

ICS 73.120
CCS J77



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

GB/T 10901-2023

Replacing GB/T 10901-2005

Centrifuge - Methods of performance testing

离心机 性能测试方法

Issued on: November 27, 2023

Implemented on: June 1, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

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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 10901-2005 "Centrifuge Performance Test Method": Compared with GB/T 10901-2005, except for structural adjustments In addition to general and editorial changes, the main technical changes are as follows:

- a) Delete the terms "liquid content of filter cake (sediment)" and "solid content of filtrate (clarified liquid)" (see 3:3 and 3:4 of the:2005 edition);
- b) Added the term "energy consumption" and its definition (see 3:3);
- c) Added general requirements for centrifuge performance testing (see 4:1);
- d) Added test site requirements (see 4:2);
- e) Changed the names and accuracy requirements of some test instruments (see 4:3, 4:2 of the:2005 version);
- f) Added weighing balances and electronic scales and accuracy requirements (see 4:3);
- g) Added requirements for document inspection (see 4:4);
- h) The contents of bearing temperature and oil temperature have been changed (see 5:4 and 5:5, 5:5 and 5:6 of the:2005 edition);
- i) The measurement of the number of pushing times has been deleted (see 5:10 of the:2005 version);
- j) Changed the testing methods of production capacity and processing capacity (see 5:9, 5:10 of the:2005 version);
- k) The regulations on the liquid content of the filter cake (sediment) and the solid content of the filtrate (clarified liquid) have been changed (see 5:10:3, 5:11:3,;2005 version 5:12:3, 5:13:3);

l) Changed the inspection content of control system reliability (see 5:13, 5:15 of the:2005 version);

m) Change "maximum number of cycles per hour" to "maximum number of cycles per unit time" (see 5:15, 5:17 of the:2005 version): Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents: This document is proposed by China Machinery Industry Federation: This document is proposed and coordinated by the National Separation Machinery Standardization Technical Committee (SAC/TC92): This document was drafted by: Hefei General Machinery Research Institute Co., Ltd., Suzhou Unate Machinery Manufacturing Co., Ltd., Chongqing Jiangbei Machinery Co., Ltd: Limited liability company, Jiangsu Jieda Centrifuge Manufacturing Co., Ltd., Jiangsu Seideli Pharmaceutical Machinery Manufacturing Co., Ltd., Chongqing Technology and Business University, Jingjin Decoration Equipment Co., Ltd., Nanjing Oasis Machinery Co., Ltd., and Hefei General Environmental Control Technology Co., Ltd: The main drafters of this document: Zhou Jin, Zhang Deyou, Ren Jianmin, Zhang Jianming, Fan Chunyang, Xu Guanhong, Gong Haifeng, Jiang Guiting, and Wang Youqiang: The previous versions of this document and the documents it replaces are as follows:

1 Scope

GB/T 10901-2023 is the Chinese national standard on centrifuge - methods of performance testing, in the field of mining and minerals. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 27 November 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 June 2024. Classification: ICS 73.120, CCS J77. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the requirements, test items and methods for performance testing of industrial centrifuges: This document applies to industrial centrifuges that separate or concentrate suspensions, emulsions and other heterogeneous phases: It does not apply to laboratory analysis tables: centrifuge: This document also applies to separators:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments)

applies to this document:

GB/T 4774 Filtration and separation terminology

GB/T 10894 Separation mechanical noise test method

GB/T 10895 Mechanical vibration test method for centrifuge separators

GB/T 36522-2018 General technical requirements for electrical control systems for separation machinery

JB/T 6418 Method for determination of cleanliness of separation machinery

3 Terms and definitions

The terms and definitions defined in GB/T 4774 and the following apply to this document: 3:

1 Production capacity $\text{filtrate flow rate}$; $\text{cake formation rate}$ For filter centrifuges, under rated working conditions, when the liquid content of the filter cake and the solid content of the filtrate meet the relevant regulations, the filter cake or filtrate is in a single unit: Discharge volume within a bit time: For decanter centrifuges, under rated working conditions, the solid content of the clarified liquid and the liquid content of the sediment meet the relevant regulations: Discharge volume per unit time:

Note: The unit is m^3/h or t/h : 3:2 processing power throughput The volume or mass of suspension (or emulsion) that can be separated per unit time under working conditions that meet the separation requirements:

Note: The unit is m^3/h or t/h : 3:

3 The electric energy consumed by the entire centrifuge machine (including control system) per unit output (or processing capacity):

4 Requirements

1 General requirements 4:1:

1 Depending on the purpose of the test, the industrial centrifuge (hereinafter referred to as "centrifuge") manufacturer or inspection department may conduct testing on the centrifuge: