



**National Metrological Specifications of
the People's Republic of China**
中华人民共和国国家计量检定规程

JJG 291-2008

**Dissolved Oxygen Meter with
Covered-Membrane-Electrode**
覆膜电极溶解氧测定仪

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Quarantine

**Verification Regulation of Dissolved Oxygen
Meter with Covered-Membrane-Electrode**

JJG 291—2008
Replacing **JJG 291—1999**

The regulation is approved by General Administration of Quality Supervision, Inspection and Quarantine on December 23, 2008 and comes into force from June 23, 2009.

Jurisdictional unit: National Technical Committee on Environmental Stoichiometry

Drafting unit: Zhejiang Province Institute of Metrology

The regulation is interpreted by National Technical Committee on Environmental Stoichiometry upon entrustment.

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Dissolved Oxygen Meter with Covered-Membrane-Electrode

1 Scope

The regulation applies to initial verification, subsequent verification and in-use verification of laboratory-service and portable dissolved oxygen meters with covered-membrane-electrode (hereinafter referred to as the instrument) that have a measuring range of (0 ~ 20)mg/L.

2 Overview

The instrument is used to measure concentration of constant dissolved oxygen meter (DO) in water.

The instrument is composed of covered-membrane-oxygen electrode, electronic unit and displayer.

3 Requirements for metrological performance

3.1 Zero error

Zero error of instrument shall not exceed 0.10 mg/L.

3.2 Response time

Response time of instrument shall not exceed 60 s.

3.3 Dissolved oxygen concentration indication error

Dissolved oxygen concentration indication error of instrument for initial verification shall not exceed ± 0.30 mg/L; indication error for subsequent verification shall not exceed ± 0.50 mg/L.

3.4 Repeatability

Standard deviation of instrument for initial verification shall not exceed 0.15 mg/L; standard deviation for subsequent verification shall not exceed 0.20 mg/L.

3.5 Temperature indication error

Temperature indication error of instrument shall not exceed $\pm 0.5^{\circ}\text{C}$.

3.6 Salinity compensation error

Salinity compensation error of instrument shall not exceed $\pm 2\%$.

4 General technical requirements

4.1 Appearance

4.1.1 The instrument shall be indicated with name of manufacturing company, model and manufacturing number; domestic instrument shall also be marked with metering equipment manufacturing license mark and number. Accessories shall be complete and accompanied by operation instruction of the instrument.

4.1.2 Instrument shall look good; indication shall be clear and complete; electrode lead connection shall be reliable and fasteners do not become loose.

4.1.3 Electrode cavity shall be filled with electrolyte and free of bubbles; membrane shall be



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