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Identification methods of wood-based activated carbon

木质活性炭鉴别方法

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

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Identification method of wood activated carbon

1 Scope

This document describes the use of scanning electron microscopy and carbon 14 isotope (14C) methods for the identification of wood activated carbon and gives sample preparation, experimental Steps and identification feature diagram.

This document is applicable to the identification of wood activated carbon and coal-based activated carbon.

2 Normative references

GB/T 42985

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Wood-based activated carbon

A carbonaceous adsorption material with a developed pore structure and a large specific surface area, which is made from wood raw materials through processes such as carbonization and activation.

3.2 Coal-based activated carbon

Activated carbon produced from coal.

3.3 residual biomass cell wall structure

The unique residual cell wall structure of wood activated carbon.

4.1 Principle

The scanning electron microscope uses a concentrated electron beam with a certain energy to scan the surface of the sample, stimulate the generation of secondary electrons, and obtain the sample Scanning image of surface morphology. Based on the unique residual biomass cell wall structure of wood activated carbon, which is different from

coal-based activated carbon, wood activated carbon can be identified. Sexual charcoal.

4.2 Instruments and Equipment

Scanning electron microscope. power supply voltage is $220\text{ V} \pm 20\text{ V}$, frequency is $50\text{ Hz} \pm 0.5\text{ Hz}$, with an independent ground wire with good grounding.

The ground resistance shall not exceed the requirements of the instrument manufacturer.