

测试报告(Test Report) 报告编号(NO.): MUCRF5NG8108487D3 签发日期(Issued Date): 2026-01-16 Page 1 of 9

委托单位 Applicant:

东莞市超冠锂能源科技有限公司

地址 Address:

Dongguan Chaoguan Lithium Energy Technology Co.,Ltd

广东省东莞市道滘镇小河大新东路 24 号 1 号楼 103 室

Room 103, Building 1, No.24 Daxin East Road, Xiaohu, Daojiao,

Dongguan City, Guangdong Province

委托单位提供样品信息如下:

The following sample(s) was/were submitted and identified on behalf of the client as:

样品名称 Sample Name:

锂离子电池扣式电池 Lithium manganese dioxide button battery

样品型号 Sample Model:

CR2016

制造商 Manufacturer:

东莞市超冠锂能源科技有限公司

Dongguan Chaoguan Lithium Energy Technology Co.,Ltd

零部件名称 Part Name:

见清单 See the List

样品接收日期 Sample Receive Date: 2026-01-12

样品测试日期 Testing Period:

2026-01-12 ~ 2026-01-16

参考要求:

Reference Requested:

RoHS 2011/65/EU 及修订指令(EU)2015/863 附录 II 的要求

RoHS Directive 2011/65/EU & (EU)2015/863 Annex II

参考方法:

Reference Method:

1. 拆分申请者提供的成品, 并评估样品和相关测试报告

Review was performed for the samples disjonted from the submitted articles and the ralated test reports submitted by the Applicant

2. 仅对本报告照片中的样品进行下列测试分析

Tests was performed for the samples indicated by the photos in the report.

(1) IEC 62321-3-1:2013,用 X 射线荧光分析仪器进行筛选

IEC 62321-3-1:2013,Screening by XRF Spectroscopy

(2) IEC 62321-3-3:2021 的方法, 用热裂解气相色谱质谱仪对

邻苯二甲酸酯类进行筛选

IEC 62321-3-3:2021 method, Screening Phthalates by PY-GC-MS

(3) 化学测试方法 Wet Chemical Test Method

a. IEC 62321-7-1 Edition 1.0:2015,

用紫外-可见分光光度计测定六价铬的含量

IEC 62321-7-1 Edition 1.0:2015,

Hexavalent Chromium Analysis is performed by UV-Vis

b. IEC 62321-6 Edition 1.0:2015,用气相色谱-质谱仪测定多溴联苯和

多溴二苯醚的含量

IEC 62321-6 Edition 1.0:2015, PBBs and PBDEs Analysis is performed by GC-MS

测试结果 Test Result:

请参见下页 Please refer to next page(s)

批准人 Approved by:

毛祖青



Code: fmrpqvf

声明 Statement

1. 本报告无检验测试专用章、报告骑缝章和批准人签章无效。
This report is invalid without special seal for inspection and test, cross-page seal and signature of the approver.
2. 本报告页面所使用“PONY”、“谱尼”字样为谱尼测试集团的注册商标，其受《中华人民共和国商标法》保护，任何未经本单位授权的擅自使用和仿冒、伪造、变造“PONY”、“谱尼”商标均为违法侵权行为，本单位将依法追究其法律责任。
The words "PONY" and "谱尼" used in this report page are the registered trademarks of Pony Testing International Group, which are protected by the Trademark Law of the People's Republic of China. Any unauthorized use, counterfeiting, forging or altering of the trademarks of "PONY" and "谱尼" without the authorization of us is an illegal infringement, and we will investigate their legal liabilities according to law.
3. 委托单位对报告数据如有异议，请于报告完成之日起十五日内(初级农产品报告请于报告收到之日起五个工作日内)向本单位书面提出复测申请，同时附上报告原件并预付复测费。
If the applicant has any objection to the report data, please submit a written application for retesting to us within 15 days after the completion of the (for the report of primary agricultural products, submit a written application for retesting to the unit within 5 working days after the receipt of the report), with the original report attached and the retesting fee prepaid.
4. 委托单位办理完毕以上手续后，本单位会尽快安排复测。如果复测结果与异议内容相符，本单位将退还委托单位的复测费。
After the applicant completes the above procedures, we shall arrange the retesting as soon as possible. If the retest result is consistent with the objection, we will refund the retest fees.
5. 不可重复性或不能进行复测的实验，不进行复测，委托单位放弃异议权利。
If the experiment cannot be repeated or cannot be retested, no retest shall be conducted, and the applicant shall waive the right of objection.
6. 委托单位对送检样品的代表性和资料的真实性负责，否则本单位不承担任何相关责任。
The applicant is responsible for the representativeness of the commissioned samples and the authenticity of the documents, otherwise we do not assume any relevant responsibilities.
7. 本报告仅对所测样品的测试结果负责，测试结果及其相关判定结论仅反映对所测样品的评价或只代表测试时污染物的排放状况。对于报告及所载内容不能进行商业广告宣传使用，使用所产生的直接或间接损失及一切法律后果，本单位不承担任何经济和法律后果。
This report is only responsible for the test results of the tested samples. The test results and relevant conclusions reflect the evaluation of the tested samples or only represent the emission status of pollutants during the test. The report and the contents contained in it cannot be used for commercial advertising, and we do not assume any economic and legal liabilities for direct or indirect losses and all legal consequences arising from the use.
8. 本单位有权在完成报告后按规定方式处理所测样品，除客户特别声明并支付样品管理费，所有超过标准规定时效期的样品均不再做留样。
We have the right to dispose the tested sample after approval of the test report. Unless the applicant specifically declares and pays the sample management fee, all samples beyond the validity period specified in the standard will not be retained.
9. 本单位保证工作的客观公正性，对委托单位的商业信息、技术文件等商业秘密履行保密义务。
We assure objectivity and impartiality of the test, and fulfills the obligation of confidentiality for applicant's commercial information, and technique document.
10. 本报告私自转让、盗用、冒用、涂改、未经本单位批准的复制(全文复制除外)或以其它任何形式的篡改均属无效，本单位将对上述行为追究其相应的法律责任。
Any unauthorized transfer, appropriation, falsification, alteration, copying (except full text copying) or alteration in any other form of this report without the approval of us shall be invalid. We shall strictly investigate the corresponding legal liability for the aforesaid behavior.

▲防伪说明 (Anti-counterfeiting Instructions):

1. 报告编号是唯一的;
The report number is unique.
2. 扫描报告首页下方二维码，即可查询报告真伪。
Scan the QR code below the first page to check the authenticity of the report.

测试报告(Test Report) 报告编号(NO.): MUCRF5NG8108487D3 签发日期(Issued Date): 2026-01-16 Page 2 of 9

清单 List:

样品编号 Sample No.	零部件名称 Part Name	
G8108487D3-1	金属上壳	Metal upper shell
G8108487D3-2	金属下壳	Metal lower shell
G8108487D3-3	金属网	Metal mesh
G8108487D3-4	黑色密封圈	Black sealing ring
G8108487D3-5	电解纸	Electrolytic paper
G8108487D3-6	黑色粉末	Black powder
G8108487D3-7	灰色粉末	Grey powder

测试报告(Test Report) 报告编号(NO.): MUCRF5NG8108487D3 签发日期(Issued Date): 2026-01-16 Page 3 of 9

测试结果 Test Result (Unit: mg/kg)

样品编号 Sample No.	EDXRF		PHTH 筛分结果 ⁽²⁾ PHTH Screening Results ⁽²⁾	化学测试 Chemical Testing			单项判定 Item Conclusion
	测试项目 Test Item	结果 ⁽¹⁾ Results ⁽¹⁾		测试项目 Test Item	结果 ⁽³⁾ Result ⁽³⁾	限量 Limit	
G8108487D3-1	Pb	BL	\	Pb	\	1000	PASS
	Cd	BL	\	Cd	\	100	PASS
	Hg	BL	\	Hg	\	1000	PASS
	Cr	X	\	Cr ⁶⁺	Negative	See Remark (3) (c)	PASS
	Br	\	\	PBBs	\	1000	—
				PBDEs	\	1000	—
	DEHP	\	\	DEHP	\	1000	—
	DBP	\	\	DBP	\	1000	—
	BBP	\	\	BBP	\	1000	—
	DIBP	\	\	DIBP	\	1000	—
G8108487D3-2	Pb	BL	\	Pb	\	1000	PASS
	Cd	BL	\	Cd	\	100	PASS
	Hg	BL	\	Hg	\	1000	PASS
	Cr	X	\	Cr ⁶⁺	Negative	See Remark (3) (c)	PASS
	Br	\	\	PBBs	\	1000	—
				PBDEs	\	1000	—
	DEHP	\	\	DEHP	\	1000	—
	DBP	\	\	DBP	\	1000	—
	BBP	\	\	BBP	\	1000	—
	DIBP	\	\	DIBP	\	1000	—
G8108487D3-3	Pb	BL	\	Pb	\	1000	PASS
	Cd	BL	\	Cd	\	100	PASS
	Hg	BL	\	Hg	\	1000	PASS
	Cr	X	\	Cr ⁶⁺	Negative	See Remark (3) (c)	PASS
	Br	\	\	PBBs	\	1000	—
				PBDEs	\	1000	—
	DEHP	\	\	DEHP	\	1000	—
	DBP	\	\	DBP	\	1000	—
	BBP	\	\	BBP	\	1000	—
	DIBP	\	\	DIBP	\	1000	—

测试报告(Test Report) 报告编号(NO.): MUCRF5NG8108487D3 签发日期(Issued Date): 2026-01-16 Page 4 of 9

测试结果 Test Result (Unit: mg/kg)

样品编号 Sample No.	EDXRF		PHTH 筛分结果 ⁽²⁾	化学测试 Chemical Testing			单项判定 Item Conclusion
	测试项目 Test Item	结果 ⁽¹⁾ Results ⁽¹⁾	PHTH Screening Results ⁽²⁾	测试项目 Test Item	结果 ⁽³⁾ Result ⁽³⁾	限量 Limit	
G8108487D3-4	Pb	BL	\	Pb	\	1000	PASS
	Cd	BL	\	Cd	\	100	PASS
	Hg	BL	\	Hg	\	1000	PASS
	Cr	BL	\	Cr ⁶⁺	\	1000	PASS
	Br	BL	\	PBBs	\	1000	PASS
				PBDEs	\	1000	PASS
	DEHP	\	BL	DEHP	\	1000	PASS
	DBP	\	BL	DBP	\	1000	PASS
	BBP	\	BL	BBP	\	1000	PASS
DIBP	\	BL	DIBP	\	1000	PASS	
G8108487D3-5	Pb	BL	\	Pb	\	1000	PASS
	Cd	BL	\	Cd	\	100	PASS
	Hg	BL	\	Hg	\	1000	PASS
	Cr	BL	\	Cr ⁶⁺	\	1000	PASS
	Br	BL	\	PBBs	\	1000	PASS
				PBDEs	\	1000	PASS
	DEHP	\	BL	DEHP	\	1000	PASS
	DBP	\	BL	DBP	\	1000	PASS
	BBP	\	BL	BBP	\	1000	PASS
DIBP	\	BL	DIBP	\	1000	PASS	
G8108487D3-6	Pb	BL	\	Pb	\	1000	PASS
	Cd	BL	\	Cd	\	100	PASS
	Hg	BL	\	Hg	\	1000	PASS
	Cr	BL	\	Cr ⁶⁺	\	1000	PASS
	Br	X	\	PBBs	N.D.	1000	PASS
				PBDEs	N.D.	1000	PASS
	DEHP	\	BL	DEHP	\	1000	PASS
	DBP	\	BL	DBP	\	1000	PASS
	BBP	\	BL	BBP	\	1000	PASS
DIBP	\	BL	DIBP	\	1000	PASS	

测试报告(Test Report) 报告编号(NO.): MUCRF5NG8108487D3 签发日期(Issued Date): 2026-01-16 Page 5 of 9

测试结果 Test Result (Unit: mg/kg)

样品编号 Sample No.	EDXRF		PHTH 筛分结果 ⁽²⁾ PHTH Screening Results ⁽²⁾	化学测试 Chemical Testing			单项判定 Item Conclusion
	测试项目 Test Item	结果 ⁽¹⁾ Results ⁽¹⁾		测试项目 Test Item	结果 ⁽³⁾ Result ⁽³⁾	限量 Limit	
G8108487D3-7	Pb	BL	\	Pb	\	1000	PASS
	Cd	BL	\	Cd	\	100	PASS
	Hg	BL	\	Hg	\	1000	PASS
	Cr	BL	\	Cr ⁶⁺	\	1000	PASS
	Br	BL	\	PBBs	\	1000	PASS
				PBDEs	\	1000	PASS
	DEHP	\	BL	DEHP	\	1000	PASS
	DBP	\	BL	DBP	\	1000	PASS
	BBP	\	BL	BBP	\	1000	PASS
	DIBP	\	BL	DIBP	\	1000	PASS

测试报告(Test Report) 报告编号(NO.): MUCRF5NG8108487D3 签发日期(Issued Date): 2026-01-16 Page 6 of 9

备注 Remark:

- (1) (a)结果显示的是总 Br 含量,而限用物质是 PBBs/PBDEs;结果显示的是总 Cr 含量,而限用物质是 Cr⁶⁺.
It is the result on total Br while test item on restricted substances is PBBs/PBDEs.It is the result on total Cr while test item on restricted substances is Cr⁶⁺.
- (b)EDXRF 所得的测试结果只作初步筛选, 如果 XRF 结果超出 IEC 62321-3-1:2013 所规定的警戒范围, 我们建议客户用更精确的化学测试方法测试样品. (单位 mg/kg)
Results are obtained by EDXRF for primary screening,and further chemical testing, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013 (unit:mg/kg)

元素 Element	聚合物 Polymer	金属 Metal	复合材料 Composite Materials
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	$BL \leq (300-3\sigma) < X$	—	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

- (c) BL=低于限度, OL=超出限度, IN=不确定, LOD=测试极限值, X=需要做进一步测试的范围
BL=Below Limit, OL=Over Limit, IN=Inconclusive, LOD=Limit of Detection, X=The range of needing to the further testing
- (d) 对于复合材料, XRF 筛选测试 RoHS 元素所得数据可能与样品中实际含量不同。
The XRF screening test for RoHS elements-The reading may be different to the actual content in the sample be of non-uniformity composition
- (2) PHTH 筛分结果只作初步筛选, 如果测试结果超出 IEC 62321-3-3:2021 所规定的警戒范围, 我们建议客户用更精确的化学测试方法测试样品. (单位 mg/kg)
PHTH screening results are only preliminary screening,and further chemical testing, if the concentration exceeds the below warning value according to IEC 62321-3-3:2021 (unit:mg/kg)

化合物 Compound	聚合物 Polymer
DEHP	$BL \leq 600 < X$
DBP	$BL \leq 600 < X$
BBP	$BL \leq 600 < X$
DIBP	$BL \leq 600 < X$

- (3) (a) mg/kg=ppm=0.0001%, N.D.=未检出 (低于方法检出限), \=未测试, —=无要求。
mg/kg=ppm=0.0001%, N.D.= not detected(<MDL), \= not conducted, —= not available.

(b)化学测试单位和方法测试极限值

Unit and Method Detection Limit (MDL) in wet chemical test

任何一种 PBBs (多溴联苯) 和 PBDEs (多溴二苯醚) 化合物的方法测试极限值是 5 mg/kg。

The MDL for single compound of PBBs & PBDEs is 5 mg/kg.

(c) 沸水萃取测试 Boiling water extraction test:

<0.10 µg/cm² 以阴性表示, 即镀层中不存在六价铬

<0.10 µg/cm² expressed as "negative" results, indicates without hexavalent chromium in the plating

0.10 µg/cm² ~0.13µg/cm² 无法判定镀层中是否存在六价铬, 需进一步确定。

0.10 µg/cm²~0.13 µg/cm² expressed as "not confirmative", indicates that it can not be confirmative for the presence of hexavalent chromium in the plating, further test is needed.

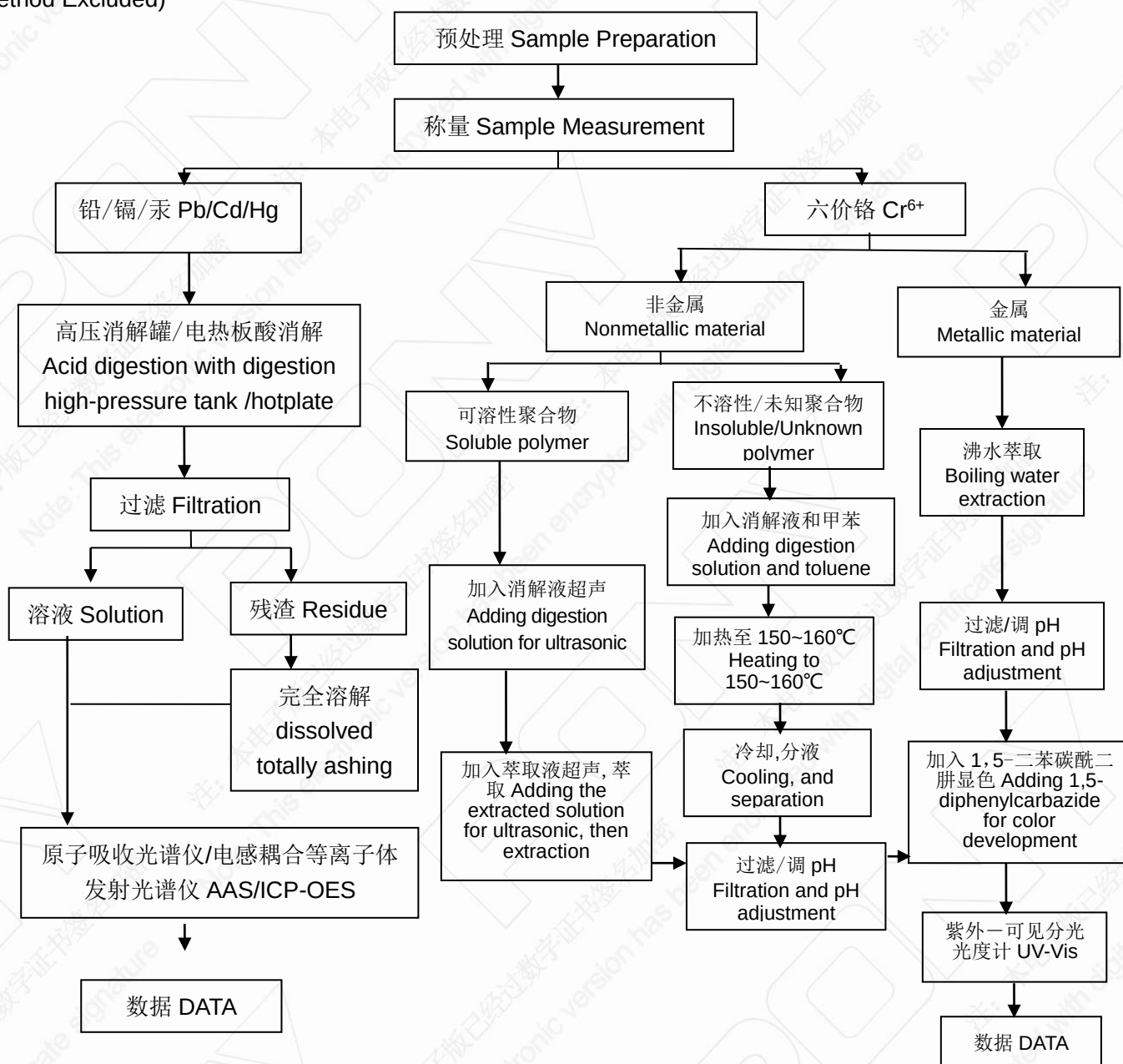
>0.13 µg/cm² 以阳性表示, 即镀层中存在六价铬。

>0.13 µg/cm² expressed as "positive", indicates that hexavalent chromium is detected in the plating.

测试报告(Test Report) 报告编号(NO.): MUCRF5NG8108487D3 签发日期(Issued Date): 2026-01-16 Page 7 of 9

测试流程图 Measurement Flow-chart

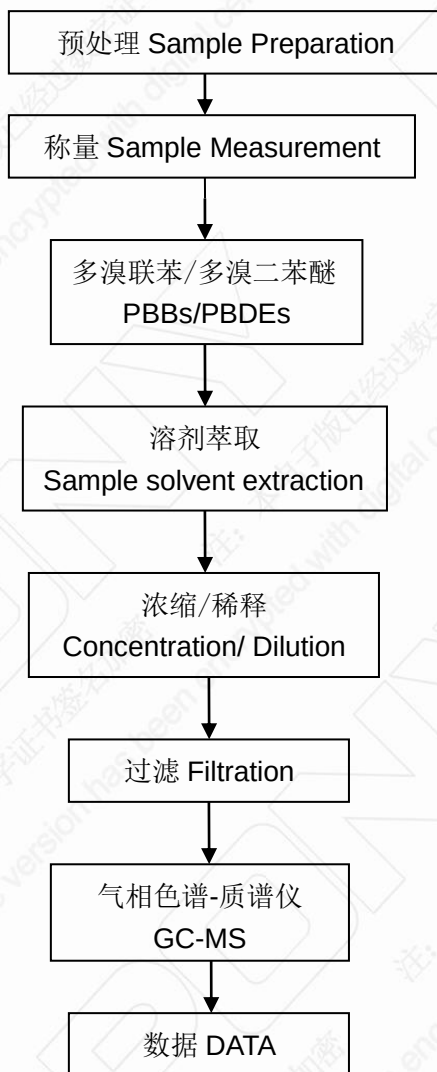
测试人员Tested by: 韩春海 审核人Checked by: 彭平平 实验室负责人Person in charge of the lab by: 毛祖青
样品按照下述流程被完全消解 (六价铬除外)。
These Samples Were Dissolved Totally By Pre-conditioning Method According To Below Flow Chart. (Cr⁶⁺ Test Method Excluded)



测试报告(Test Report) 报告编号(NO.): MUCRF5NG8108487D3 签发日期(Issued Date): 2026-01-16 Page 8 of 9

测试流程图 Measurement Flow-chart

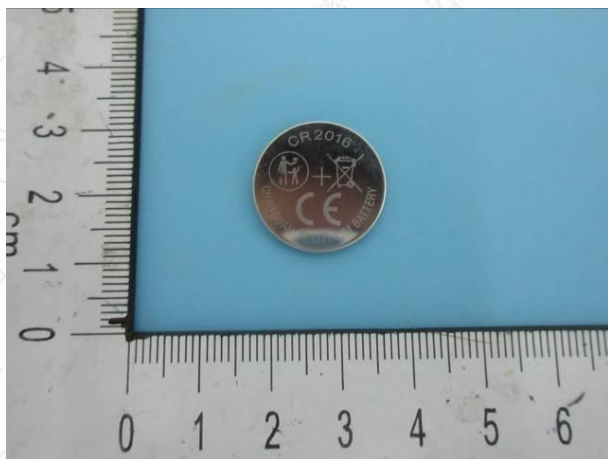
测试人员Tested By: 叶雅韵 审核人Checked by: 彭平平 实验室负责人Person in charge of the lab by: 毛祖青



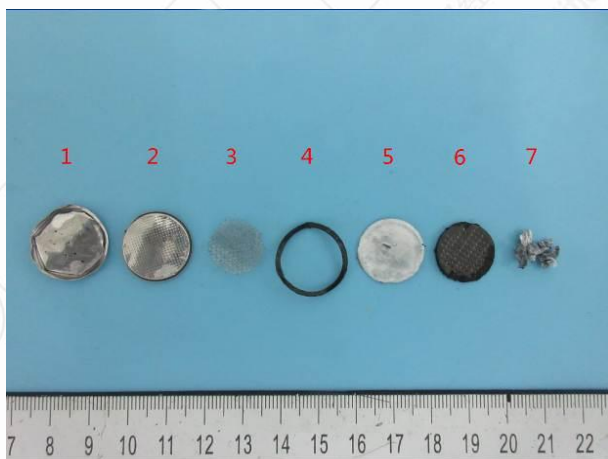
测试报告(Test Report) 报告编号(NO.): MUCRF5NG8108487D3 签发日期(Issued Date): 2026-01-16 Page 9 of 9

样品编号和照片 Sample No. & Photo:

成品图 Finished Photo



零部件图 Part Photo



仅对报告照片中的样品负责

Pony authenticate the photo on original report only

报告结束 End of Report

附录 Appendix

客户参考图片(非测试样品) Client Reference Photo(Non-tested sample)



声明 Statement:

1. 附录内容由申请者提供, 申请者应对其真实性负责, PONY 未核实其真实性。

The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which PONY hasn't verified

2. 附录内容为 MUCRF5NG8108487D3 报告的补充。

The Appendix Information is/are the supplement(s) for the Report MUCRF5NG8108487D3.