

ICS 75.040
CCS E21

SN

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

SN/T 3189-2012

**Determination of sodium, magnesium, iron, vanadium, nickel,
copper and lead in crude oils. Organic injection-inductively
coupled plasma atomic emission spectrometry**

(English Translation)

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Foreword

Accordance with the standards GB/T 1.1-2009, rules GB/T 20001.4-2001 given draft.

Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents.

This standard is proposed and managed by the National Certification and Accreditation Administration Committee.

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

1 Scope

This standard specifies the use of organic Injection - Inductively Coupled Plasma Atomic Emission Spectrometry crude sodium, magnesium, iron, vanadium, nickel, copper, lead elements method.

This standard applies to the determination of sodium, magnesium, iron, vanadium, nickel, copper, lead elements in crude oil. The measurement results depending on the crude oil contained in the particle size of the large Small, when contained in particulate matter larger than a few microns, the measurement results may be low. Determination of floor elements are shown in Table 1.

Table 1 element determination floor milligrams per kilogram (mg/kg)

Elements Na Mg Fe V Ni Cu Pb Determination of floor 3 0.5 11 213

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references,

the latest edition (including any amendments) applies to this document.

GB/T 4756 petroleum liquids hand sampling method

3 Method summary

A certain amount of the sample was sufficiently mixed, to obtain a sample solution was diluted with an appropriate organic solvent, and then to prepare a standard solution in the same manner Liquid, in order to compensate for errors due to sample a variety of effects caused by the import, select an internal standard element added to the sample solution and standard solution with creeping the solution was introduced into the movable pump ICP instrument for testing. By comparing the sample and standard solutions in emission intensity of a specific wavelength, computing the concentration of the sample solution measured elements, the inner standard method.

4 Reagents and materials

4.1

Thinner. do not contain aromatic hydrocarbons measured elements of a mixed solvent (such as. aviation kerosene).

4.2

Mineral Oil. does not contain mineral oil or lubricating base oils tested elements (light oil), as Conostan75 Domestic white oil.

4.3

organometallic oil standard. a mixed organic metal oil standard, the concentration of sodium, magnesium, iron, vanadium, nickel, copper, lead and multi-element is 1000mg/kg.

Such as the US company Conostan organometallic oil Standard 1).

4.4

yttrium internal standard. a concentration of 1000mg/kg, such as Accustandard (R)1) products.

1) This information is given for the convenience of users of this standard does not imply endorsement of the product. If other equivalent product has the same effect, then You can use these equivalent products.