

测试报告

No. SHAEC1602039404

日期: 2016年02月01日 第1页,共9页

金柯有色金属有限公司
江苏昆山市青阳南路159号

以下测试之样品是由申请者所提供及确认: 硫酸镍

SGS工作编号: SP16-003327 - SH
批号: NS542J01242
样品接收日期: 2016年01月28日
测试周期: 2016年01月28日 - 2016年02月01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

结论: 基于所送样品进行的测试, 镉、铅、汞、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸酯(如邻苯二甲酸二丁酯 (DBP)、邻苯二甲酸丁苯酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP))的测试结果符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

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授权签名

Shelly Li 黎珊
批准签署人

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测试结果:

测试样品描述:

样品编号	SGS样品ID	描述
SN1	SHA16-020394.002	绿色晶体颗粒

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

RoHS 指令2011/65/EU附录II的修正指令(EU) 2015/863

- 测试方法:
- (1) 参考IEC 62321-5:2013, 用ICP-OES测定镉的含量
 - (2) 参考IEC 62321-5:2013, 用AAS测定铅的含量
 - (3) 参考IEC 62321-4:2013, 用ICP-OES测定汞的含量
 - (4) 参考IEC 62321:2008, 用紫外-可见分光光度计比色法测定六价铬的含量
 - (5) 参考IEC 62321-6:2015, 用GC-MS测定PBBs(多溴联苯)和PBDEs(多溴二苯醚) 的含量
 - (6) 参考IEC 62321-8 (111/321/CD), 用GC-MS测定邻苯二甲酸酯的含量

测试项目	限值	单位	MDL	002
镉(Cd)	100	mg/kg	2	ND
铅(Pb)	1000	mg/kg	2	ND
汞(Hg)	1000	mg/kg	2	ND
六价铬(CrVI)	1000	mg/kg	2	ND
多溴联苯之和(PBBs)	1000	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)	1000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND



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测试项目	限值	单位	MDL	002
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
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)	1000	mg/kg	30	ND
邻苯二甲酸丁苄酯(BBP)	1000	mg/kg	30	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	1000	mg/kg	30	ND
邻苯二甲酸二异丁酯(DIBP)	1000	mg/kg	30	ND

备注:

- (1) 最大允许极限值引用自RoHS指令(EU) 2015/863。
- (2) 2015年6月4号发表在欧盟官方杂志(官方公报)上的RoHS指令(EU) 2015/863附录II限值中还包括邻苯二甲酸酯BBP, DBP, DEHP和DIBP。新的指令限制了电子电器产品的每一个均一材质中邻苯二甲酸酯含量不得超过0.1%。
- (3) 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。
- (4) DEHP, BBP, DBP 和 DIBP的限制不适用于2019年7月22日前投放市场的电缆及电子电气产品中用于维修、重复利用、功能更新及容量提升的备用配件以及2021年7月22日前投放市场的医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。
- (5) DEHP、BBP 和 DBP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 和 DBP含量进行了限制。

卤素

测试方法: 参照EN 14582:2007方法测定, 采用IC进行分析。

测试项目	单位	MDL	002
氟(F)	mg/kg	50	ND
氯(Cl)	mg/kg	50	ND
溴(Br)	mg/kg	50	ND
碘(I)	mg/kg	50	ND

全氟辛烷磺及其衍生物(PFOS)和全氟辛酸(PFOA)



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测试方法: 参考 CEN/TS 15968: 2010方法, 采用LC-MS进行分析。

测试项目	限值	单位	MDL	002
全氟辛烷磺及其衍生物(PFOS)^	1000	mg/kg	10	ND
全氟辛酸(PFOA)	-	mg/kg	10	ND

备注:

(1) 最大允许限制引用自(EC) No. 850/2004 的修订指令欧盟决议(EU) No. 757/2010.

(2) ^=全氟辛烷磺(PFOS)及其衍生物包含全氟辛烷磺酸(PFOS), 全氟辛基磺酰胺(PFOSA), 2-(N-乙基全氟辛基磺酰胺)乙醇(EtFOSE), N-甲基全氟辛烷磺酰胺(MeFOSA), N-乙基全氟辛烷磺酰胺(EtFOSA)和2-(N-甲基全氟辛基磺酰胺)乙醇(MeFOSE)。



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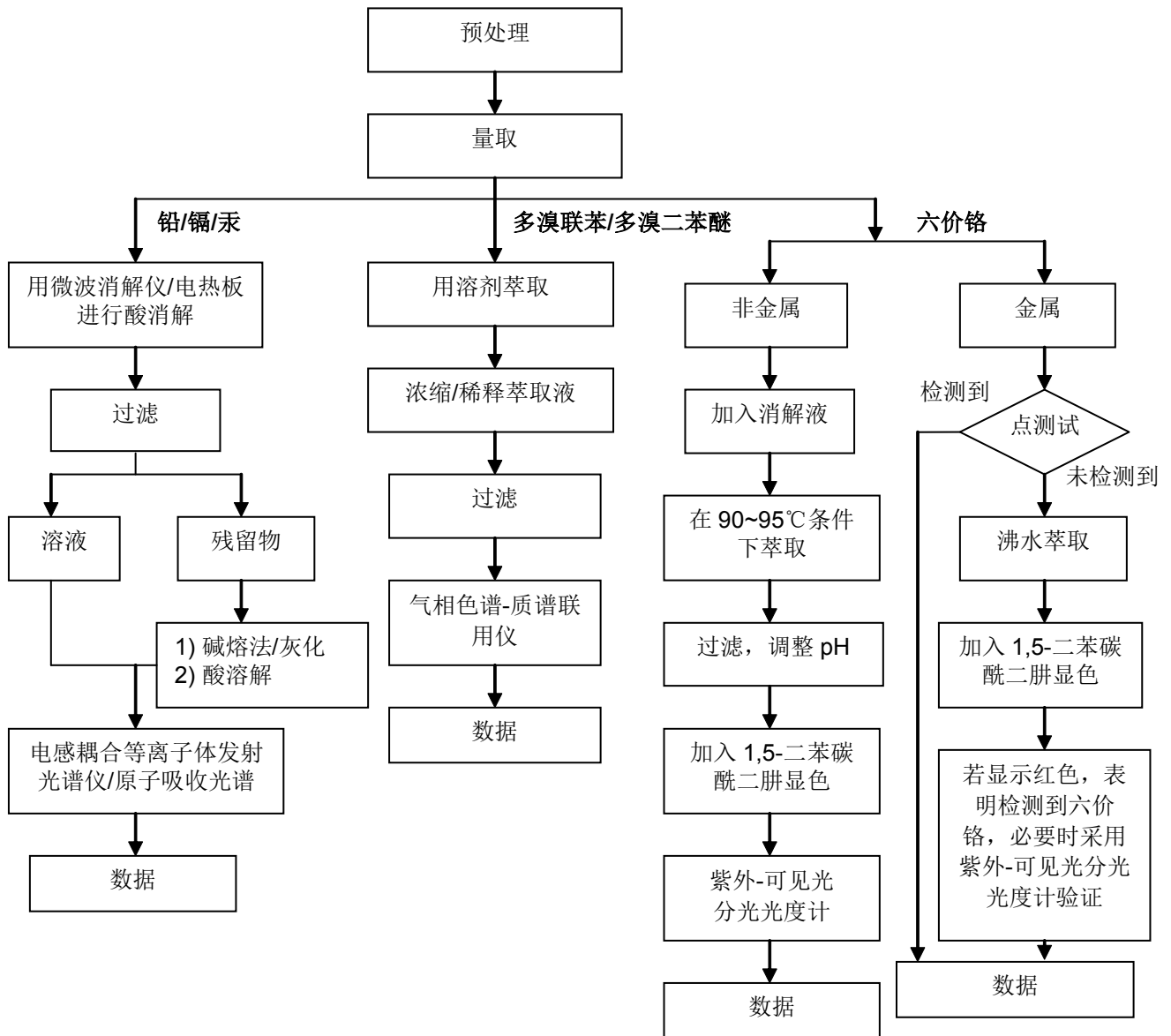
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附件

RoHS 测试流程图

- 1) 分析人员: 李大锐/徐刚/张世敏/秦兴章
- 2) 项目负责人: 施青/金黎霞/黄婷/陈怀磊
- 3) 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)。



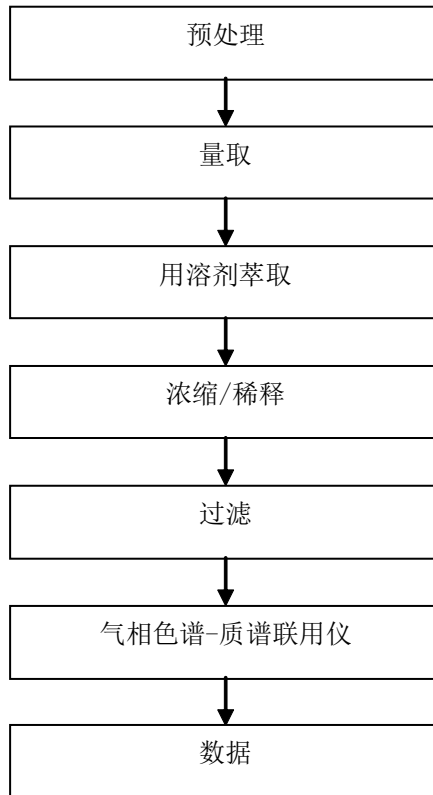
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Phthalates 测试流程图

- 1) 分析人员: 高仰景
- 2) 项目负责人: 黄婷



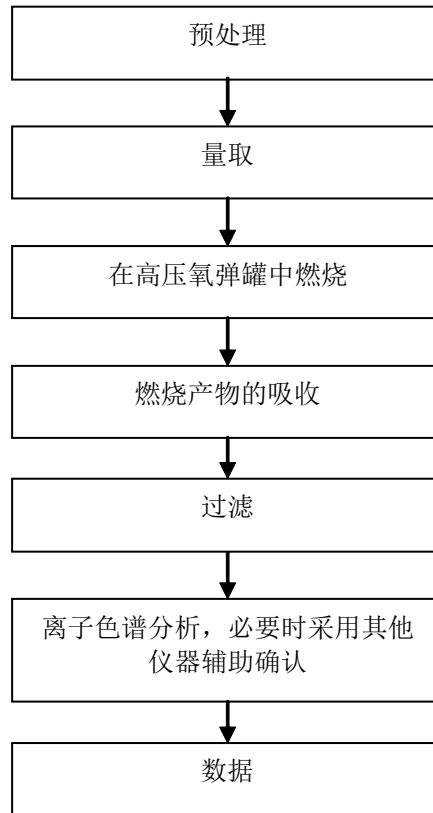
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Halogen(氧弹法)测试流程图

- 1) 分析人员: 徐诚
- 2) 项目负责人: 印雨



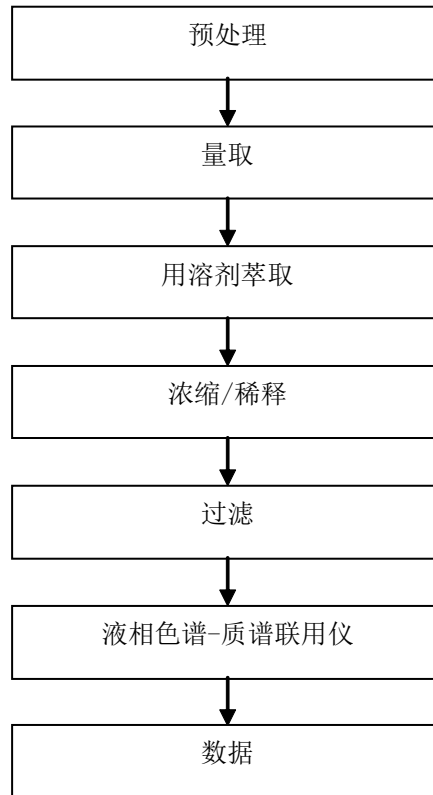
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PFOS/PFOA 测试流程图

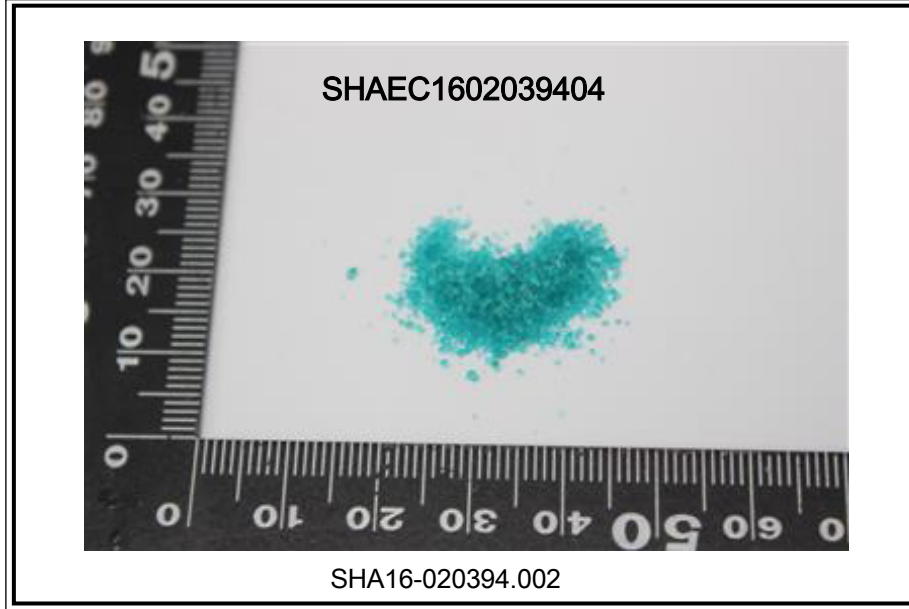
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