

Determination of chlorine content using X-ray fluorescence spectrometry



Overview

1 This test method covers the determination of chlorine by monochromatic wavelength-dispersive X-ray fluorescence (MWDXRF) spectrometry in aromatic hydrocarbons, their derivatives, and related chemicals. The typical time for each analysis is five or ten minutes. 2 Knowledge of the chlorine content of aromatics is important for process control as. Method 9075: Test Method for Total Chlorine in New and Used Petroleum Products by X-Ray Fluorescence Spectrometry (XRF), part of Test Methods for Evaluating Solid Waste, Physical/Chemical Methods CD-ROM 9075 - 1 Revision 0 September 1994 METHOD 9075 TEST METHOD FOR TOTAL CHLORINE IN NEW AND USED. A simple and rapid wavelength dispersive X-ray fluorescence spectrometry method was developed for simultaneous determination of Cl and S in geochemical reference samples. Spectral line shifts and matrix effect of different inorganic sulfur species were studied by WD-XRF. Analysis of the spectral. In order to demonstrate the analysis of chlorine (Cl) in oil, a calibration curve has been constructed according to ASTM D4929 method except that we have used a rhodium anode tube. The powerful and stable Thermo Scientific™ ARL™ PERFORM'X WD-XRF instrument has been used. It includes an option for. 5.

Article Content

Detection limit and determination range of Cl element

The determination of chlorine (Cl) in fertilizers is crucial for plant growth and soil health.

Analysis of total chlorine in oil by XRF at 1500W

ARL PERFORM[™]X Sequential X-Ray Fluorescence Spectrometer Introduction In order to demonstrate the analysis of chlorine (Cl) in oil, a calibration curve has been constructed according to ASTM

Analysis of total chlorine in oil by XRF at 1500W

In order to demonstrate the analysis of chlorine (Cl) in oil, a calibration curve has been constructed according to ASTM D4929 method except that we have used a rhodium anode tube.

Determination of fluorine by total reflection X-ray fluorescence ...

Abstract There is a growing interest in determination of low Z elements, i.e. carbon to phosphorus, in various samples. Total reflection X-ray fluorescence spectrometry (TXRF) has been

Rapid determination of chlorine in fertilizers by pressed pellet ...

This study proposes a rapid determination method using pressed pellet-wavelength dispersive X-ray fluorescence spectrometry (WDXRF). By optimizing sample preparation conditions (including sample

ASTM International

1.1 This test method covers the determination of chlorine by monochromatic wavelength-dispersive X-ray fluorescence (MWDXRF) spectrometry in aromatic hydrocarbons, their derivatives, and related...

X-Ray Fluorescence: Chemical Characterization of Materials by X-Ray ...

Quantitative chemical analyses using ED and WD X-ray fluorescence spectrometry must consider a calibration of the spectrometer: the calibration can be supplied with the instrumentation or carried out

Standard Test Method for Chlorine in Aromatics by Monochromatic ...

1.1 This test method covers the determination of chlorine by monochromatic wavelength-dispersive X-ray fluorescence (MWDXRF) spectrometry in aromatic hydrocarbons, their derivatives,

Determination of fluorine by total reflection X-ray fluorescence in ...

Total reflection X-ray fluorescence (TXRF) spectrometry is known as a state-of-the-art and fast-growing analytical technique . TXRF spectrometry works on the principle of emission of

Evaluation of chloride content in concrete by X-ray

Determination of chloride content in concrete structures can be carried out by the X-ray fluorescence technique. However some problems affect

Determination of fluorine by total reflection X-ray fluorescence in ...

The object of this study was to develop, optimize, and validate the analytical method for fluorine in a form of calcium fluoride determination in fluoride fluxes by total reflection X-ray

Chlorine in Aromatics by Monochromatic Wavelength Dispersive X-ray ...

1. Scope* spersive X-ray fluorescence (MWDXRF) spectrometry in aromatic hydrocarbons, their deriv g/kg. Higher chlorine concentrations can be determined by quantitatively

Determination of Chlorine in Reference Materials of Marine ...

The main problem in determining chlorine in marine sediments is the lack of a sufficient number of reference materials (RMs) with certified values for the content of this element.

A novel approach for chlorine determination in acidic ...

Citations (11) References (12) Abstract A novel approach for chlorine (Cl) determination in acidic medium using total reflection x-ray fluorescence (TXRF) is reported.

ASTM D7536 Chlorine in Aromatics by Monochromatic

ASTM D7536 provides a standard method for determining the chlorine content in aromatic hydrocarbons using monochromatic wavelength dispersive X

Method 9075: Test Method for Total Chlorine in New and Used

The intensities of the chlorine K" and sulfur K" lines are measured, as are the intensities of appropriate background lines. After background correction, the net intensities are used with a calibration

IP 503: Petroleum and related products

Overview: Scope This International Standard specifies a method for the determination of the chlorine and bromine content of liquid petroleum products, synthetic oils and fluids, and additives for

A novel approach for chlorine determination in acidic medium by total ...

A novel approach for chlorine (Cl) determination in acidic medium using total reflection x-ray fluorescence (TXRF) is reported. It is based on the addition of a known excess amount of AgNO

X-ray fluorescence spectrometry for environmental analysis: Basic ...

This review describes the basic principles, instrumentation and advances in the application of X-ray fluorescence instrumentation to the environmental sciences research topics,

Determination of Chlorides in Ionic Liquids by Wavelength Dispersive

The synthesis of ionic liquids (ILs) usually involves two steps: (i) quaternization of a precursor followed by (ii) a salt metathesis reaction to introduce the desired anion. A consequence of

Rapid determination of chlorine in fertilizers

Abstract The determination of chlorine (Cl) in fertilizers is crucial for plant growth and soil health. Traditional methods such as chemical titration and ion chromatography have limitations including

Chlorine determination in (U, PU)C fuel by total

This solution was analyzed for chlorine by Total Reflection X-ray Fluorescence Spectrometry, using cobalt as an internal standard.

(PDF) Determination of Chlorides in Ionic Liquids by

In this work, wavelength dispersive X-ray fluorescence (WDXRF) spectrometry is presented for the direct measurement of chlorides in ILs.

Determination of fluorine by total reflection X-ray fluorescence in ...

Abstract Total reflection X-ray fluorescence spectrometry (TXRF) is known as a state-of-the-art and fast-growing analytical technique. The spectral range of TXRF spectrometry

Direct chlorine determination in crude oils by energy dispersive X-ray ...

The goal of this work is to propose method to quantify lower amounts of chlorine in crude oil using energy dispersive X-ray fluorescence spectrometry using a simple calibration strategy.

ASTM D7536 Dispersive X-Ray Fluorescence Spectrometry Testing

ASTM D7536 is a standardized, non-destructive test method for determining chlorine content in aromatic hydrocarbons and related synthetic materials using monochromatic wavelength-dispersive X-ray

Determination of fluorine by total reflection X-ray fluorescence ...

The first total reflection X-ray fluorescence (TXRF) spectrometer for the determination of the low Z elements was developed in Atominstitute, Vienna . This equipment is already available

Simultaneous determination of chlorine and sulfur in

A simple and rapid wavelength dispersive X-ray fluorescence spectrometry method was developed for simultaneous determination of Cl and S in geochemical

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