

## 测试报告

No. CANEC1922604601

日期: 2019年11月15日 第1页,共8页

深圳市兴凯城电子有限公司

深圳市宝安区松岗街道塘下涌工业区1号厂房2楼

### 本报告取代测试报告CANEC1921449301

以下测试之样品是由申请者所提供及确认: PVC电解电容器

SGS工作编号: CP19-061126 - GZ  
样品接收日期: 2019年10月31日  
测试周期: 2019年10月31日 - 2019年11月05日  
测试要求: 根据客户要求测试  
测试方法: 请参见下一页  
测试结果: 请参见下一页

通标标准技术服务有限公司广州分公司  
授权签名

吕爱凤

Merry Lv 吕爱凤  
批准签署人



## 测试报告

No. CANEC1922604601

日期: 2019年11月15日 第2页,共8页

测试结果:

### 测试样品描述:

样品编号	SGS样品ID	描述
SN1	CAN19-226046.001	"PVC电解电容器"(混合)

备注:

- (1) 1 mg/kg = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

### 元素分析, 阻燃剂&邻苯二甲酸酯

测试方法: 参考IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 和 IEC 62321-8:2017, 采用 ICP-OES, UV-Vis 和 GC-MS 进行分析.

测试项目	单位	MDL	001
镉 (Cd)	mg/kg	2	ND
铅 (Pb)	mg/kg	2	ND
汞 (Hg)	mg/kg	2	ND
六价铬(Cr(VI))	mg/kg	8	ND
多溴联苯之和(PBBs)	mg/kg	-	ND
一溴联苯	mg/kg	5	ND
二溴联苯	mg/kg	5	ND
三溴联苯	mg/kg	5	ND
四溴联苯	mg/kg	5	ND
五溴联苯	mg/kg	5	ND
六溴联苯	mg/kg	5	ND
七溴联苯	mg/kg	5	ND
八溴联苯	mg/kg	5	ND
九溴联苯	mg/kg	5	ND
十溴联苯	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	mg/kg	-	ND
一溴二苯醚	mg/kg	5	ND
二溴二苯醚	mg/kg	5	ND
三溴二苯醚	mg/kg	5	ND
四溴二苯醚	mg/kg	5	ND
五溴二苯醚	mg/kg	5	ND



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## 测试报告

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日期: 2019年11月15日 第3页,共8页

测试项目	单位	MDL	001
六溴二苯醚	mg/kg	5	ND
七溴二苯醚	mg/kg	5	ND
八溴二苯醚	mg/kg	5	ND
九溴二苯醚	mg/kg	5	ND
十溴二苯醚	mg/kg	5	ND
邻苯二甲酸二丁酯 (DBP)	mg/kg	50	ND
邻苯二甲酸丁苄酯(BBP)	mg/kg	50	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	mg/kg	50	ND
邻苯二甲酸二异丁酯(DIBP)	mg/kg	50	ND

### 备注:

(1)IEC 62321 系列等同于 EN 62321 系列

[https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)

(2) 2021年7月22号开始, DEHP, BBP, DBP 和 DIBP的限制适用于医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。

(3) DEHP, BBP, DBP 和 DIBP的限制不适用于玩具产品, 因为No.1907/2006附录XVII第51条已对玩具产品中的DEHP, BBP, DBP 和 DIBP含量进行了限制。

### 卤素

测试方法: 参考EN 14582:2016, 用 IC分析。

测试项目	单位	MDL	001
氟 (F)	mg/kg	50	ND
氯 (Cl)	mg/kg	50	27601
溴 (Br)	mg/kg	50	ND
碘 (I)	mg/kg	50	ND

### 邻苯二甲酸盐(或酯)

测试方法: 参考EN 14372: 2004的方法测定, 采用GC-MS进行分析。

测试项目	CAS NO.	单位	MDL	001
邻苯二甲酸二丁酯 (DBP)	84-74-2	%(w/w)	0.003	ND
邻苯二甲酸丁苄酯 (BBP)	85-68-7	%(w/w)	0.003	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	117-81-7	%(w/w)	0.003	ND
邻苯二甲酸二异壬酯 (DINP)	28553-12-0 / 68515-48-0	%(w/w)	0.010	ND



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测试项目	CAS NO.	单位	MDL	001
邻苯二甲酸二正辛酯 (DNOP)	117-84-0	%(w/w)	0.003	ND
邻苯二甲酸二异癸酯 (DIDP)	26761-40-0 / 68515-49-1	%(w/w)	0.010	ND
邻苯二甲酸二甲酯 (DMP)	131-11-3	%(w/w)	0.003	ND
邻苯二甲酸二乙酯 (DEP)	84-66-2	%(w/w)	0.003	ND
邻苯二甲酸二异丁酯 (DIBP)	84-69-5	%(w/w)	0.003	ND
邻苯二甲酸二壬酯 (DNP)	84-76-4	%(w/w)	0.003	ND
邻苯二甲酸二异辛酯 (DIOP)	27554-26-3	%(w/w)	0.010	ND
邻苯二甲酸二丙酯 (DPrP)	131-16-8	%(w/w)	0.003	ND
邻苯二甲酸二环己酯 (DCHP)	84-61-7	%(w/w)	0.003	ND
邻苯二甲酸二戊酯 (DPENP/ DnPP)	131-18-0	%(w/w)	0.003	ND
邻苯二甲酸二苄酯 (DBzP)	523-31-9	%(w/w)	0.003	ND
邻苯二甲酸二苯酯 (DPhP)	84-62-8	%(w/w)	0.003	ND
邻苯二甲酸二正己酯 (DnHP)	84-75-3	%(w/w)	0.003	ND

### 备注:

(1) DBP、BBP、DEHP、DIBP参考信息: 1907/2006/EC Reach 附录XVII的修正指令——2018/2005/EU 第51条的要求:

i) 不允许DBP、BBP、DEHP、DIBP单一质量浓度或质量浓度总和等于或高于0.1%的可塑性物料用于玩具和儿童护理品。

ii) 当玩具和儿童护理品中的可塑性物料含DBP、BBP、DEHP单一质量浓度或质量浓度总和等于或高于0.1%时,不得投放市场。另外,当玩具和儿童护理品中的可塑性物料含DIBP单一质量浓度或DBP、BBP、DEHP、DIBP质量浓度总和等于或高于0.1%时,2020年7月7日后不得投放市场。

iii) 当成品中的可塑性物料含DBP、BBP、DEHP、DIBP单一质量浓度或质量浓度总和等于或高于0.1%时,2020年7月7日后不得投放市场。

详细信息请参见Regulation (EU) No 2018/2005。

(2) DINP、DNOP、DIDP参考信息: 1907/2006/EC Reach 附录XVII的修正指令——552/2009/EC 第52条(前身为2005/84/EC)的要求:

i) 不允许DINP、DNOP、DIDP质量浓度高于0.1%的可塑性物料用于可放入儿童口中的玩具和儿童护理品。

ii) 当可放入儿童口中的玩具和儿童护理品中的可塑性物料含DINP, DNOP, DIDP质量浓度高于0.1%时,不得投放市场。

详细信息请参见Regulation (EC) No 552/2009。

备注: 样品的测试是基于申请人要求混合测试, 报告中的混合测试结果不代表其中个别单一材质的含量, 该测试数据仅供参考。

检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



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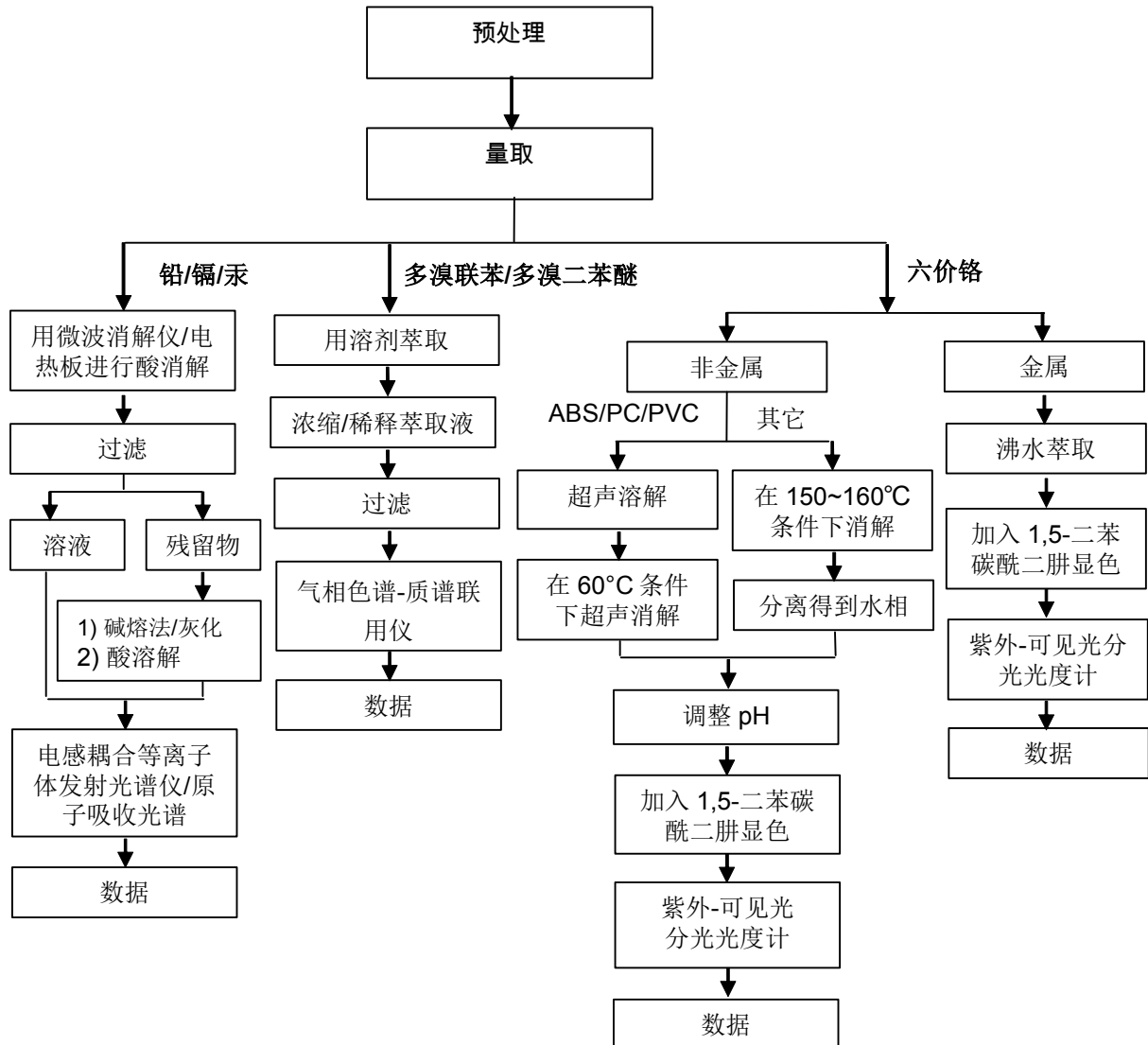
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附件

## Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs 测试流程图

1) 样品按照下述流程被完全消解（六价铬和多溴联苯/多溴二苯醚测试除外）。



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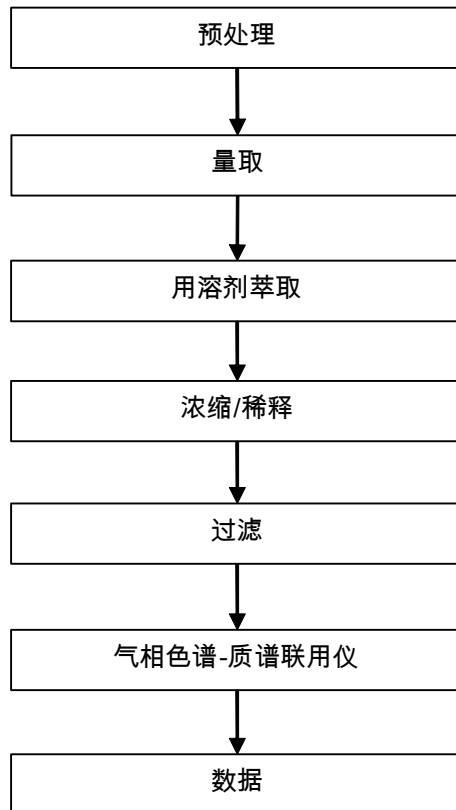
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Guangzhou Branch Testing Center Chemical Laboratory.

198 Kezhu Road, Sciotech Park Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075113 www.sgs.com.cn  
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075113 e sgs.china@sgs.com

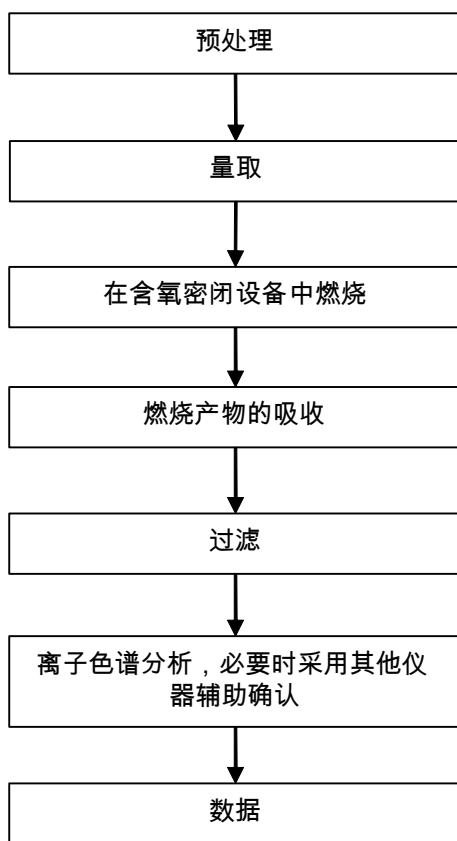
附件

### Phthalates 测试流程图



附件

## Halogen 测试流程图



样品照片:



此照片仅限于随SGS正本报告使用

\*\*\* 报告完 \*\*\*