 1);
- f) "Total sulfur content" was changed to "sulfur content", and the test method and arbitration method were changed (see Table 1, Table 1 of the 2011 edition);
- g) The test method for nitrogen content has been changed (see Table 1, Table 1 of the 2011 edition);
- h) The test method for water content has been changed (see Table 1, Table 1 of the 2011 edition);
- i) Added the quality index and test method of chlorine content (see Table 1);
- j) Changes have been made to marking, packaging, storage, transportation and delivery acceptance (see Chapter 7, Chapter 6 of the 2011 edition);

- k) Safety has been modified (see Chapter 8, Chapter 7 of the 2011 edition);
- l) The determination method for trace thiophene in petroleum benzene has been changed (see Appendix A, Appendix A of the 2011 edition).

1 Scope

This document specifies the product classification, technical requirements and test methods, inspection rules, marking, packaging, storage and transportation, delivery acceptance and Safety.

This document is applicable to the production of crude oil and its derivatives by catalytic reforming, ethylene cracking by-product aromatics, toluene disproportionation and other processes.

Petroleum benzene produced as a raw material for organic synthesis or other chemical industries.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 511 Determination of mechanical impurities in petroleum, products and additives
 GB/T 1816 Neutral test for benzene products GB/T 2012 Aromatic hydrocarbon pickling test method
 GB/T 2013 Determination of density of benzene products GB/T 3143 Determination of color of liquid chemical products (Hazen unit---platinum-cobalt color number) GB/T 3145
 Determination of the crystallization point of benzene GB/T 4756 Manual sampling method for petroleum liquids
 GB/T 6324.6 Test methods for organic chemical products Part 6: Determination of liquid chromaticity Tristimulus colorimetry GB/T 6324.8 Test methods for organic chemical products
 Part 8: Determination of water content in liquid products - Karl Fischer coulometric method GB 13690 General Rules for Classification and Hazard Communication of Chemicals
 GB 30000.7 Chemical Classification and Labelling Specification Part 7: Flammable Liquids GB 30000.18 Chemical Classification and Labelling Specification
 Part 18: Acute Toxicity GB/T 40111 Determination of fluorine, chlorine and sulfur content in petroleum products - Combustion-ion chromatography NB/SH/T 0164
 Rules for packaging, storage, transportation and delivery acceptance of petroleum and related products NB/SH/T 0253 Determination of total sulfur content in light petroleum products - Coulometric method
 NB/SH/T 6056 Determination of organic chlorine content in light hydrocarbons and engine fuels - Microcoulometric method NB/SH/T 6057
 Determination of purity and hydrocarbon impurities of petroleum benzene, petroleum

toluene and petroleum mixed xylenes - Gas chromatography-effective carbon number method SH/T 0246 Determination of water content in light petroleum products (coulometric method) SH/T 0604 Density determination of crude oil and petroleum products (U-type vibrating tube method) SH/T 0630 Determination of bromine value and bromine index of petroleum products (coulometric method) SH/T 0657 Determination of trace nitrogen in liquid petroleum hydrocarbons - Oxidative combustion and chemiluminescence method SH/T 0689 Determination of total sulfur content in light hydrocarbons, motor fuels and other oil products (ultraviolet fluorescence method) SH/T 1147 Determination of trace sulfur in industrial aromatic hydrocarbons - Microcoulometric method