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General rules for electrical conductivity measuring method

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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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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 of revision of Japanese Industrial Standard submitted by Japan Analytical Instruments Manufacturers' Association (JAIMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS K 0130** : 1995 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.

General rules for electrical conductivity measuring method

1 Scope

This Japanese Industrial Standard specifies the measuring method of electrical conductivities in the range of 5 μS/m to 200 S/m (25 °C) of electrolytic aqueous solution and water (river water, sea water, rain water, distilled water, ionized water, etc.).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS K 0213 *Technical terms for analytical chemistry (Electrochemistry part)*

JIS K 0557 *Water used for industrial water and wastewater analysis*

JIS K 1107 *Nitrogen*

JIS K 8121 *Potassium chloride (Reagent)*

JIS Z 8710 *Temperature measurement — General requirement*

3 Terms and definitions

For the purpose of this Standard, the terms and definitions in **JIS K 0213** and the following apply.

3.1 conductance

the reciprocal of electrical resistance (R) of solution in a space between electrodes which is filled with electrolytic aqueous solution

NOTE : The symbol is G, and the unit is S (siemens).

3.2 electrical conductivity, electric conductivity, electrolytic conductivity

the reciprocal of the electrical resistance measured after filling a container wherein two plane electrodes of 1 m^2 in area are opposed to each other at a distance of 1 m with electrolytic aqueous solution

NOTE : It is also called "DÔDENRITU" (Japanese). The symbol is κ, and the unit is S/m. The units mS/m and μS/m are also used depending on the conductivity value.

3.3 cell

the container made of electrical insulating material, to which electrodes for measurement of electrical conductivity are fixed