

ICS 65.020
CCS B73



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

GB/T 12496.19-2015

Replacing GB/T 12496.19-1999

**Test methods of wooden activated carbon - Determination of
iron content**

木质活性炭试验方法 铁含量的测定

Issued on: July 3, 2015

Implemented on: November 2, 2015

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 The first law of ammonium thiocyanate method
- 3.3 Reagents and solutions
- 3.4 Operation

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard replaces GB/T 12496.19-1999 "Standard Test Method for Determination of wooden activated carbon iron content", and GB/T 12496.19- Compared to 1999, the main technical changes as follows: precise iron standard solution preparation steps. This standard is proposed and managed by the State Forestry Administration. This standard was drafted. Chinese Academy of Forestry Forest Research Institute of Chemical Industry, Chinese Academy of Science and Technology, Institute of Chemical Industry of Forest Products Development Corporation. The main drafters of this standard. Gong, Zhang Tianjian, Daiwei Di, Yan-Ping Zhang, Chen Chao, Xu Yu, Gu Yujie. This standard replaces the standards previously issued as follows:

--- GB/T 12496.8-1990;

--- GB/T 12496.19-1999. Test methods of wooden activated carbon Determination of iron content

1 Scope

GB/T 12496.19-2015 is the Chinese national standard on test methods of wooden activated carbon - determination of iron content, in the field of agriculture. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 3 July 2015 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 2 November 2015. Classification: ICS 65.020, CCS B73. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the test method for wood activated carbon iron content. This standard applies to wood-based activated carbon.

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. Laboratory use specifications and test methods GB/T 6682-2008 Analysis

GB/T 9721-2006 Chemicals General molecular absorption spectrophotometry (UV and visible part)

3 The first law of ammonium thiocyanate method

3.1 Principle of the method Ammonium persulfate as an oxidizing agent, ammonium thiocyanate as reagent, and iron (Fe^{3+}) form a red complex of iron with visual colorimetry content.

3.2 Instrument Analytical balance. a sense of the amount of 0.0001g.

3.3 Reagents and solutions

3.3.1 hydrochloric acid (GB/T 622), 19.

3.3.2 ammonium persulfate (GB/T 655), 10g/L solution of ammonium persulfate.

3.3.3 Ammonium thiocyanate (GB/T 660), 80g/L ammonium thiocyanate solution. 3.3.4 0.01mg/mL iron standard solution Weigh 0.8634g ammonium ferric sulfate [$\text{Fe}(\text{NH}_4)(\text{SO}_4) \cdot 12\text{H}_2\text{O}$] (GB/T 1279) dissolved in water, was added 2.5mL of concentrated sulfuric acid, shift Into 1000mL volumetric flask, dilute to the mark, shake, this solution containing Fe^{3+} 0.1mg/mL. In use, the precise pipetting 100.0mL Above solution, transferred to 1000mL volumetric flask, dilute to the mark, shake, this solution containing Fe^{3+} 0.01mg/mL.

3.4 Operation

3.4.1 crushed to learn $\leq 71\mu\text{m}$ said sample 1.00g (through 200 mesh) of (accurate to 10mg), placed in 100mL Erlenmeyer flask, Add "19" hydrochloric acid solution 25mL, ease boil 5min. After cooling slightly in 100mL flask filtration, washed several times with hot water filter Slag, and the filtrate and washings were combined, cooled to room temperature, dilute to the mark. Accurate Pipette 10.0mL said filtrate in 50mL colorimetric tube, add too Ammonium sulfate solution 5.0mL, ammonium thiocyanate solution 5.0mL, diluted to 50mL, shake, place 10min after the red iron standard solution (3.3.4) and test liquid while the same treatment was red contrast.