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ICS 75.160.20
CCS E31

SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3094-2012

Determination of the aromatic content and polynuclear aromatic content of diesel fuels and aviation turbine fuels. Supercritical fluid chromatography

柴油机燃料和航空燃料中的芳香烃和多环芳烃的测定 超临界流体色谱法

(English Translation)

Issued on: May 7, 2012 **Implemented on: November 16, 2012**

Issued by: General Administration of Customs

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard by the National Certification and Accreditation Administration Committee.

This standard was drafted. Tianjin People's Republic of China Exit Inspection and Quarantine.

1 Scope

This standard specifies the method for determining the total content of aromatic hydrocarbons and polycyclic aromatic hydrocarbons using supercritical fluid chromatography (SFC).

This standard applies to diesel fuel, aviation fuel and fuel mix in an aromatic hydrocarbon content of 1% to 75%, mass fraction of PAHs Number of 0.5% to 50%.

2 Method summary

According to supercritical fluid chromatography (SFC) principle, direct injection, and detected by a flame ionization detector (FID), according to the area of one hundred Dividing ratio calculated mass fraction of aromatic hydrocarbons and polycyclic aromatic hydrocarbons.

3 Reagents and materials

3.1

hexadecane. chromatography.

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3.2
Toluene. chromatography.

3.3
tetrahydronaphthalene. chromatography.

3.4
naphthalene. chromatography.

3.5
Mixed standard solution. the preparation of hexadecane (see 3.1) mass fraction of 75% toluene (see 3.2) mass fraction of 20%, tetrahydronaphthalene (see 3.3) Quality Score 3% naphthalene (see 3.4) 2% of the mass fraction of a mixed standard solution.

3.6
Carbon dioxide. purity >=99.99%.

3.7
Hydrogen. purity >=99.99%.

3.8
Air. Zero Air.

4 Instrument

Supercritical Fluid Chromatography. with flame ionization detector.

5.1 Supercritical Fluid Chromatography working conditions

The following operating conditions are typical, according to the characteristics of different instruments, given operating conditions make appropriate adjustments to get the best results.

a) Column. Si column, 250mm x 4.6mm (diameter), particle diameter of 5μm or equivalent person;

b) Column temperature. 40 °C;

c) Mobile phase. Carbon dioxide;

d) Mobile phase flow rate. 1mL/min;

e) Pressure.200atm;

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