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

GB/T 30921.6-2025

Replacing GB/T 30921.6-2016

**Test methods for purified terephthalic acid (PTA) for industrial
use - Part 6: Determination of particle size distribution**

工业用精对苯二甲酸（PTA）试验方法 第6部分：粒度分布的测定

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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 is Part 6 of GB/T 30921, "Test Methods for Purified Terephthalic Acid (PTA) for Industrial Use". GB/T 30921 has been issued. The following parts were laid out.

1. Determination of p-carboxybenzaldehyde (4-CBA) and p-methylbenzoic acid (p-TOL) content;

2. Determination of Metal Content;

3. Determination of water content;

4. Determination of Titanium Content. Diantipyrin Methane Spectrophotometric Method;

5. Determination of Acid Value;

6. Determination of Particle Size Distribution;

7. Determination of b^* value using a colorimeter. This document replaces GB/T 30921.6-2016 "Test Methods for Industrial Purified Terephthalic Acid (PTA) - Part

6. Particle Size Distribution". Compared with GB/T 30921.6-2016, the main technical changes in the "Determination" standard are as follows, except for structural adjustments and editorial modifications.

---The scope has been changed (see Chapter 1, Chapter 1 of the 2016 edition);

---The non-legal unit of measurement "mesh" for particle size and sieve aperture has been removed (see

3.3.2 in the 2016 edition);

---A dynamic image method has been added (see Chapter 7);

1 Scope

GB/T 30921.6-2025 is the Chinese national standard covering the particle size of PTA powder - which governs how it flows, how it dissolves in the esterification reactor and how much dust it makes in handling. Part 6 of the series. It replaces GB/T 30921.6-2016, revised with Part 5. It was issued on 2 December 2025 and has been in force since 1 July 2026, replacing GB/T 30921.6-2016. The document is under the responsibility of the China Petroleum and Chemical Industry Federation. This page is published from the official record of the 2025 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 the air jet sieving method, laser diffraction method, and dynamic graph method for determining the particle size distribution of industrial purified terephthalic acid (PTA). Image method. The scope of this document is as follows:

---Air jet sieving is suitable for determining the particle size distribution of PTA samples ranging from 10 μm to 4000 μm ;

---Laser diffraction is suitable for determining the particle size distribution of PTA samples ranging from 1 μm to 2000 μm ;

---The dynamic image method is suitable for the determination of PTA samples with a particle size distribution range of 0.8 μm to 5000 μm .

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 3723 General Safety Rules for Sampling of Industrial Chemical Products

GB/T 6679 General Rules for Sampling of Solid Chemical Products

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

GB/T 8170 Rules for rounding off numerical values and the representation and determination of limiting values

GB/T 19077 Particle size analysis by laser diffraction

GB/T 21649.2 Particle size analysis-Image analysis method-Part

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Samples

Samples shall be taken in accordance with the technical requirements specified in GB/T 3723 and GB/T 6679.

5 Air jet sieving method

5.1 Method Summary A set of specialized sieves was used to sieve the samples one by one on an air jet sieve (1% carbon black was added to eliminate the generated static electricity), and then the measurements were performed.