



NO.1124090401

# 检 测 报 告

## Test Report

样品名称： 圆柱形可充电锂离子电芯 IMR14500-500mAh 3.7V 500mAh  
1.85Wh

Name of Sample: Cylindrical lithium-ion rechargeable cell  
IMR14500-500mAh 3.7V 500mAh 1.85Wh

委托单位:

Consignor:



上海化工院检测有限公司

Shanghai Institute of Chemical Industry Testing Co., Ltd.

上海化工院检测有限公司  
检测报告

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|                                |                                                                                                                                                                                                   |                                                                              |                             |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------|
| 样品名称<br>Name of Sample         | 中文<br>Chinese                                                                                                                                                                                     | 圆柱形可充电锂离子电芯 IMR14500-500mAh 3.7V 500mAh 1.85Wh                               |                             |
|                                | 英文<br>English                                                                                                                                                                                     | Cylindrical lithium-ion rechargeable cell IMR14500-500mAh 3.7V 500mAh 1.85Wh |                             |
| 样品编号<br>Sample No.             | 1124090401                                                                                                                                                                                        |                                                                              |                             |
| 委托单位<br>Consignor              |                                                                                                                                                                                                   |                                                                              |                             |
| 生产单位<br>Manufacturer           |                                                                                                                                                                                                   |                                                                              |                             |
| 检测方法<br>Test method            | 联合国《试验和标准手册》<br>ST/SG/AC.10/11/Rev.8 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8<br>Section 38.3                                                                                    |                                                                              |                             |
| 判定标准<br>Criterion              | 联合国《试验和标准手册》<br>ST/SG/AC.10/11/Rev.8 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8<br>Section 38.3                                                                                    |                                                                              |                             |
| 样品外观<br>Appearance             | 绿色 圆柱型塑料薄膜外壳<br>Green Cylinder plastics film shell                                                                                                                                                |                                                                              |                             |
| 样品接受日期<br>Accepted Date        | 2024-09-13                                                                                                                                                                                        | 检测起始日期<br>Test Date                                                          | 2024-09-24 ~ 2024-10-22     |
| 检测项目<br>Test Items             | 高度模拟;热测试;振动;冲击;外短路;挤压;强制放电<br>Altitude simulation,Thermal test,Vibration,Shock,External short<br>circuit,Crush,Forced discharge                                                                   |                                                                              |                             |
| 检测结论<br>Conclusion             | 经检测,该样品符合联合国《试验和标准手册》ST/SG/AC.10/11/Rev.8 38.3标准要求。<br>The sample has passed the test items of UN Manual of Tests and Criteria<br>ST/SG/AC.10/11/Rev.8 Section 38.3<br><br>生效日期(Date): 2024-10-22 |                                                                              |                             |
| 备注<br>Comment                  | 可充电锂电池芯Rechargeable Lithium Cell.                                                                                                                                                                 |                                                                              |                             |
| 委托单位地址<br>Consignor<br>Address | /                                                                                                                                                                                                 |                                                                              | 邮政编码<br>Post Code<br>518103 |

批准  
Approver:  
职务  
Title:

许彪

审核  
Checker:

丁品如

编制  
Compiler:

傅佳

新能源安全部部长(Head of New Energy Safety Department)



# 上海化工院检测有限公司

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| 序号<br>No.                              | 检测项目名称<br>Name of Test Items  | 标准要求或标准条款号<br>Standard requirement or The Clause Number of Standard                                                       | 检测结果<br>Test Result     | 本项结论<br>Conclusion | 备注<br>Remark    |
|----------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------|-----------------|
| 1                                      | 高度模拟<br>Altitude simulation   | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.8 38.3 试验T.1<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 Section 38.3 Test T.1 | 见附表 1<br>See Appendix 1 | 合格<br>Passed       | /               |
| 2                                      | 热测试<br>Thermal test           | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.8 38.3 试验T.2<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 Section 38.3 Test T.2 | 见附表 2<br>See Appendix 2 | 合格<br>Passed       | /               |
| 3                                      | 振动<br>Vibration               | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.8 38.3 试验T.3<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 Section 38.3 Test T.3 | 见附表 3<br>See Appendix 3 | 合格<br>Passed       | /               |
| 4                                      | 冲击<br>Shock                   | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.8 38.3 试验T.4<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 Section 38.3 Test T.4 | 见附表 4<br>See Appendix 4 | 合格<br>Passed       | /               |
| 5                                      | 外短路<br>External short circuit | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.8 38.3 试验T.5<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 Section 38.3 Test T.5 | 见附表 5<br>See Appendix 5 | 合格<br>Passed       | /               |
| 6                                      | 挤压<br>Crush                   | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.8 38.3 试验T.6<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 Section 38.3 Test T.6 | 见附表 6<br>See Appendix 6 | 合格<br>Passed       | /               |
| 7                                      | 强制放电<br>Forced discharge      | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.8 38.3 试验T.8<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 Section 38.3 Test T.8 | 见附表 7<br>See Appendix 7 | 合格<br>Passed       | /               |
| 8                                      | 以下空白                          | This space intentionally left blank                                                                                       |                         |                    |                 |
| 检测环境条件<br>Test Environment Condition   |                               | 环境温度:21℃-25℃;环境湿度:/%<br>Ambient temperature:21℃-25℃;Ambient humidity:/%                                                   |                         |                    |                 |
| 分包检验情况<br>Subcontracted Test Condition |                               | 检测项目<br>Test Item                                                                                                         | /                       |                    |                 |
|                                        |                               | 分包实验室<br>Subcontracted Laboratory                                                                                         | 名称<br>Name              | /                  | 邮编<br>Post Code |
|                                        |                               |                                                                                                                           | 地址<br>Address           | /                  | 电话<br>Tel       |

## 检测报告-附表1

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### 检测报告-附表2

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| 序号<br>No.                 | 2                                   | 检测项目名称<br>Name of Test Items |                       | 热测试<br>Thermal test  |                       |                             |                                   |                            |
|---------------------------|-------------------------------------|------------------------------|-----------------------|----------------------|-----------------------|-----------------------------|-----------------------------------|----------------------------|
| 样品<br>编号<br>Sample<br>No. | 样品状态<br>Sample Status               | 试验前 Before                   |                       | 试验后 After            |                       | 质量损失<br>Mass Loss<br><br>/% | 剩余电压<br>Residual<br>OCV<br><br>/% | 其他<br>现象<br>Other<br>Event |
|                           |                                     | 质量<br>Mass<br><br>/g         | 开路电压<br>OCV<br><br>/V | 质量<br>Mass<br><br>/g | 开路电压<br>OCV<br><br>/V |                             |                                   |                            |
| 001                       | 1CYC完全充电<br>1CYC Fully charged      | 16.3645                      | 4.15                  | 16.3626              | 4.04                  | 0.01                        | 97.35                             | O                          |
| 002                       | 1CYC完全充电<br>1CYC Fully charged      | 16.3492                      | 4.16                  | 16.3485              | 4.04                  | 0.00                        | 97.12                             | O                          |
| 003                       | 1CYC完全充电<br>1CYC Fully charged      | 16.4640                      | 4.15                  | 16.4626              | 4.04                  | 0.01                        | 97.35                             | O                          |
| 004                       | 1CYC完全充电<br>1CYC Fully charged      | 16.3529                      | 4.15                  | 16.3522              | 4.04                  | 0.00                        | 97.35                             | O                          |
| 005                       | 1CYC完全充电<br>1CYC Fully charged      | 16.4258                      | 4.14                  | 16.4238              | 4.04                  | 0.01                        | 97.58                             | O                          |
| 006                       | 25CYC完全充电<br>25CYC Fully charged    | 16.4491                      | 4.14                  | 16.4486              | 4.04                  | 0.00                        | 97.58                             | O                          |
| 007                       | 25CYC完全充电<br>25CYC Fully charged    | 16.3292                      | 4.15                  | 16.3273              | 4.04                  | 0.01                        | 97.35                             | O                          |
| 008                       | 25CYC完全充电<br>25CYC Fully charged    | 16.5109                      | 4.15                  | 16.5085              | 4.04                  | 0.01                        | 97.35                             | O                          |
| 009                       | 25CYC完全充电<br>25CYC Fully charged    | 16.3657                      | 4.14                  | 16.3660              | 4.04                  | 0.00                        | 97.58                             | O                          |
| 010                       | 25CYC完全充电<br>25CYC Fully charged    | 16.3422                      | 4.16                  | 16.3419              | 4.04                  | 0.00                        | 97.12                             | O                          |
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|                           |                                     |                              |                       |                      |                       |                             |                                   |                            |

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。  
 Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting,  
 No Disassembly,No Rupture & No Fire.

## 检测报告-附表3

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上海化工院检测有限公司  
检 测 报 告 - 附表4  
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| 序号<br>No.                 | 4                                   | 检测项目名称<br>Name of Test Items |                   | 冲击<br>Shock      |                   |                         |                               |                            |
|---------------------------|-------------------------------------|------------------------------|-------------------|------------------|-------------------|-------------------------|-------------------------------|----------------------------|
| 样品<br>编号<br>Sample<br>No. | 样品状态<br>Sample Status               | 试验前 Before                   |                   | 试验后 After        |                   | 质量损失<br>Mass Loss<br>/% | 剩余电压<br>Residual<br>OCV<br>/% | 其他<br>现象<br>Other<br>Event |
|                           |                                     | 质量<br>Mass<br>/g             | 开路电压<br>OCV<br>/V | 质量<br>Mass<br>/g | 开路电压<br>OCV<br>/V |                         |                               |                            |
| 001                       | 1CYC完全充电<br>1CYC Fully charged      | 16.3622                      | 4.04              | 16.3606          | 4.03              | 0.01                    | 99.75                         | O                          |
| 002                       | 1CYC完全充电<br>1CYC Fully charged      | 16.3463                      | 4.04              | 16.3446          | 4.04              | 0.01                    | 100.00                        | O                          |
| 003                       | 1CYC完全充电<br>1CYC Fully charged      | 16.4618                      | 4.04              | 16.4607          | 4.03              | 0.01                    | 99.75                         | O                          |
| 004                       | 1CYC完全充电<br>1CYC Fully charged      | 16.3511                      | 4.04              | 16.3481          | 4.04              | 0.02                    | 100.00                        | O                          |
| 005                       | 1CYC完全充电<br>1CYC Fully charged      | 16.4209                      | 4.04              | 16.4205          | 4.03              | 0.00                    | 99.75                         | O                          |
| 006                       | 25CYC完全充电<br>25CYC Fully charged    | 16.4486                      | 4.04              | 16.4461          | 4.04              | 0.02                    | 100.00                        | O                          |
| 007                       | 25CYC完全充电<br>25CYC Fully charged    | 16.3265                      | 4.04              | 16.3265          | 4.03              | 0.00                    | 99.75                         | O                          |
| 008                       | 25CYC完全充电<br>25CYC Fully charged    | 16.5081                      | 4.04              | 16.5061          | 4.04              | 0.01                    | 100.00                        | O                          |
| 009                       | 25CYC完全充电<br>25CYC Fully charged    | 16.3634                      | 4.04              | 16.3615          | 4.04              | 0.01                    | 100.00                        | O                          |
| 010                       | 25CYC完全充电<br>25CYC Fully charged    | 16.3400                      | 4.04              | 16.3387          | 4.04              | 0.01                    | 100.00                        | O                          |
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|                           |                                     |                              |                   |                  |                   |                         |                               |                            |

备注: L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。  
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage, No Venting,  
No Disassembly, No Rupture & No Fire.

## 检测报告-附表5

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## 检测报告-附表6

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| 序号<br>No.          | 6                                   | 检测项目名称<br>Name of Test Items                | 挤压<br>Crush         |
|--------------------|-------------------------------------|---------------------------------------------|---------------------|
| 样品编号<br>Sample No. | 样品状态<br>Sample Status               | 样品表面最高温度<br>Max. External Temperature<br>/℃ | 其他现象<br>Other Event |
| 011                | 1CYC 50%容量<br>1CYC 50% Capacity     | 23.9                                        | O                   |
| 012                | 1CYC 50%容量<br>1CYC 50% Capacity     | 24.0                                        | O                   |
| 013                | 1CYC 50%容量<br>1CYC 50% Capacity     | 23.7                                        | O                   |
| 014                | 1CYC 50%容量<br>1CYC 50% Capacity     | 23.2                                        | O                   |
| 015                | 1CYC 50%容量<br>1CYC 50% Capacity     | 23.5                                        | O                   |
| 016                | 25CYC 50%容量<br>25CYC 50% Capacity   | 23.4                                        | O                   |
| 017                | 25CYC 50%容量<br>25CYC 50% Capacity   | 23.2                                        | O                   |
| 018                | 25CYC 50%容量<br>25CYC 50% Capacity   | 23.0                                        | O                   |
| 019                | 25CYC 50%容量<br>25CYC 50% Capacity   | 23.3                                        | O                   |
| 020                | 25CYC 50%容量<br>25CYC 50% Capacity   | 23.2                                        | O                   |
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|                    |                                     |                                             |                     |

备注：D-解体 F-起火 O-无解体、无起火。

Note: D-Disassembly F-Fire O-No Disassembly & No Fire.

# 上海化工院检测有限公司

## 检测报告 - 附表7

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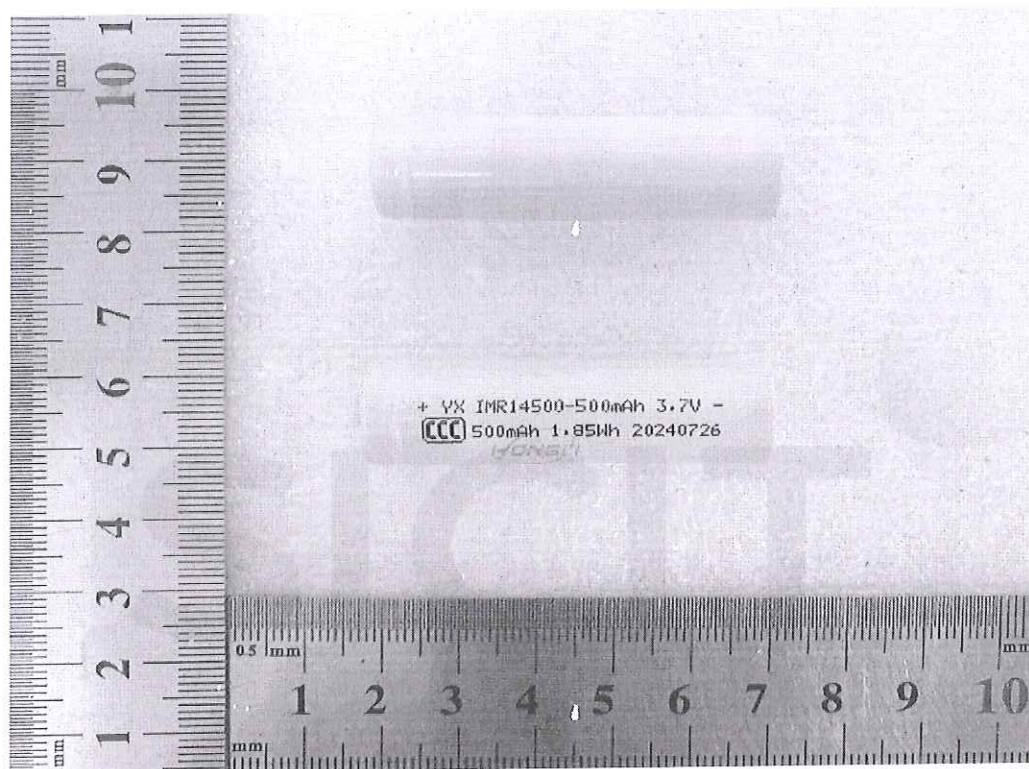
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| 序号<br>No.                                                                          | 7                                   | 检测项目名称<br>Name of Test Items | 强制放电<br>Forced discharge |
|------------------------------------------------------------------------------------|-------------------------------------|------------------------------|--------------------------|
| 样品编号<br>Sample No.                                                                 | 样品状态<br>Sample Status               | 其他现象<br>Other Event          |                          |
| 021                                                                                | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 022                                                                                | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 023                                                                                | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 024                                                                                | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 025                                                                                | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 026                                                                                | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 027                                                                                | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 028                                                                                | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 029                                                                                | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 030                                                                                | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 031                                                                                | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 032                                                                                | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 033                                                                                | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 034                                                                                | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 035                                                                                | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 036                                                                                | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 037                                                                                | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 038                                                                                | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 039                                                                                | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 040                                                                                | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 备注: D-解体 F-起火 O-无解体、无起火。<br>Note: D-Disassembly F-Fire O-No Disassembly & No Fire. |                                     |                              |                          |

上海化工院检测有限公司  
检测报告-附图  
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\*\*\*报告结束\*\*\*

图 28