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SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3186-2012

Determination of sodium, magnesium, calcium, iron, vanadium, nickel, copper in crude oil. Microwave ashing-inductively coupled plasma atomic emission spectrometry

原油中钠、镁、钙、铁、钒、镍、铜元素的测定 微波灰化-电感耦合等离子体发射光谱法

(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 Entry-Exit-Entry Inspection and People's Republic of China Fujian Quarantine Bureau.

1 Scope

This standard specifies the microwave crude sodium, magnesium, calcium, iron, vanadium, nickel, copper ash by inductively coupled plasma emission spectrometry method.

This standard applies to the determination of the lower limit of sodium in crude oil, the determination of magnesium, calcium, iron, vanadium, nickel, copper, sodium, magnesium, calcium, iron, vanadium, nickel, copper. sodium 0.2mg/kg, magnesium 0.02mg/kg, calcium 0.02mg/kg, iron 0.02mg/kg, vanadium 0.05mg/kg, Ni 0.05mg/kg, copper 0.05mg/kg.

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.

Preparation of standard solution of GB/T 602 Determination of impurities in chemical reagents GB/T 4756 petroleum liquids hand sampling method Laboratory use specifications

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and test methods GB/T 6682 Analysis

3 Method summary

The samples were microwave ashing treatment with dilute hydrochloric acid to dissolve the resulting ash, set the volume. Test solution by inductively coupled plasma atomic emission spectroscopy measurements it determines the content of each element according to the working curve.

4 Reagents and materials

Unless otherwise indicated in the analysis using only the gifted class pure reagents and in line with GB/T 6682 secondary water.

4.1
hydrochloric acid (rho = 1.18g/cm3).

4.2
hydrochloric acid solution (5050), volume ratio.

4.3
hydrochloric acid solution (298), the volume ratio.

4.4
sodium, magnesium, calcium, iron, vanadium, nickel, copper single element standard stock solution (1000μg/mL). Each standard solution according to GB/T 602 method Preparation, or directly with the national standard material.

4.5
Quantitative filter paper.

5 Instruments

5.1
Inductively coupled plasma atomic emission spectroscopy (ICP-AES).

5.2
Microwave ashing furnace temperature program can be carried out using a range of room temperature ~ 1200 °C, temperature sensing the amount of ± 1 °C.

5.3
electric stove, 1000W ~ 2000W, power adjustable.

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5.4

a platinum crucible, capacity 80mL ~ 100mL.

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