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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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Attention is dorawn to possibility that some of the elements of this document may be the subject of patent rights.

Japan Automotive Standards Organization shall not be hold responsible for identifying any or all suchpatentright.

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 fatty acid methyl ester and triglyceride contents in diesel fuel — High performance liquid chromatograph method

Description

This technical paper is prepared based on the public notice of the Ministry of Economy, Trade and Industry Article 78, “Test method for measurement of fatty acid methyl ester and triglyceride contents 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 allows the determination of the concentrations of fatty acid methyl ester (hereinafter referred to as FAME) and triglyceride in a concentration range of 0.1-10 mass % and of 0.01-0.1 mass %, respectively.

In case the concentration of a sample is beyond the concentration ranges of this standard, the test may be performed by diluting the sample to suitable levels and complying with this standard.

2 Normative reference

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

JIS K 0124 General rules for high performance liquid chromatography

JIS K 2249-1 Crude petroleum and petroleum products - Determination of density- Part 1:Oscillating U-tube method

JIS K 2249-2 Crude petroleum and petroleum products - Determination of density-Part 2:Hydrometer method

JIS K 2249-3 Crude petroleum and petroleum products - Determination of density-Part 3:Capillary pyknometer method

JIS K 2249-4 Crude petroleum and petroleum products - Determination of density-Part 4:Petroleum measurement tables

JIS K 2251 Crude petroleum and petroleum products - Sampling

JIS Z 8401 Guide to the rounding of numbers

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