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NATIONAL STANDARD OF THE
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GB/T 6684-2002

Chemical reagent -- Hydrogen peroxide 30%

化学试剂 30%过氧化氢

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NATIONAL STANDARD OF THE PEOPLE'S
REPUBLIC OF CHINA

GB/T 6684-2002

neq ISO 6353-2:1983
Replacing GB/T 6684-1986

Chemical reagent - Hydrogen peroxide 30%

Molecular formula: H_2O_2

Relative molecular mass: 34.01 (based on 1997 international relative atomic mass)

1 Scope

This Standard specifies technical requirements, test methods, inspection rules and packaging as well as marks of chemical reagent - hydrogen peroxide 30%.

2 Normative references

The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. At the time of publication, the editions indicated are valid. All standards are subject to revision. The parties who are using this Standard shall explore the possibility of using the latest version of the following standards.

GB/T 601-1988, *Chemical reagent - Preparations of standard volumetric solutions*

GB/T 602-1988, *Chemical reagent - Preparations of stock standard solutions*

GB/T 603-1988, *Chemical reagent - Preparations of reagent solutions for use in test methods*

GB/T 609-1988, *Chemical reagent - General method for the determination of total nitrogen* (idt ISO 6353-1:1982)

GB/T 610.1-1988, *Chemical reagent - General method for the determination of arsenic*

GB/T 619-1988, *Chemical reagent - Regulations for sampling and acceptance*

GB/T 6682-1992, *Water for laboratory use; Specifications* (eqv ISO

hydroxide standard titration solution [$c(\text{NaOH})=0.01\text{mol/L}$] to titrate till the solution is green and maintain 30s. The result shall be calculated according to the provisions of Clause 7 "Water-soluble sample" in GB/T 9736-1988.

5.4 Chloride

Measure 18mL (20g) of sample [analytical reagent, chemical pure reagent take 9mL (10g)]. Dilute to 20mL. Determine according to GB/T 9729. The turbidity of the solution must not be greater than the standard comparison solution.

The preparation of the standard comparison solution takes the following amount of chloride standard solution:

Guaranteed reagent, analytical reagent		0.01 mg Cl
Chemical pure reagent		0.05 mg Cl

Conduct the same processing with the sample at the same time.

5.5 Sulfate

Measure 9mL (10g) of sample [take 3.6mL (4g) of chemical pure reagent]. Dilute to 20mL. Add 0.5mL of hydrochloric acid solution (mass fraction is 20%) to acidize. Determine according to GB/T 9728. The turbidity of the solution must not be greater than the standard comparison solution.

The preparation of the standard comparison solution takes the following amount of sulfate standard solution:

Guaranteed reagent		0.02 mg SO_4
Analytical reagent		0.03 mg SO_4
Chemical pure reagent		0.06 mg SO_4

Conduct the same processing with the sample at the same time.

5.6 Total nitrogen

Measure 4.5mL (5g) of sample [analytical reagent, chemical pure reagent take 1.8mL(2g)]. Place in a platinum dish. After the sample is completely decomposed, add 10mL of sulfuric acid solution (mass fraction is 5%). Evaporate on water bath to 5mL. Move this solution to a branch tube distillation flask. Dilute to 140mL and determine according to GB/T 609. The solution shall not be yellower than the standard comparison solution.

The preparation of the standard comparison solution takes the following amount of nitrogen standard solution:

The solution must not be redder than the standard comparison solution.

The preparation of the standard comparison solution takes the following amount of iron standard solution:

Guaranteed reagent		0.002 mg Fe
Analytical reagent		0.004 mg Fe
Chemical pure reagent		0.010 mg Fe

Conduct the same processing with the test solution that is completely decomposed at the same time.

5.10 Nickel

Measure 90mL (100g) of sample. Slowly inject into a platinum dish. After the sample is completely decomposed, evaporate dry on water bath. Add 0.5mL of hydrochloric acid solution (mass fraction is 20%) to dissolve the residue. Dilute to 25mL. Add 2mL of butadione oxime (nickel reagent) ethanol solution (10g/L), 2mL of sodium hydroxide solution (300g/L) and 1mL of potassium persulfate solution (50g/L). Shake well. The solution must not be redder than the standard comparison solution.

The preparation of standard comparison solution takes the standard solution that contains 0.002mg of nickel (Ni). Add 0.5mL of hydrochloric acid solution (mass fraction is 20%). Dilute to 25mL. Conduct the same processing with the same volume of test solution.

5.11 Copper

Determine according to GB/T 9723.

5.11.1 Instrument conditions

Light source: Copper hollow cathode lamp;

Wavelength: 324.7nm;

Flame: Acetylene-air.

5.11.2 Determination method

Measure 225mL (250g) of sample for guaranteed reagent. Measure 45mL (50g) of sample for analytical reagent. Measure 9mL (10g) of sample for chemical pure reagent. Slowly inject into a platinum dish. After the sample is completely decomposed, evaporate dry on water bath. Add 0.5mL of hydrochloric acid solution (mass fraction is 10%) to dissolve the residue. Dilute to 10mL.

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