

检测报告

编号: CANEC2209914130

日期: 2022年06月02日 第1页,共11页

客户名称: 优耐铜材(苏州)有限公司
客户地址: 江苏省苏州市高新区金枫路567号

样品名称: 焦磷酸铜
以上样品及信息由客户提供。

SGS工作编号: CP22-026415 - GZ
内部编号: 22655395
样品接收日期: 2022年05月17日
检测周期: 2022年05月17日 - 2022年05月30日
检测要求: 根据客户要求检测
检测方法: 请参见下一页
检测结果: 请参见下一页

结论: 基于所送样品进行的检测, 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))的检测结果显示符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

通标标准技术服务有限公司广州分公司
授权签名

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批准签署人

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检测结果:

检测样品描述:

| 样品编号 | SGS样品ID | 描述 |
|------|------------------|------|
| SN1 | CAN22-099141.015 | 蓝色粉末 |

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

检测方法: 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。

| 检测项目 | 限值 | 单位 | MDL | 015 |
|----------------|-------|-------|-----|-----|
| 镉 (Cd) | 100 | mg/kg | 2 | ND |
| 铅 (Pb) | 1,000 | mg/kg | 2 | ND |
| 汞 (Hg) | 1,000 | mg/kg | 2 | ND |
| 六价铬(Cr(VI)) | 1,000 | mg/kg | 8 | ND |
| 多溴联苯之和(PBBs) | 1,000 | 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) | 1,000 | 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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| 检测项目 | 限值 | 单位 | MDL | 015 |
|-----------------------|-------|-------|-----|-----|
| 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) | 1,000 | mg/kg | 50 | ND |
| 邻苯二甲酸丁苄酯(BBP) | 1,000 | mg/kg | 50 | ND |
| 邻苯二甲酸二(2-乙基己基)酯(DEHP) | 1,000 | mg/kg | 50 | ND |
| 邻苯二甲酸二异丁酯(DIBP) | 1,000 | mg/kg | 50 | ND |

备注:

(1)最大允许极限值引用自RoHS指令(EU) 2015/863。

(2) 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

(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。

卤素

检测方法: 参考EN 14582:2016, 用 IC分析。

| 检测项目 | 单位 | MDL | 015 |
|--------|-------|-----|-----|
| 氟 (F) | mg/kg | 50 | ND |
| 氯 (Cl) | mg/kg | 50 | 67 |
| 溴 (Br) | mg/kg | 50 | ND |
| 碘 (I) | mg/kg | 50 | ND |

邻苯二甲酸酯

检测方法: 参考 IEC 62321-8:2017, 采用 GC-MS 进行分析。

| 检测项目 | CAS NO. | 单位 | MDL | 015 |
|------------------|----------------------------|--------|-------|-----|
| 邻苯二甲酸二异壬酯 (DINP) | 28553-12-0 / 68515-48-0 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二异癸酯 (DIDP) | 26761-40-0 / 68515-49-1 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二正辛酯 (DNOP) | 117-84-0 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二正己酯 (DnHP) | 84-75-3 | %(w/w) | 0.005 | ND |



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| 检测项目 | CAS NO. | 单位 | MDL | 015 |
|----------------------------------|-------------|--------|-------|-----|
| 邻苯二甲酸二(2-甲氧基乙基)酯 (DMEP) | 117-82-8 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二异戊酯 (DIPP) | 605-50-5 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸正戊基异戊基酯 (nPIPP) | 776297-69-9 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二戊酯 (DPENP/ DnPP) | 131-18-0 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二环己酯 (DCHP) | 84-61-7 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二乙酯 (DEP) | 84-66-2 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二甲酯 (DMP) | 131-11-3 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二(C6-8支链)烷基酯(富C7) (DIHP) | 71888-89-6 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二(C7-11支链与直链)烷基(醇)酯 (DHNUP) | 68515-42-4 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二苯酯 (DPhP) | 84-62-8 | %(w/w) | 0.005 | ND |
| 邻苯二甲酸二(支链与直链)戊基酯 (DPP) | 84777-06-0 | %(w/w) | 0.005 | ND |

六溴环十二烷(HBCDD)

检测方法: SGS 内部方法(GZTC CHEM-TOP-073, 参考EPA 3550C:2007), 采用GC-MS进行分析。

| 检测项目 | CAS NO. | 单位 | MDL | 015 |
|---|--|-------|-----|-----|
| 六溴环十二烷(HBCDD) 及其非对映异构体(α -HBCDD, β -HBCDD, γ -HBCDD) | 25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8 | mg/kg | 10 | ND |

全氟辛酸(PFOA)及其盐 & 全氟辛烷磺酸 (PFOS)及其衍生物

检测方法: 参考CEN/TS 15968:2010, 采用LC-MS或LC-MS/MS进行分析。

| 检测项目 | CAS NO. | 单位 | MDL | 015 |
|----------------------------|------------|-------|--------|-----|
| 全氟辛酸 (PFOA) 及其盐+ | 335-67-1 | mg/kg | 10.000 | ND |
| 全氟辛烷磺酸 (PFOS) [^] | 1763-23-1 | mg/kg | 10.000 | ND |
| 全氟辛基磺酰胺(PFOSA) | 754-91-6 | mg/kg | 10.000 | ND |
| N-甲基全氟辛烷磺酰胺(MeFOSA) | 31506-32-8 | mg/kg | 10.000 | ND |
| N-乙基全氟辛烷磺酰胺(EtFOSA) | 4151-50-2 | mg/kg | 10.000 | ND |
| 2-(N-甲基全氟辛基磺酰胺)乙醇(MeFOSE) | 24448-09-7 | mg/kg | 10.000 | ND |
| 2-(N-乙基全氟辛基磺酰胺)乙醇(EtFOSE) | 1691-99-2 | mg/kg | 10.000 | ND |
| 全氟辛烷磺酸 (PFOS) 及其衍生物 | - | mg/kg | - | ND |

备注:

(1) + PFOA 及其盐包含PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) 和 APFO (CAS No.: 3825-26-1);



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(2) ^ 全氟辛烷磺酸 (PFOS) 包含 PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH₄ (CAS No.: 29081-56-9), PFOS-NH(OH)₂ (CAS No.: 70225-14-8), PFOS-N(C₂H₅)₄ (CAS No.: 56773-42-3), PFOS-DDA (CAS No.: 251099-16-8) 和 POSF (CAS No.: 307-35-7)

除非另有说明, 参照 ILAC-G8:09/2019, 使用简单接受 ($w=0$) 的二元判定规则进行符合性判定。

除非另有说明, 此报告结果仅对检测的样品负责。本报告未经本公司书面许可, 不可部分复制。

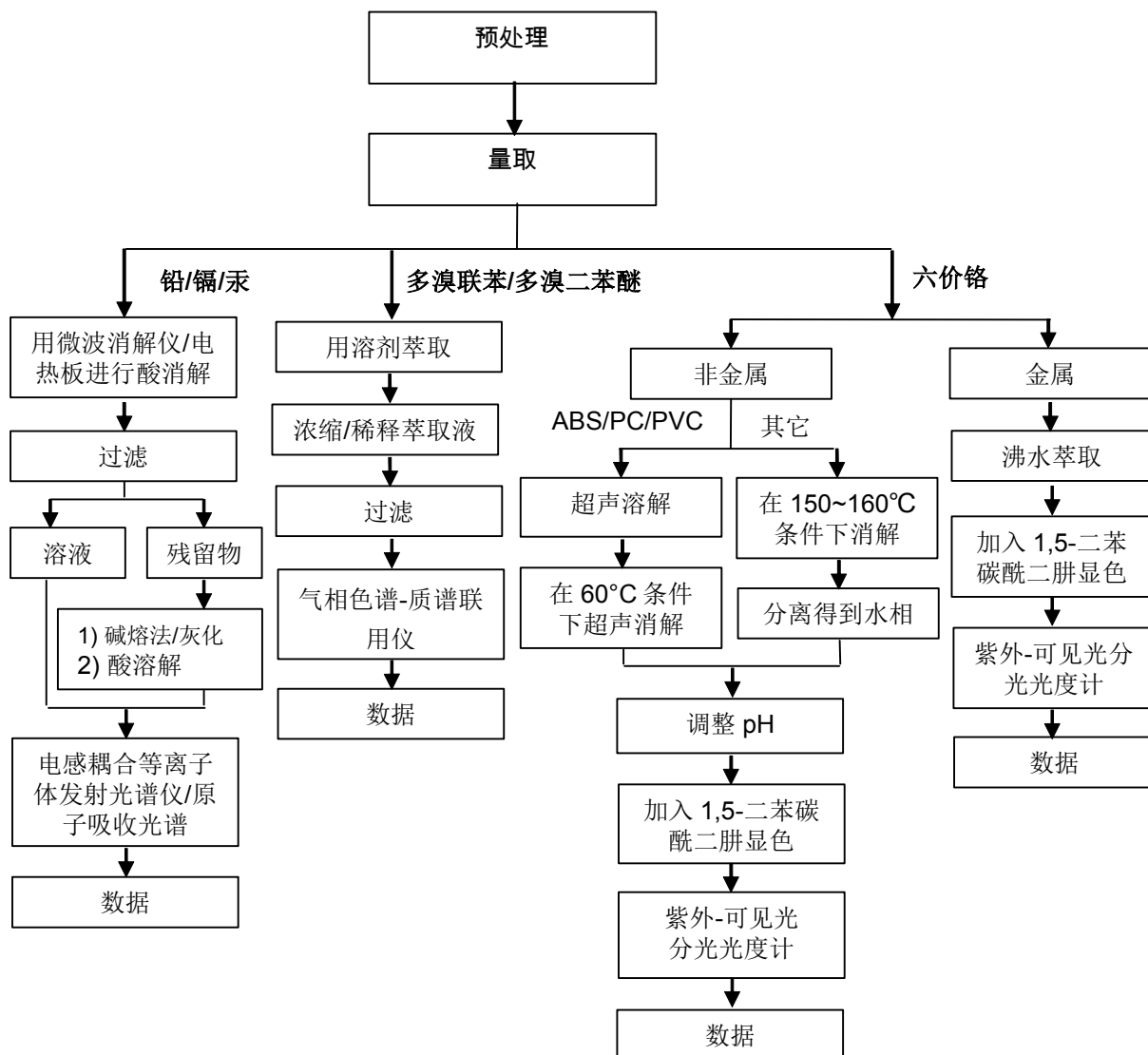
检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



附件

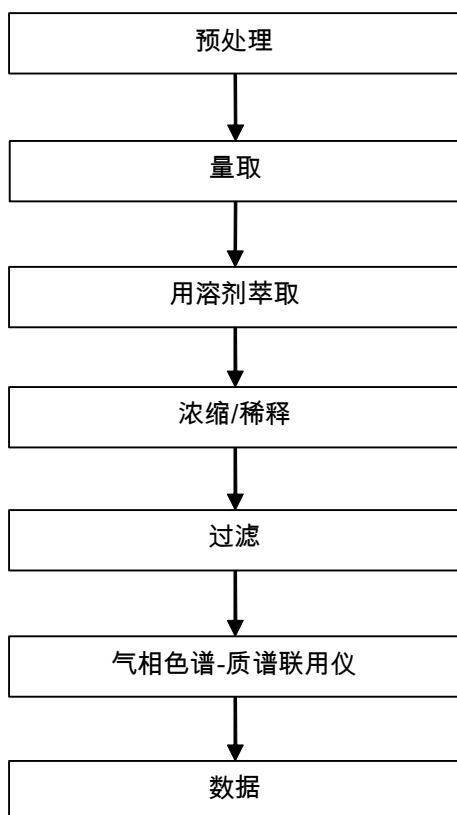
Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs 检测流程图

1) 样品按照下述流程被完全消解(六价铬和多溴联苯/多溴二苯醚检测除外)。



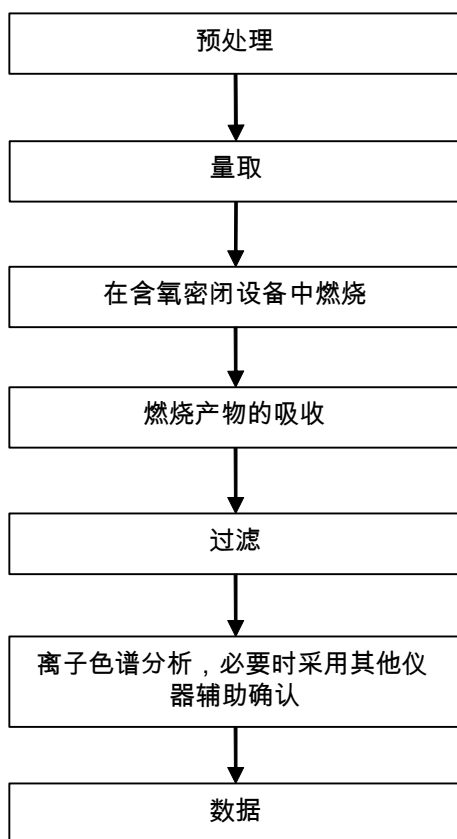
附件

Phthalates 检测流程图



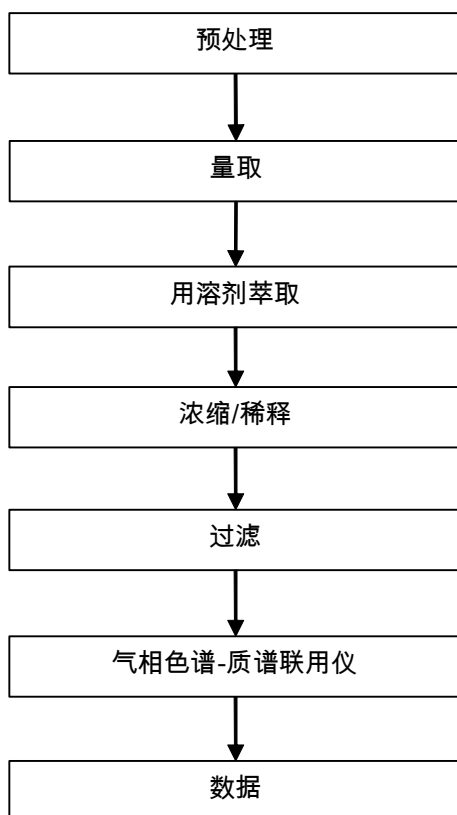
附件

Halogen 检测流程图



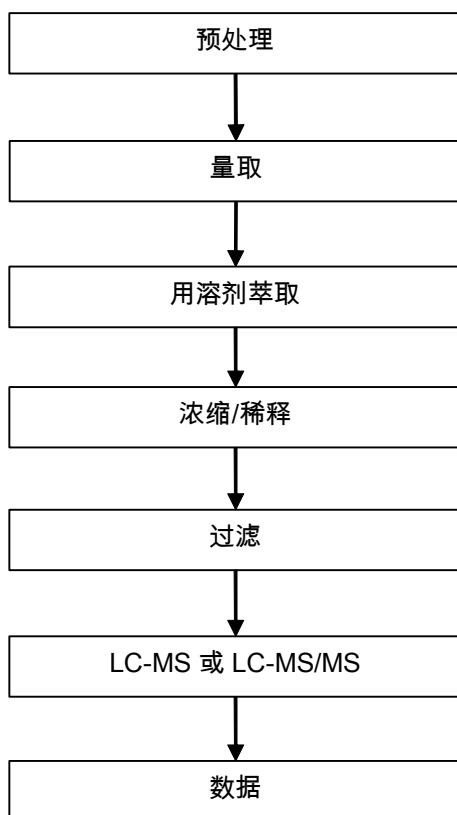
附件

HBCDD 检测流程图



附件

PFOA / PFOS 检测流程图



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