

ICS 49.020

CCS V 40



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

GB/T 43457-2023

**Requirements for preparation and installation of space science
experiment sample before launching**

空间科学实验样品发射前准备与安装要求

Issued on: December 28, 2023

Implemented on: April 1, 2024

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

Table of Contents

Preface	III
1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Preparation and installation principles	2
5 General requirements	2
5:1 Technical status management requirements	2
5:2 Security requirements	2
5:3 Ergonomic and medical requirements	3
5:4 Troubleshooting requirements	3
5:5 Documentation requirements	3
5:6 Recording requirements	3
6 Preparation requirements before experimental sample launch	3
6:1 Preparation process	3
6:2 Experimental sample transportation	5
6:3 Confirmation of the status of experimental equipment at the launch site	5
6:4 Experimental sample preparation	5
6:5 Experimental sample loading	6
6:6 Experimental waste disposal	7
6:7 Experimental unit integration	7
6:8 Experimental unit acceptance	7
6:9 Experimental unit transport	8
7 Installation requirements before experimental sample launch	8
7:1 Installation process	8
7:2 General requirements for installation of experimental samples	9
7:3 Experimental unit	9
7:4 Experimental setup	10
7:5 Experimental package	11
Appendix A (informative) Basic support conditions for launch sites and manned aircraft ..	12

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:

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 the Chinese Academy of Sciences:

This document is under the jurisdiction of the National Standardization Technical Committee on Space Science and Its Applications (SAC/TC312):

This document was drafted by: Space Application Engineering and Technology Center of the Chinese Academy of Sciences, Shenzhen Institute of Advanced Technology of the Chinese Academy of Sciences, China Science and Technology Center for Excellence in Molecular Plant Science of the College, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, Institute of Mechanics, Chinese Academy of Sciences, Science in China Institute of Hydrobiology, Institute of Metal Research, Chinese Academy of Sciences, Dalian Maritime University, Institute of Microbiology, Chinese Academy of Sciences, Beijing Space Vehicle Overall Design Department:

The main drafters of this document: Tao Xin, Cang Huaixing, Zhao Liping, Huang Kun, Liu Wei, Zhang Wei, Liu Ying, Wang Yang, Lei Xiaohua, Zheng Huiqiong, Liu Fangwu, Sun Shujin, Wang Gaohong, Luo Xinghong, Sun Yeqing, Huang Ying, Yu Jin, Tian Enjie, Wang Ran:

Preparation and preparation of space science experiment samples before launch
Installation requirements

1 Scope

This document stipulates the preparation and installation requirements for space science experiment samples before launch, including preparation and installation principles, overall requirements, accuracy preparation requirements, installation requirements, etc:

This document applies to manned space life science and biotechnology, space material science, microgravity fluid physics and combustion science, space Scientific research on basic physics, or pre-launch sample preparation and installation work for space science experiments with similar processes:

2 Normative reference documents

GB/T 2893

GB/T 28875

GB/T 28877

GB/T 29083

GB/T 30114

GB/T 32870

GB/T 35436

GB/T 35439

GB/T 37469

GB/T 38325

3 Terms and definitions

The terms and definitions defined in GB/T 28877, GB/T 30114:1 and the following apply to this document:

3:1 sample preparation In order to obtain experimental samples that meet the requirements of space science experiments, effective methods are used to prepare, load and transport experimental samples: and other activities:

3:2 sample loading The activities of filling, transplanting, placing, and adding experimental samples and their auxiliary materials into the sample unit:

[Source: GB/T 32870-2016, 3:4, with modifications]

3:3 sample chamber Carrying and accommodating experimental samples and their accessories, accessories, containers and experimental samples for conducting experiments in experimental units: