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

GB/T 42754-2023

**General rules for performance evaluation of dry chemistry
analyzer**

干式化学分析仪性能评价通则

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Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
8 Transport and transport storage	3
8 Transport and transport storage	6
7 Appendix B (Informative) Instrument Performance Evaluation Report Format Example	10

Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents" drafting: Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents: This document is proposed by China Machinery Industry Federation: This document is under the jurisdiction of the National Industrial Process Measurement Control and Automation Standardization Technical Committee (SAC/TC124): This document was drafted by: Beijing Institute of Food Inspection (Beijing Food Safety Monitoring and Risk Assessment Center), China Inspection and Quarantine Division Science Research Institute, Beijing Hexagon Technology Development Co., Ltd., Heilongjiang Provincial Institute of Metrology and Testing, Jilin University, Beijing Saibida Technology Co., Ltd: Co., Ltd., Beijing Qinbang Technology Co., Ltd., Guangdong Dayuan Oasis Food Safety Technology Co., Ltd., China Quality Certification Center, Chang Chunji Big Little Swan Instrument Co., Ltd: The main drafters of this document: Jiang Jie, Mao Ting, Zou Mingqiang, Gao Yang, Jia Dongfen, Sun Xiaodong, Ding Haiming, Gao Dejiang, Liu Xingju, Wan Yuping, Fan Jun, Zou Jun, Tian Zhiwei, Wu Xiaosheng, Song Daqian, Dai Feng, Shi Na, Mu Tongna, Luo Xiaoxuan: General rules for performance evaluation of dry chemical analyzers

1 Scope

GB/T 42754-2023 sets the general rules for evaluating the performance of dry chemistry analysers. Dry chemistry puts the reagents on a slide instead of in a bottle, which removes the plumbing and the liquid handling and makes the instrument small enough for a clinic, an ambulance or a veterinary practice - and shifts the sources of error onto the slide, its storage and the reflectance measurement made through it. The standard sets the requirements on working conditions, appearance, functions, performance, data interface,

safety, environmental adaptability and transport and storage, and then the evaluation methods for each, beginning with the evaluation conditions and the appearance and functional assessment. It took effect on 1 December 2023.

This document specifies the terms and definitions, requirements, evaluation methods and evaluation reports of dry chemical analyzers: This document is applicable to the performance evaluation of dry chemical analyzers for food testing: This document does not apply to dry chemistry analyzers based on the principle of fluorescence immunoassay:

2 Normative references

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

GB/T 3181-2008 Paint film color standard

GB 5009:22-2016 National Food Safety Standard Determination of Aflatoxin Group B and Group G in Food

GB 5009:33-2016 National Food Safety Standard Determination of Nitrite and Nitrate in Food

GB/T 5009:49-2008 Analytical method of hygienic standards for fermented wine and its blended wine

GB 5009:275-2016 National Food Safety Standard Determination of Boric Acid in Food

GB/T 11606-2007 Environmental test methods for analytical instruments

GB/T 12519-2021 General Specifications for Analytical Instruments

GB/T 19857-2005 Determination of malachite green and crystal violet residues in aquatic products

GB 31658:22-2022 National Food Safety Standard Determination of beta-Agonist Residues in Animal Foods Liquid Chromatography- tandem mass spectrometry

GB/T 34065-2017 Safety requirements for analytical instruments

YY/T 1582-2018 Colloidal gold immunochromatography analyzer GSB05-1426 Paint film color standard sample card

3 Terms and Definitions

The following terms and definitions apply to this document: 3:

1 Test card testcard Used in conjunction with dry chemical analyzers, it is a test card or test strip that can be used to identify the tested substance through the color change of the reaction zone: 3:2 dry chemistry analyzer drychemistryanalyzer Based on the principle of colloidal gold immunochromatography or chromogenic method, the analyte in the sample is judged by measuring the reflected signal of the reaction area of the detection card: reading instrument: 3:

3 It is an instrument for interpreting the analyte in the sample by measuring the reflected signal of the reaction area of the colloidal gold detection card: by host and supporting reagents