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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 19861-2026

Replacing GB/T 19861-2005

**Determination of the exchange capacity of acrylic anion
exchange resins**

丙烯酸系阴离子交换树脂交换容量测定方法

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 19861-2005 "Acrylic Anion Exchange Resins with Strong Base Groups, Weak Base Groups and Weak Acid Groups for Exchange Capacity". Compared with GB/T 19861-2005, the main technical changes in the "Methods for Determination of Quantities" are as follows, except for structural adjustments and editorial modifications.

---Change "Principle of Measurement" to "Method Summary" (see Chapter 4, Chapter 4 of the.2005 edition);

---The definition of "water" has been changed (see 5.1,.2005 edition 5.1);

---The definition of "exchange post" has been changed (see 6.1,
6.13 in the.2005 edition);

---Specifications for "centrifuge filter tubes" and "automatic potentiometric titrators" have been added (see

---The definition of "centrifuge" has been changed (see 6.3,
6.10 in the.2005 edition);

---The following terms have been removed. "stoppered Erlenmeyer flask", "acid burette", "alkaline burette", "pipette", "Erlenmeyer flask", "wide-mouth bottle", and "separating funnel". Regulations for "stopwatches," "drying ovens," and "weighing bottles" (see 6.1-6.5,

6.7-6.9, 6.11, and

6.12 in the.2005 edition);

---Change "backwashing" and "pretreatment and transformation treatment" to "sample treatment" (see 7.2,

7.3 in the.2005 edition);

---Change "First remove external moisture according to 8.1~

1 Scope

GB/T 19861-2026 is the Chinese national standard covering the exchange capacity of an anion resin - the number of sites available to hold ions, which is what a demineralisation plant is buying and what falls as the resin ages and fouls. It replaces GB/T 19861-2005. It was issued on 28 January 2026 and has been in force since 1 August 2026, replacing GB/T 19861-2005. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document describes a method for determining the exchange capacity of acrylic anion exchange resins. This document applies to the determination of the capacity of strong base groups, weak base groups, and weak acid groups in acrylic anion exchange resins.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 601 Preparation of Standard Titration Solutions for Chemical Reagents

GB/T 603 Preparation of reagents and products used in chemical reagent test methods

GB/T 5475 Sampling Method for Ion Exchange Resins

GB/T 5757 Method for Determination of Moisture Content in Ion Exchange Resins

GB/T 6682 Specifications and test methods for water used in analytical laboratories

GB/T 8331 Method for Determination of Wet Apparent Density of Ion Exchange Resins

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Standard Form Under the pretreatment and transformation treatment conditions specified in this document, the ion concentrations of the acrylic anion exchange resin samples obtained after treatment are... Type/form.

3.2 strong-base group capacity Under the conditions specified in this document, the acrylic anion exchange resin, based on a unit mass or volume standard, undergoes exchange with a neutral salt solution. The amount of active groups in the reaction is changed.

Note. Strong base capacity, also known as strong base exchange capacity, is expressed in millimoles per gram (mmol/g) or millimoles per milliliter (mmol/mL).

3.3 weak-base group capacity Under the conditions specified in this document, the amount of acrylic anion exchange resin that undergoes an acid exchange reaction per unit mass or volume standard is... Amount of active groups.

Note. Weak base capacity, also known as weak base exchange capacity, is expressed in millimoles per gram (mmol/g) or millimoles per milliliter (mmol/mL).

3.4 weak-acid group capacity Under the conditions specified in this document, the amount of acrylic anion exchange resin that undergoes an exchange reaction with alkali per unit mass or volume standard is...