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Test methods for water content of chemical products

ICS 71.040.40

Descriptors : water content determination, karl fischer method, karl fischer reagent,
moisture measurement, distillation methods of analysis, evaporation
residue determination

Reference number : JIS K 0068 : 2001 (E)

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee, as the result of proposal for revision of Japanese Industrial Standard submitted by the Japan Chemical Industry Association (JCIA)/the Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law. Consequently **JIS K 0068 : 1992** is replaced with this Standard. Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Introduction This Japanese Industrial Standard has been prepared based on the first edition of **ISO 760 : 1978** *Determination of water—Karl Fischer method (General method)*, however, this International Standard has specified only Karl Fischer method that is traditional volumetric titration method, which means this method is behind the times, therefore the required methods (such as Karl Fischer method by coulometric titration, drying loss method, distillation method and so on) are supplemented in this Japanese Industrial Standard, and additionally the reagents and others concerning the testing methods have been specified after their technical contents in International Standards are modified.

1 Scope This Japanese Industrial Standard specifies the general methods to measure water content in solid or liquid chemical products.

- Remarks 1 The chemical products shall be the overall substance manufactured by chemical reactions, and when the test methods other than those in this Standard are specified in the standard for respective product or for the group of products, the methods specified in the standard shall be conformed.
- 2 Because some chemical products have volatility, explosiveness, radioactivity, and other properties, this Standard may not be able to secure sufficient safety condition when being applied. The methods adopted in this Standard are general methods, therefore they shall be applied only when the safety measures are sufficiently confirmed.
- 3 The standard corresponding to this Standard is as follows.

In addition, abbreviations which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified) and NEQ (not equivalent) according to **ISO/IEC Guide 21**.

ISO 760 : 1978 *Determination of water—Karl Fischer method (General method)* (NEQ)

2 Normative references The standards indicated in Attached Table 1 contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of the standards (including amendments) shall be applied.

3 Definition For the purpose of this Standard, the definitions given in **JIS K 0211** and **JIS K 0213** and the following definition apply.

- a) **titer** When water is titrated with Karl Fischer reagent, the titer means the mass of water equivalent to unit volume of Karl Fischer reagent. It is expressed with mg/ml.

4 Matters in common Matters in common to measurements shall follow the description in **JIS K 0050**, and the method for rounding-off of numerical values follow **JIS Z 8401**. Matters in common to Karl Fischer titration shall follow **JIS K 0113**.