



北京朗搏校准检测有限公司

BeiJing Lonbo Calibration and Testing Co.,LTD



中国认可  
国际互认  
校准  
CALIBRATION  
CNAS L 9885

# 校准证书

## Calibration Certificate

10



证书编号: 3XJ21700538-0007  
Cer.No.

委托单位:  
Customer

北京安定医院

委托单位地址:  
Customer Addr.

北京市西城区安康胡同5号

仪器名称:  
Description

超低温冰箱

型号规格:  
Model/Type

ULT2186-4-V43

制造厂商:  
Manufacturer

Thermo

机身编号:  
Serial No.

0126782201081028

管理编号:  
Asset No.

/

接收日期:  
Acce. Date

2021-11-09

校准日期:  
Cal. Date

2021-11-09

校准人:  
Calibrated by

邢国文

签发日期:  
App. Date

2021-11-12

核验人:  
Inspected by

赵会卿

签发人:  
Approved by

赵虎林

印章:  
Chop

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邮箱/Email: [bjlangbo@126.com](mailto:bjlangbo@126.com)



# 校准说明

## Directions of Calibration



证书编号: 3XJ21700538-0007  
Certificate No.

1. 本实验室质量管理体系符合ISO/IEC 17025:2017《检测和校准实验室能力的通用要求》的要求。  
The Quality management system of Our Lab meets the ISO/IEC 17025:2017《General Requirements for the Competence of Testing and Calibration Lab》.

2. 本证书未经本实验室书面授权, 不得部分复制。  
The certificate shall not be partly reproduced without written approval of the laboratory.

3. 本次校准结果仅与被校件有关。  
The calibration results are only related to the items calibrated.

4. 证书内页中"P"、“合格”代表“测量结果在允许范围内”,“F”、“不合格”代表“测量结果不在允许范围内”,“N/A”代表“不适用”; 本证书报告的判定规则和结论仅供参考, 使用人员应结合实际测量的要求合理使用。

"P" and "Pass" in this certificate stand for "Low Limit  $\leq$  the measured value  $\leq$  High Limit", "F" and "Fail" Stand for "the measured value  $<$  Low Limit or the measured value  $>$  High Limit", "N/A" stand for "Not Applicable"; The judgment rules and conclusions of this certificate are for reference only, User should use them reasonably according to the actual measurement requirements.

5. 环境条件 (Environmental condition):

温度(Temperature): 22.3 (°C)      相对湿度(Relative Humidity): 46 (%)

6. 校准地点 (The place of the calibration):

北京安定医院样本库

7. 本次校准的技术依据 (Reference documents for the calibration):

JJF 1101-2019 环境试验设备温度、湿度参数校准规范

8. 本次校准的CNAS认可能力范围及说明 (CNAS accredited scopes and comments). 详细认可范围请查看CNAS网站中注册号为L9885的证书附件。(Please see the attachment of certificate No.L9885 at CNAS website).

9. 本次校准所使用的主要测量标准 (Main measurement standards used during the calibration):

| 名称<br>(Description) | 出厂编号<br>(Serial No.) | 证书编号<br>(Certificate No.) | 有效期至<br>(Due Date) | 溯源单位<br>(Traceability to) | 技术指标<br>(Specification) |
|---------------------|----------------------|---------------------------|--------------------|---------------------------|-------------------------|
| 数据采集器               | US37003454           | 1ZJ21700015-0001          | 2022-04-27         | 北京朗搏                      | U=0.02°C(k=2)           |
| 超低温铂电阻              | cd01~cd15            | 1ZJ21700015-0002          | 2022-04-27         | 北京朗搏校准检测有限公司              | A级                      |

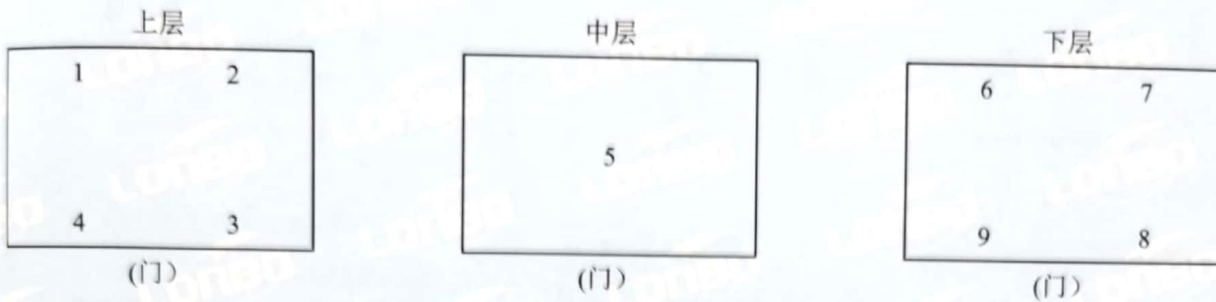
结论(Conclusion): 所校准项目合格(Passed at Calibration Items)



**校准结果(Calibration Results):**

1、温度校准结果(Calibration Results of Temperature )

1.1、测量点布置图(Measurement Point Graph)



1.2、测量条件(Measurement Conditions)

单位(Units):                      ℃  
标称值(Nominal):                -80.0  
设定值(Setting):                -80.0  
示值(Indication):               -80.0

1.3、各点测量平均值(Average value of measurement at each point)

|                          |          |          |          |          |          |
|--------------------------|----------|----------|----------|----------|----------|
| 测量点<br>(Measuring point) | 1<br>(℃) | 2<br>(℃) | 3<br>(℃) | 4<br>(℃) | 5<br>(℃) |
| 测量值<br>(Measured value)  | -78.91   | -78.89   | -78.91   | -78.91   | -79.37   |
| 测量点<br>(Measuring point) | 6<br>(℃) | 7<br>(℃) | 8<br>(℃) | 9<br>(℃) | /        |
| 测量值<br>(Measured value)  | -79.31   | -79.32   | -79.30   | -79.35   | /        |

1.4、校准结果(Calibration results)

| 校准项目<br>(Calibration Items) | 测量值<br>(Measured Value) | 允许范围<br>(Limit) | 结论<br>(Pass/Fail) |
|-----------------------------|-------------------------|-----------------|-------------------|
| 温度上偏差( $\Delta T_{max}$ ):  | 1.22<br>(℃)             | $\pm 2$<br>(℃)  | P<br>(P/F)        |
| 温度下偏差( $\Delta T_{min}$ ):  | 0.48                    | $\pm 2$         | P                 |
| 温度均匀度( $\Delta T_u$ ):      | 0.65                    | $\leq 2$        | P                 |
| 温度波动度( $\Delta T_f$ ):      | $\pm 0.20$              | $\pm 0.5$       | P                 |



**校准结果(Calibration Results):**

附(Appendix):

关于测量结果不确定度的说明

Directions of measurement uncertainty in the calibration

1、依据: JJF 1059.1-2012 测量不确定度评定与表示

Reference document: JJF 1059.1-2012 Evaluation and Expression of Uncertainty in Measurement

2、本次测量结果的扩展不确定度

The measurement expanded uncertainties of the calibration

2.1、温度(Temperature):

$U = 0.30^{\circ}\text{C}$  (k=2)

-----以下空白(hereafter no data)-----

