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

中华人民共和国国家标准

GB/T 7702.9-2008

Replace GB/T 7702.9-1997

**Test Method for Granular Activated Carbon from
Coal-Determination of Ignition Temperature**

煤质颗粒活性炭试验方法

着火点的测定

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Foreword

GB/T 7702 *Test method for granular activated carbon from coal* is divided into:

- Part 1: Determination of moisture;
- Part 2: Determination of particle size;
- Part 3: Determination of hardness;
- Part 4: Determination of packing density;
- Part 5: Determination of adsorption capacity of water;
- Part 6: Determination of methylene blue adsorption;
- Part 7: Determination of iodine number;
- Part 8: Determination of phenol adsorption;
- Part 9: Determination of ignition temperature;
- Part 10: Determination of service life against benzene and chloroethane vapors;
- Part 13: Determination of service life against benzene and chloroethane vapors;
- Part 14: Determination of sulphur capacity;
- Part 15: Determination of ash content;
- Part 16: Determination of pH value;
- Part 17: Determination of floatation ratio;
- Part 18: Determination of caramel adsorption;
- Part 19: Determination of carbon tetrachloride (CCl₄) desorption;
- Part 20: Determination of pore volume and specific surface area.

This is part 9 of GB/T 7702.

This part will replace GB/T 7702.9-1997 *Standard test method for ignition temperature of granular activated carbon from coal*.

This part revised and use ASTM D3466: 2006 *Standard Test Method for Ignition*

Temperature of Granular Activated Carbon. Following changes have been made:

- a) Change the temperature measure point into two temperature measure points;
- b) Change the accuracy into that the difference between two parallel results shall not be more than 20℃.

Comparison with GB/T 7702.9-1997, main changes of this part are as follows:

- a) Add the test condition, and specify the air source for test use;
- b) Stipulate that the carbon layer shall be covered with the quartz beads with the thickness of 15 mm and diameter of 3 mm, in order to prevent fluidization of the carbon layer;
- c) Revise the schematic diagram of quartz ignition tube, and specify the specification and size of the quartz ignition tube.
- d) Added Clause 3 "Terms and definitions".

This Standard is proposed by China North Industries Group.

The responsible drafting organization of this Standard is Shanxi Xinhua Chemical Co., Ltd.

The chief drafting staff of this Standard includes Cheng Qingjun, Yuan Yidong, Zhang Xu, Zhao Jijun, Li Weibing, Qiao Xueming and Chi Guangxiu.

This Standard was issued on 1987 and revised on 1997 for the first time.

Test Method for Granular Activated Carbon from Coal-Determination of Ignition Temperature

1 Scope

This part specifies the principle, steps and result calculation, etc. for the determination of ignition temperature of granular activated carbon from coal.

This part applies to the determination of ignition temperature of granular activated carbon from coal.

2 Normative references

The articles contained in the following documents have become this part of GB/T 7702 when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this part. For the undated documents so quoted, the latest editions shall be applicable to this part.

GB/T 7702.2 Standard Test Method for Granular Activated Carbon from Coal-Determination of Particle Size

3 Terms and definitions

For the purpose of this part of GB/T 7702, the following terms and definitions shall apply.

3.1

Ignition temperature

The instantaneous temperature of the activated carbon which gradually increases with the temperature of heating air flow until make the carbon catch fire suddenly under the test conditions specified.

4 Principle

Heat the specimen in the air flow by certain heating rate; with rising of the temperature, the specimen temperature suddenly rises and exceeds the temperature of air stream entering the carbon layer; the temperature at this time is the ignition temperature.

5 Instruments, equipment and materials

5.1 Quartz ignition tube, see Fig. 1.

5.2 Thermocouple, 0°C~20°C, type K, accuracy grade II.



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