

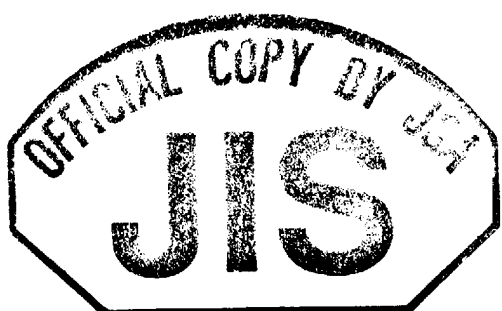
JIS

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JAPANESE INDUSTRIAL STANDARD

Determination of Chlorine in Chlorine-containing Polymers, Copolymers and their Compounds

JIS K 7229—1987



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J I S

Determination of Chlorine in Chlorine-
containing Polymers, Copolymers
and their Compounds

K 7229-1987

1. Scope

This Japanese Industrial Standard specifies the method to determine the chlorine in chlorine-containing resins ⁽¹⁾ by oxygen-flask combustion method ⁽²⁾.

Notes ⁽¹⁾ The chlorine-containing resins, to which this method is applicable, shall be as follows: simple substances such as, polyvinyl chloride and its copolymer, polyvinylidene chloride and its copolymer, synthetic rubber made of chloroprene series, epichlorohydrin rubber and its copolymer, chloromethylated polystyrene and its copolymer, chlorinated polyolefine, rubber hydrochloride, chlorinated rubber, chlorosulfonated polyolefine, chlorinated polyvinyl chloride, copolymer of allyl chloride, and mixture of these substances and other resins.

⁽²⁾ This is called also flask combustion method or oxygen flask method.

Remarks 1. This testing method shall be the determination of chlorine content by means of silver-nitrate titration method or potentiometric titration method after burning chlorine-containing resin in an oxygen flask under oxygen atmosphere to change chlorine contained to inorganic chlorine and then changing the chlorine into chlorine ion by letting it be absorbed in water absorbing liquid.

2. In this standard the units and numerical values shown in { } are in accordance with the conventional units and are standardized values.

2. Matters in Common

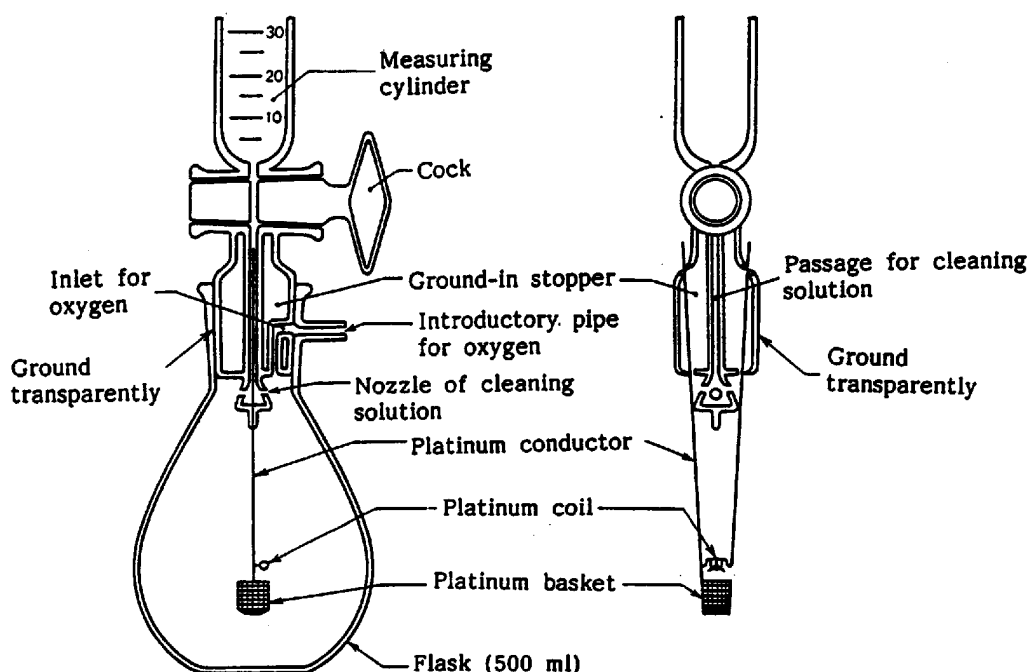
General matters in common to chemical analysis shall conform to the specifications of JIS K 0050 and JIS K 8001.

3. Apparatus

An oxygen-flask combustion apparatus to be used shall consist of, as shown in Fig. 1, the about 500 ml flask in volume equipped with a platinum basket, platinum coil for ignition, and ground stopper with a conductor, or the equivalent.

Applicable Standards, Corresponding International Standard and Reference Standards:
See pages 9 and 10.

Fig. 1. Example of Oxygen-Flask Combustion Apparatus



4. Implement and Reagent

4.1 Implements Implements shall be as follows:

- (1) Chemical Balance Having reciprocal sensibility of 0.01 mg.
- (2) Filter Paper For quantitative analysis (class 5 or class 6) specified in JIS P 3801, and containing no halogen.
- (3) Flask, Measuring Cylinder, Beaker, Pipette, Buret Those with respectively a fixed capacity specified in JIS R 3503.
- (4) Potentiometric Titration Apparatus or pH Meter Specified in JIS K 0113 or JIS Z 8802.
- (5) Indication Electrode Silver electrode specified in JIS K 0113.
- (6) Reference Electrode Silver-silver chloride electrode or carmel electrode specified in JIS K 0113.
- (7) Salt Bridge Controllable by the method specified in JIS K 0113.
- (8) Magnetic Stirrer and Agitator They shall be free from the generation of heat due to their rotation.

4.2 Reagents Reagents shall be as follows:

- (1) Water Distilled water or ion-exchanged water containing no halogen and sulfur compound.
- (2) Hydrogen Peroxide Guaranteed (GR) grade specified in JIS K 8230