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Foreword

This is a technical paper prepared by the standards committee after deliberation of the standard in accordance with the rules of the standards conference based on the articles of the Japan Automotive Standards Organization.

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This technical paper is one of the following technical papers related to test methods for diesel fuel containing fatty acid methyl ester in the range of not exceeding 5% in mass fraction.

TP 16001 Automotive fuel — Measurement of fatty acid methyl ester and triglyceride contents in diesel fuel — High performance liquid chromatograph method

TP 16002 Automotive fuel — Measurement of formic acid, acetic acid and propionic acid contents in diesel fuel — Water extraction ion chromatograph method

TP 16003 Automotive fuel —Measurement of methanol content in diesel fuel — Method using gas chromatograph with oxygen detector

TP 16004 Automotive fuel —Measurement of methanol content in diesel fuel — Method using gas chromatograph with head space flame ionization detector

TP 16005 Automotive fuel —Measurement of methanol content in diesel fuel — Water extraction — Method using gas chromatograph with flame ionization detector

TP 16006 Automotive fuel — Measurement of acid value increase in diesel fuel

TP 16007 Automotive fuel —Measurement of oxidation stability of diesel fuel — Rapid small scale oxidation test method

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Technical Paper

Automotive fuel —Measurement of methanol content in diesel fuel — Method using gas chromatograph with head space flame ionization detector

Description

This technical paper is prepared based on the public notice of the Ministry of Economy, Trade and Industry Article 79, "Test method for measurement of methanol content in diesel fuel specified by the Minister of Economy, Trade and Industry", for "Act on the Quality Control of Gasoline and Other Fuels", without reviewing the technical contents.

WARNING The use of this standard may involve hazardous materials, operations and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

1 Scope

This technical paper is applicable to diesel fuels, which contain methanol in the range of 0.01 to 0.5% in mass. When methanol content in a sample exceeds this range, the sample may be diluted with appropriate solvents so as to meet this range, before measuring it.

2 Normative reference

The standards cited at the appropriate places in this technical paper are as follows. For these reference standards, their latest versions (including the Supplements) shall be applied.

JIS K 0114 General rules for high performance liquid chromatography

JIS K 0512 Hydrogen

JIS K 2204 Diesel Fuel

JIS K 2251 Crude petroleum and petroleum products - Sampling

JIS K 8891 Methanol (reagent)

JIS K 8839 2-Propanol

JIS Z 8401 Guide to the rounding off of numbers

JIS Z 8402-6 Accuracy (trueness and precision) of measurement methods and results - Part 6: Use in practice of accuracy value

3 Summary of test method

A gas chromatograph with a headspace sampler is used. A sealed vial, which contains a sample is set in the sampler, and then heated to 80℃ in order to allow methanol in the sample to vaporise. Upon

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