



检测报告 TEST REPORT

客户信息 Customer information	委托单位 Client	
	地址 Address	
样品信息 Sample information	样品名称 Name of sample	锂锰纽扣电池(Lithium manganese button battery)
	型号 Model	CR2032,CR2025,CR1632,CR1625,CR1220,CR927
	材料Material	----
	制造商Manufacture	
	地址Address	
检验信息 Test information	收样日期 Sample received	Apr.07,2016-Apr.12,2016
	检验日期 Testing date	Apr.12,2016
	检验类别 Test sort	委托检测 Commission Test
	检验项目 Requested/item	镉 Cd, 铅 Pb, 汞 Hg, 六价铬 Cr(VI), 多溴联苯 PBBs, 多溴二苯醚 PBDEs
	检验依据 Standard/Foundation	依据 IEC 62321-5:2013, 使用 ICP-OES 测定聚合物和电子材料中的镉、铅和铬, 以及金属中的镉和铅 According to IEC 62321-5:2013, Cadmium, lead and chromium in polymers and electronics and cadmium and lead in metals by ICP-OES 依据 IEC 62321-4:2013, 使用 ICP-OES 测定聚合物、金属和电子材料中的汞 According to IEC 62321-4:2013, Mercury in polymers, metals and electronics by ICP-OES 依据 IEC 62321:2008, 比色法测定六价铬, 使用 GC-MS 测定多溴联苯和多溴二苯醚 According to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric method, determination of PBBs and PBDEs by GC-MS
	检验结论 Conclusion	所检样品符合 RoHS 指令(2011/65/EU)。 The tested sample complied with RoHS directive (2011/65/EU)。
备注 Remark	----	

Approved by: _____

(Kevin)



样品描述 Tested components:

编号 No.	描述内容 COMPONENTS	颜色材质 COLOR AND MATERIAL	型号 TYPE	项目 ITEM
1	锂锰纽扣电池(Lithium manganese button battery)	混合 Mixture	CR2032,CR2025,CR1632, CR1625,CR1220,CR927	镉Cd, 铅Pb, 汞Hg 六价铬Cr(VI), 多溴联苯PBBs, 多溴二苯醚 PBDEs

样品照片 Sample photo:





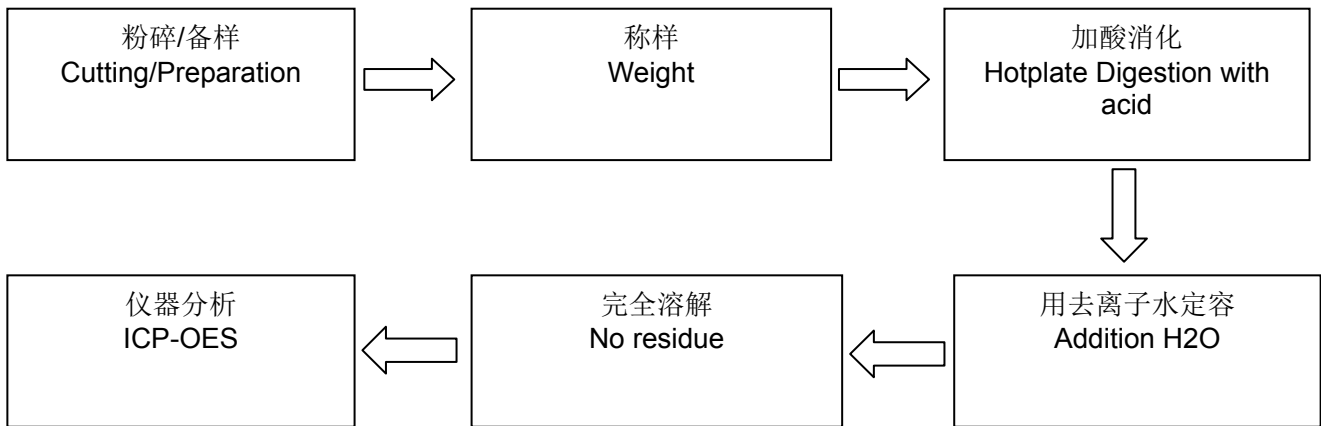
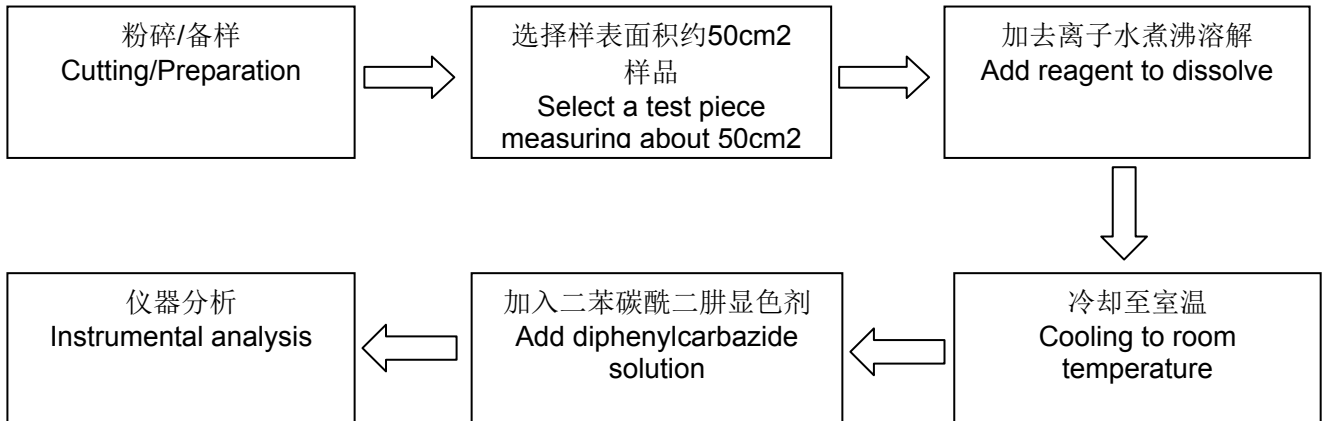
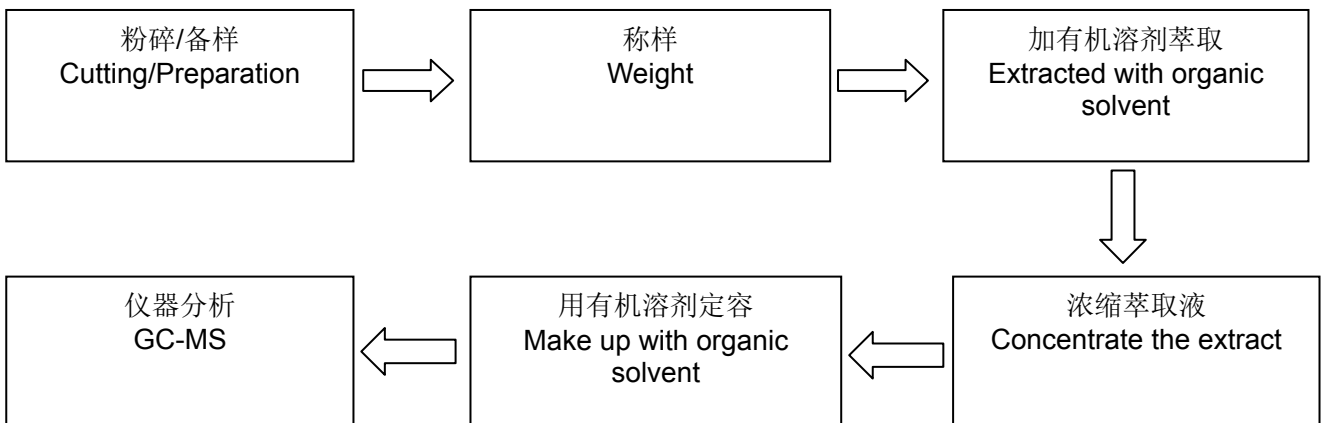
检测结果 Test result:

编号 SAMPLE No. 测试项目 ITEM	浓度 SAMPLE CONCENTRAT ION (mg/kg)	MDL (mg/kg)	限值 REQUIRED LIMIT (mg/kg)
	1		
Cd	N.D.	2	<100
价格 Cr(VI)	*阴性 Negative	----	----
汞 Hg	N.D.	2	<1000
铅 Pb	N.D.	2	<1000
一溴联苯 Monobromobiphenyl	N.D.	5	----
二溴联苯 Dibromobiphenyl	N.D.	5	----
三溴联苯 Tribromobiphenyl	N.D.	5	----
四溴联苯 Tetrabromobiphenyl	N.D.	5	----
五溴联苯 Pentabromobiphenyl	N.D.	5	----
六溴联苯 Hexabromobiphenyl	N.D.	5	----
七溴联苯 Heptabromobiphenyl	N.D.	5	----
八溴联苯 Octabromobiphenyl	N.D.	5	----
九溴联苯 Nonabromobiphenyl	N.D.	5	----
十溴联苯 Decabromobiphenyl	N.D.	5	----
多溴联苯 Polybrominated Biphenyls (PBBs)	N.D.	----	<1000
一溴二苯醚 Monobromodiphenyl ether	N.D.	5	----
二溴二苯醚 Dibromodiphenyl ether	N.D.	5	----
三溴二苯醚 Tribromodiphenyl ether	N.D.		----
四溴二苯醚 Tetrabromodiphenyl ether	N.D.		----
五溴二苯醚 Pentabromodiphenyl ether	N.D.		----
六溴二苯醚 Hexabromodiphenyl ether	N.D.		----
七溴二苯醚 Heptabromodiphenyl ether	N.D.		----
八溴二苯醚 Octabromodiphenyl ether	N.D.		----
九溴二苯醚 Nonabromodiphenyl ether	N.D.		----
十溴二苯醚 Decabromodiphenyl ether	N.D.		----
多溴二苯醚 Polybrominated Diphenyl ethers (PBDEs)	N.D.	----	<1000
结论 (P/F) Conclusion(P/F)	P		----

注意Note: P =合格, F =不合格, P = Pass, F = Fail, MDL =方法检出限 Method Detection Limit, N.D.= 未检出 (<检出限) not detected (<Method Detection Limit).

*=根据IEC 62321:2008, 金属表面的六价铬用沸水萃取法测试, 要求样品面积为50cm², 当样品表面Cr(VI)含量大于或者等于0.02mg/kg, 结果为样品表面存在Cr(VI) (阳性), 否则为样品表面没有Cr(VI) (阴性)

According to the standard of IEC62321:2008, Hexavalent Chromium test on the coating of metal by the method of Boiling Water Extraction, the acreage of sample should be 50 cm². If the content of Hexavalent Chromium testing is above or equal to 0.02mg/kg, the results of test indicate positive and contains Cr(VI), otherwise, it indicates negative.

测试流程图 Test Process:**a. 镉 Cd 铅 Pb 汞 Hg****b. 六价铬 Cr6+****c. 阻燃剂 PBBs&PBDEs**



主要仪器清单 List of apparatus:

序号 No.	仪器设备名称 Name	型号 Model	计量有效期至 Calibration Valid Date	本次使用 (√) USE(√)
1	电感耦合等离子发射光谱仪 (ICP-OES)	VISTA-MPX	2016/10/15	√
2	气相色谱质谱联用仪 (GC-MS)	5975i	2016/10/15	√
3	紫外 / 可见分光光度计 (UV-Vis)	UV1100	2016/10/15	√

*** 报告结束 End of report ***