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NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

GB/T 1870-1995

**Phosphate rock and concentrate - Determination of moisture
content - Gravimetric method**

磷矿石和磷精矿中水分的测定 重量法

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Foreword

This standard revises GB/T 1870-80 "Phosphate rock and concentrate - Determination of moisture content - Gravimetric method".

The determination of moisture in phosphorus concentrate, which is specified in this standard, equivalently adopts the method in the former Soviet standard TOCT 22275-90 "Apatite concentrate".

The determination of moisture in phosphate rock, which is stipulated in this standard, non-equivalently adopts the method in the American Association of Florida Phosphate Chemists (AFPC) "Phosphate rock analysis method (1980 sixth edition).

During the revision process of this standard, through a large number of investigations and studies, data analysis, test verification, it is considered that in the previous version, the external moisture and internal moisture are measured separately, then add them together to obtain the total moisture, the steps are cumbersome. This revision is to measure the total moisture at 105 ~ 110 °C, which is drying at one time. In addition, the determination methods of moisture in phosphate rocks and phosphate concentrates, which have different particle sizes, are stipulated respectively. The method is simple, time-saving and practical. It is drafted in accordance with the rules given in GB/T 1.1-1993.

This standard replaces GB/T 1870-80 from the date of implementation.

This standard was proposed by the Ministry of Chemical Industry of the People's Republic of China.

This standard shall be under the jurisdiction of the Chemical Mine Design and Research Institute of the Ministry of Chemical Industry.

Drafting organizations of this standard: Chemical Mine Design and Research Institute of the Ministry of Chemical Industry.

The main drafters of this standard: Wang Heping, Wang Hailiang, Zhao Zhiquan.

This standard was first issued in June 1980. It was reviewed-confirmed in December 1988.

This standard entrusts the Chemical Mine Design and Research Institute of the Ministry of Chemical Industry to be responsible for interpretation.

Phosphate rock and concentrate - Determination of moisture content - Gravimetric method

1 Scope

This standard specifies the gravimetric method for the determination of moisture.

This standard applies to the determination of moisture in phosphate rock and phosphate concentrate products.

2 Method summary

The specimen is dried at 105 ~ 110 °C. The moisture is calculated according to the lost mass.

3 Instruments

3.1 Sample holder 1: Enamel plate.

3.2 Sample holder 2: Weighing bottle, flat, with ground mouth, 50 mm in diameter, about 30 mm in height.

3.3 Oven: It is equipped with an automatic temperature controller.

4 Specimen

The specimen passes through a 10 mm and 425 µm test sieve (GB 6003).

5 Analytical procedures

5.1 Phosphate rock

Weigh about 1000 g of a specimen, which is less than 10 mm, accurate to 1 g. Evenly spread it on an enamel dish (3.1) of known mass; the thickness shall be less than 20 mm. Place in an oven, to dry it at 105 ~ 110 °C for 3 h. Stir it gently once after a certain period of time. Take out the enamel dish. Cool to room temperature. Weigh it. Repeat the drying. The difference between the two weighings is not more than 2 g.

5.2 Phosphorus concentrate

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