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

GB/T 16416-2007

Replacing GB/T 16416-1996

**Method of extraction for the determination of sodium and
potassium in brown coal soluble in dilute hydrochloric acid**

褐煤中溶于稀盐酸的钠和钾测定用的萃取方法

(English Translation)

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Foreword

This standard and ISO 1952. 1976 "lignite coal and firewood --- dissolved in dilute hydrochloric acid, sodium and potassium extraction method for the determination" corresponds to its consistency not equivalent. The main differences are.

--- Normative references differ (see Chapter 2), this standard is cited Chinese national standard;

--- Precision different (Chapter 9 of this standard, ISO 1952. 1976 in Chapter 8), this standard repeatability limit and ISO 1952.

1976 different reproducibility critical difference is not given.

This standard replaces GB/T 16416-1996 "method of extracting coal soluble in dilute hydrochloric acid, sodium and potassium determination using." this standard compared with GB/T 16416-1996, the major change is made to modify the text and format.

The standard proposed by China Coal Industry Association.

This standard by the National Standardization Technical Committee of Coal.

This standard was drafted. CCRI coal analysis laboratory.

1 Scope

This standard specifies the method for the extraction of coal soluble in dilute hydrochloric acid, sodium and potassium.

This standard applies to lignite.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents, undated reference documents, the latest versions apply to this standard.

GB 474 coal sample preparation

3 PRINCIPLE OF THE METHOD

With boiling 0.005mol/L dilute hydrochloric acid and extracted directly in the form of humic acid salt or inorganic alkali metal is present as sodium, potassium from the coal samples, Then any accurate method of determining a solution of sodium and potassium.

4 Reagents

4.1

hydrochloric acid solution. Ba (HCl) = 0.005mol/L, amount of 0.4mL hydrochloric acid (GB/T 622) diluted with water to 1L, shake spare.

4.2

ethanol (GB/T 679). 95% (volume fraction), AR.

5 Equipment

5.1

flame atomic absorption spectrophotometer or photometer.

5.2

Analysis of balance. a sense of the amount of 0.1mg.

5.3

Electric board. voltage is adjustable.

5.4

Laboratory centrifuges.2000r/min.

5.5

polyethylene tube. 80mL ~ 100mL.

5.6

polyethylene bottles. minimum capacity 250mL.

5.7

volumetric flask. 250mL.

5.8

conical flask. 250mL.

5.9

long-necked funnel.

6 Preparation, samples

Air-dried coal sample, stored in a covered container in preparation according to GB 474 less than 0.2mm in size and capacity of the container is filled to 80% the above.

7 Procedure

Weigh about 1.5g (weighing accuracy of 0.0002g) coal samples in a conical flask, wetted with ethanol 3mL added 100mL of hydrochloric acid solution, and the thing Hot plate preheated slow boil 15min, remove the cooling, the extract and move all the residue of polyethylene centrifuge tube, and