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

GB/T 47792.3-2026

**Automated liquid handling systems - Part 3: Determination,
specification and reporting of volumetric performance**

自动液体处理系统 第3部分：容量性能的测定、规范和报告

(English Translation)

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References

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.

---Part 1: Terminology and General Requirements;

---Part 2: Measurement Procedures for Capacity Performance;

---Part 3: Determination, specification and reporting of capacity performance.

This document is modified to adopt ISO 23783-3:2022 "Automatic liquid handling systems - Part 3: Determination, specification and reporting of capacity performance".

This document has undergone the following structural adjustments compared to ISO 23783-3:2022.

---The section "5.8 Volumetric Increment" has been removed from ISO 23783-3:2022;

---6.1, 6.2, 6.3, 6.4 and 6.5 correspond to 6.1.1, 6.1.2, 6.1.3, 6.1.4 and 6.1.5 in ISO 23783-3:2022, respectively.

The technical differences between this document and ISO 23783-3:2022, and the reasons therefor, are as follows.

---ISO 23783-1 has been replaced by the normatively referenced GB/T 47792.1-2026 and GB/T 47792.2-2026 respectively.

The standards 2022 and ISO 23783-2:2022 should be adopted to align with my country's national conditions (see Chapter 3, 5.2, 6.1).

---Chapter 4 changes the abbreviations referenced in ISO 23783-1:2022 to the abbreviations used in this document, taking into account the domestic industry situation.

Furthermore, this document's applicability is expanded (see Chapter 4);

---The section "5.8 Volumetric Increment" in ISO 23783-3:2022 has been removed. It is not covered in this document and is taken into account in light of the current industry situation in my country.

Furthermore, this will increase the applicability of this document.

The following editorial changes have been made to this document.

---Note to Chapter 1 of ISO 23783-3:2022 has been removed;

---Simplify the content in "5.1 Overview";

---Move i) and i) from clause 5) under clause m) in 6.1.2 to clause 5);

---The figures in Appendix A have been broken down into tables for a simpler presentation, and this approach has been adapted to the current state of industries in my country, enhancing the suitability of this document.

---The references have been adjusted.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Glass Instruments (SAC/TC178).

Introduction

Automated liquid handling systems can replace traditional manual pipetting tools, automatically completing high-precision liquid handling tasks and effectively reducing human error.

While offering good performance, it also supports process control and traceability, making it widely used in drug discovery, clinical testing, and other fields. However, due to the performance limitations of automated liquid handling systems...

The parameters vary, and there is no clear and effective measurement method to verify the key issues of its performance. Therefore, this document is used to standardize the automatic liquid...

This document outlines the performance requirements and testing methods for body processing systems, providing technical support for the analysis and improvement of product manufacturing quality. It is intended to facilitate readers' understanding and

application of these requirements.

The book "Automatic Liquid Handling Systems" is written in three parts. These three parts are interconnected yet independent, together forming an automated system.

GB/T 47792 "Automatic Liquid Handling Systems" is proposed to consist of three parts.

---Part 1: Terminology and General Requirements. This section aims to define the types, terminology, and general requirements related to automated liquid handling systems.

---Part 2: Measurement Procedures for Capacity Performance. The purpose is to define the testing procedures for the capacity performance of automated liquid handling systems.

---Part 3: Determination, Specification, and Reporting of Capacity Performance. The purpose is to specify capacity performance data for automated liquid handling systems.

Collection and inspection methods, and reporting requirements for capacity performance.

Automated Liquid Handling Systems Part 3.

Measurement, specification, and reporting of capacity performance

1 Scope

This document specifies the requirements and reporting requirements for collecting and inspecting capacity performance data of automated liquid handling systems, and describes the relevant parties...

The method provides a description of the indexing and tracking capacity performance data, as well as statistical information related to this data.

This document applies to automated liquid handling systems equipped with liquid handling devices.

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 47792.1-2026 Automated liquid handling systems - Part 1: Terminology and general requirements (ISO 23783-1:2022) MOD) GB/T 47792.2-2026 Automatic liquid handling systems - Part 2: Procedures for measuring capacity performance (ISO 23783-2) 2022, MOD) the terms and definitions defined in GB/T 47792.1-2026 apply to this document.