

# RoHS 测试报告

## RoHS Test Report

报告编号 : AGC12585210501-001  
Report No.

样品名称 : 珠光颜料 Pearlescent pigment  
SAMPLE NAME

样品型号 : 着色系列, 银白系列, 云母铁金属色系列, 虹彩系列,  
MODEL NAME : 金色系列, 超白水晶系列  
Coloring series, Silvery white series, Mica iron metallic series  
Rainbow series, Golden series, Super white crystal series

委托单位 : 东莞市君威新材料科技有限公司  
APPLICANT : Dongguan Junwei Materials Technology Co., LTD.

检测标准 : 请参见后续页(Please refer to follow page(s)).  
STANDARD(S)

签发日期 : 2021/06/02  
DATE OF ISSUE

深圳市鑫宇环标准技术有限公司

*Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd.*



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委托单位(Applicant) : 东莞市君威新材料科技有限公司  
Dongguan Junwei Materials Technology Co., LTD.  
单位地址(Address) : 广东省东莞市黄江镇长龙长安圩巷 10 号  
Changlong,Huangjiang Town, Dongguan City,Guangdong  
Province  
测试地址(Test Site) : 深圳市宝安区航城街道三围社区三围茶西工业区 2 栋 6 层  
6/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei  
Community, Hangcheng Street, Bao'an District, Shenzhen,  
Guangdong, China

**样品信息(Report on the submitted sample(s) said to be):**

样品名称(Sample Name) : 珠光颜料 Pearlescent pigment  
型号(Model) : 着色系列, 银白系列, 云母铁金属色系列, 虹彩系列, 金色系列,  
超白水晶系列  
Coloring series, Silvery white series, Mica iron metallic series  
Rainbow series, Golden series, Super white crystal series  
制造商(Manufacturer) : 东莞市君威新材料科技有限公司  
Dongguan Junwei Materials Technology Co., LTD.  
地址(Address) : 广东省东莞市黄江镇长龙长安圩巷 10 号  
Changlong,Huangjiang Town, Dongguan City,Guangdong Province  
收样日期(Sample Received Date) : 2021/05/27  
测试周期(Testing Period) : 2021/05/27-2021/06/02

**测试要求****Test Requested:**

根据客户要求, 依据欧盟议会和欧盟理事会第2011/65/EU(RoHS)号指令及修正案(EU) 2015/863的要求, 通过XRF扫描和化学方法对送检样品中的铅、镉、汞、六价铬、多溴联苯、多溴二苯醚、DBP、BBP、DEHP、DIBP的含量进行测定。

As specified by client, to determine the Pb, Cd, Hg, Cr<sup>6+</sup>, PBBs, PBDEs, DBP, BBP, DEHP, DIBP content in the submitted sample in accordance with Directive 2011/65/EU (RoHS) and its amendment directive (EU) 2015/863 on XRF and Chemical Method.

**结论  
Conclusion****合格  
Pass**Approved by: 

签发: 梁丹(Jessie.Liang)

技术总监(Technical Director)



序号 No.	样品描述 Sample Description
1	白色粉末 White powder
2	白色粉末 White powder
3	白色粉末 White powder
4	绿色粉末 Green powder
5	黄色粉末 Yellow powder
6	红色粉末 Red powder

**测试结果(Test Result):**

(测试方法/仪器/方法检出限及限值: 见附件)

(Test Method/ Instrument/ MDL and Limit: See Appendix)

序号 No.	测试结果 Test result (mg/kg)										结论 Conclusion
	Pb	Cd	Hg	Cr <sup>6+</sup>	PBBs	PBDEs	DIBP	DBP	BBP	DEHP	
1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	符合 Conformity
2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	符合 Conformity
3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	符合 Conformity
4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	符合 Conformity
5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	符合 Conformity
6	N.D.	N.D.	N.D.	245	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	符合 Conformity

**注释 Note:**

mg/kg =毫克每千克 (milligram per kilogram)

 $\mu\text{g}/\text{cm}^2$  =微克每平方厘米 (microgram per square centimeter)

N.D.= 未检出 (小于方法检出限) (Not Detected (less than method detection limit))

N/A=不适用 (Not applicable)

MDL =方法检出限 Method Detection Limit

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**备注 Remark:**

- \*表示报告结果采用湿化学法。其他的则由X射线荧光。对于X射线荧光筛选，Cr VI的结果报告为总铬，而多溴联苯和多溴二苯醚报告为总溴。此外，XRF扫描结果可能基于各种因素与实际含量有所不同，包括但不限于样品尺寸、厚度、面积、不均匀性成分，表面平整度。

\*denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, nonuniformity composition, surface flatness.

- XRF 扫描报告仅供参考，申请者必须自己确认本 XRF 扫描报告所提供的信息能满足/他/她的用途。

基于不同的因素，本 XRF 扫描报告显示结果有所不同，包括但不限于样品的尺寸、厚度、面积、表面光滑度、设备参数和基体效应(例如塑胶、橡胶、金属、玻璃、陶瓷等等)。为获得数据资料，要求有相关化学分析设备作进一步湿化学预处理。

This XRF Scanning report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes.

The result shown in this XRF scanning report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

- Boiling-water-extraction 沸水提取：（X represents the results of the tested sample / X 为待测样品结果）

Number 序号	Colorimetric result (Cr(VI) concentration) 比色结果(铬(VI)浓度)	Judgement 判定
1	$X < 0.1 \mu\text{g}/\text{cm}^2$	Negative 阴性
2	$0.1 \mu\text{g}/\text{cm}^2 \leq X \leq 0.13 \mu\text{g}/\text{cm}^2$	Uncertainty 不确定
3	$X > 0.13 \mu\text{g}/\text{cm}^2$	Positive 阳性

- Negative indicates the absence of Cr(VI) on the tested areas concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating. 阴性表明测试区域内六价铬含量低于定量极限，认定镀层不存在六价铬；

Uncertainty indicates the absence of Cr(VI) on the tested areas unavoidable coating variations may influence the determination. 不确定表明测试区域镀层六价铬的不可避免的变化影响结果判定，导致无法判定结果；

Positive indicates the presence of Cr(VI) on the tested areas concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI). 阳性表明测试区域内六价铬含量高于于定量极限，认定镀层含有六价铬；

Storage conditions and production date of the tested sample are unavailable and thus result of Cr(VI) represent status of the sample at the time of testing. 由于未获知样品的存储条件和生产日期、样品的六价铬测试结果仅代表测试时样品的状态。

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## 附件 Appendix:

测试项目 Test Item	测试方法/仪器 Test Method/ Instrument	方法检出限 MDL	最大限值 Maximum Limit
<b>X 射线荧光光谱法 X-ray Fluorescence Spectrometry (XRF)</b>			
铅 Lead (Pb)	IEC 62321-3-1:2013 / XRF	200mg/kg	1000mg/kg
镉 Cadmium (Cd)		50mg/kg	100mg/kg
汞 Mercury (Hg)		200mg/kg	1000mg/kg
总铬 Total Chromium		200mg/kg	/
总溴 Total Bromine		200mg/kg	/
<b>湿化学法 Wet Chemistry Method</b>			
铅 Lead (Pb)	IEC 62321-5:2013/ ICP-OES	10mg/kg	1000mg/kg
镉 Cadmium (Cd)	IEC 62321-5:2013/ ICP-OES	10mg/kg	100mg/kg
汞 Mercury (Hg)	IEC 62321-4: 2013+A1:2017/ ICP-OES	10mg/kg	1000mg/kg
非金属: 六价铬 (Cr <sup>6+</sup> ) Non-metal Hexavalent Chromium (Cr <sup>6+</sup> )	IEC 62321-7-2:2017/ UV-Vis	8mg/kg	1000mg/kg
金属: 六价铬 (Cr <sup>6+</sup> ) Metal Hexavalent Chromium (Cr <sup>6+</sup> )	IEC 62321-7-1:2015/ UV-Vis	0.1µg/cm <sup>2</sup>	/
多溴联苯(PBBs) Polybrominated Biphenyls (PBBs) - 一溴联苯(MonoBB) -Monobromobiphenyl (MonoBB) - 二溴联苯(DiBB) -Dibromobiphenyl (DiBB) - 三溴联苯(TriBB) -Tribromobiphenyl (TriBB) - 四溴联苯(TetraBB) -Tetrabromobiphenyl (TetraBB) - 五溴联苯(PentaBB) -Pentabromobiphenyl (PentaBB) - 六溴联苯(HexaBB) -Hexabromobiphenyl (HexaBB) - 七溴联苯(HeptaBB) -Heptabromobiphenyl (HeptaBB) - 八溴联苯(OctaBB) -Octabromobiphenyl (OctaBB) - 九溴联苯(NonaBB) -Nonabromodiphenyl (NonaBB) - 十溴联苯(DecaBB) -Decabromodiphenyl (DecaBB)	IEC 62321-6:2015/ GC-MS	单项 Single 5mg/kg	总和 Sum 1000mg/kg

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测试项目 Test Item	测试方法/仪器 Test Method/ Instrument	方法检出限 MDL	最大限值 Maximum Limit
多溴二苯醚 (PBDEs) Polybrominated Diphenylethers (PBDEs) - 一溴二苯醚(MonoBDE) -Monobromodiphenyl ether (MonoBDE) - 二溴二苯醚(DiBDE) -Dibromodiphenyl ether (DiBDE) - 三溴二苯醚(TriBDE) -Tribromodiphenyl ether (TriBDE) - 四溴二苯醚(TetraBDE) -Tetrabromodiphenyl ether (TetraBDE) - 五溴二苯醚(PentaBDE) -Pentabromodiphenyl ether (PentaBDE) - 六溴二苯醚(HexaBDE) -Hexabromodiphenyl ether (HexaBDE) - 七溴二苯醚(HeptaBDE) -Heptabromodiphenyl ether (HeptaBDE) - 八溴二苯醚(OctaBDE) -Octabromodiphenyl ether (OctaBDE) - 九溴二苯醚(NonaBDE) -Nonabromodiphenyl ether (NonaBDE) - 十溴二苯醚(DecaBDE) -Decabromodiphenyl ether (DecaBDE)	IEC 62321-6:2015/ GC-MS	单项 Single 5mg/kg	总和 Sum 1000mg/kg
邻苯二甲酸二异丁酯(DIBP) Di-iso-butyl phthalate (DIBP)	IEC 62321-8:2017/ GC-MS	50mg/kg	1000mg/kg
邻苯二甲酸二正丁酯(DBP) Dibutyl phthalate (DBP)		50mg/kg	1000mg/kg
邻苯二甲酸丁苄酯(BBP) Butylbenzyl phthalate (BBP)		50mg/kg	1000mg/kg
邻苯二甲酸二(2-乙基己基)酯(DEHP) Di-(2-ethylhexyl) Phthalate (DEHP)		50mg/kg	1000mg/kg

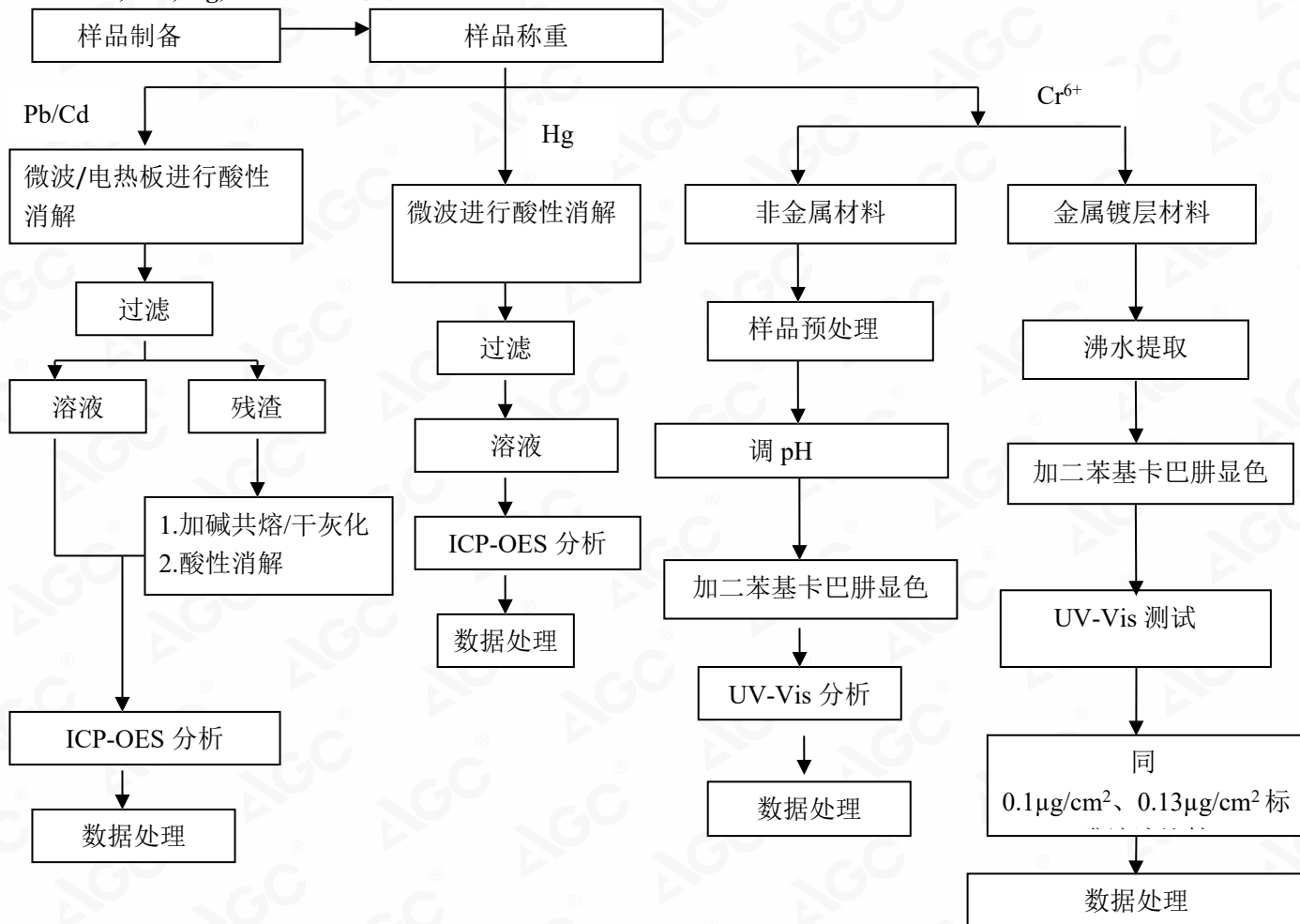
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### 测试流程图(Test Flow Chart)

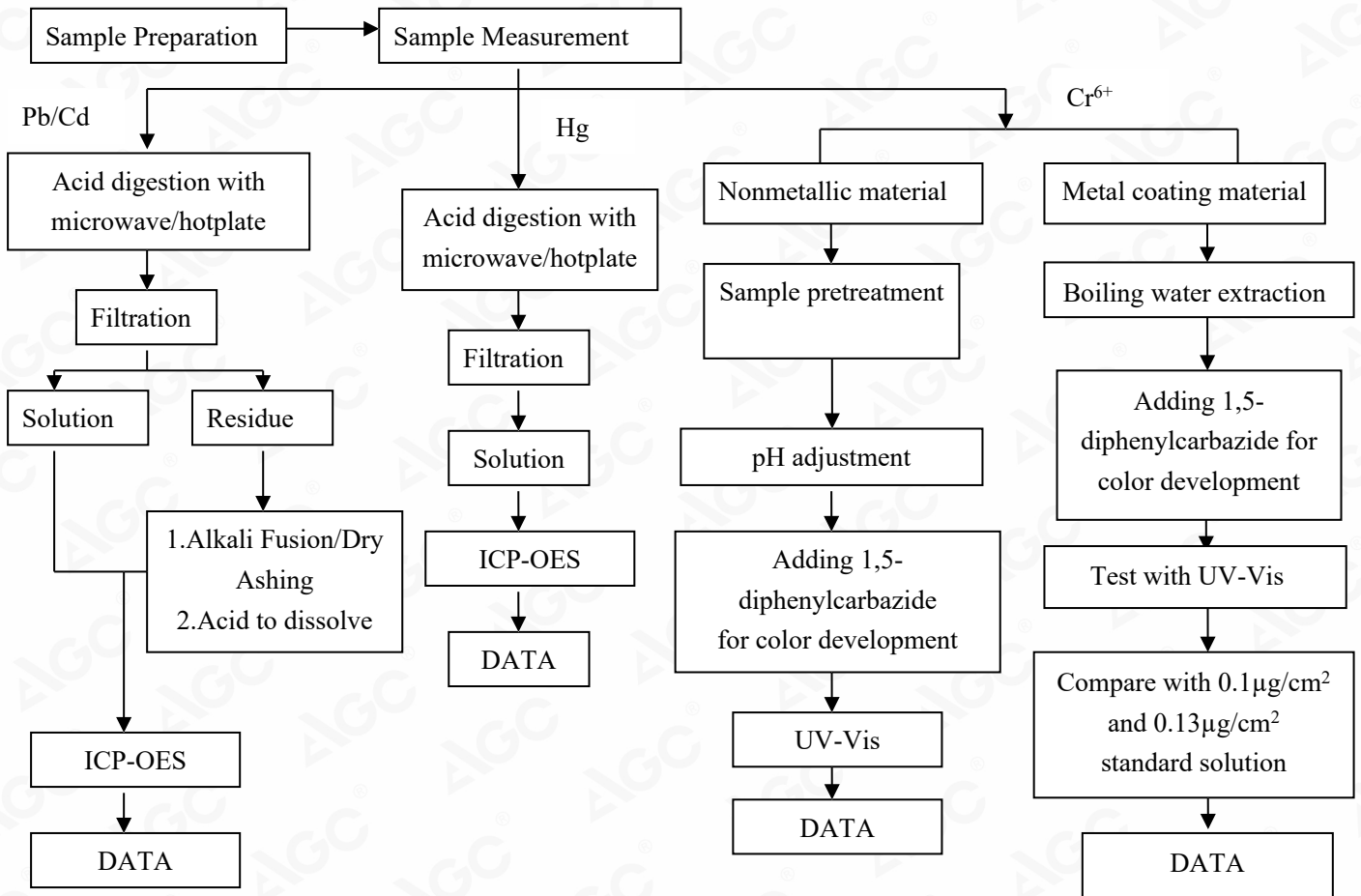
#### 1.Pb, Cd, Hg, Cr<sup>6+</sup>测试流程图



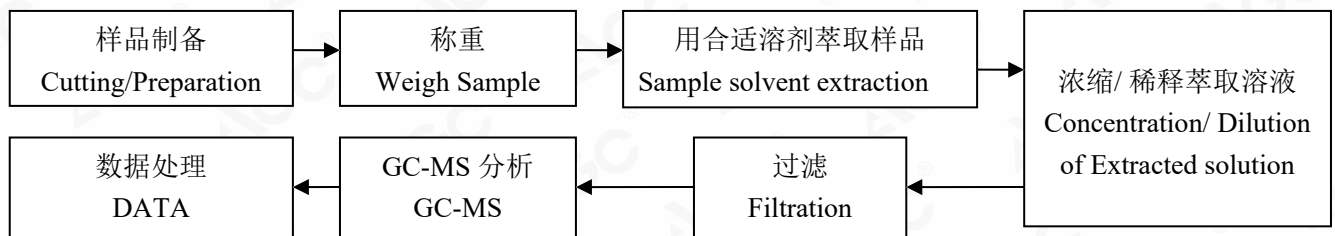
根据以上的流程图之条件，样品已经完全溶解（六价铬测试方法除外）。

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**1.For Pb , Cd , Hg, Cr<sup>6+</sup>**


These sample were dissolved totally by pre-conditioning method according to above flow chart (Cr<sup>6+</sup> test method excluded)

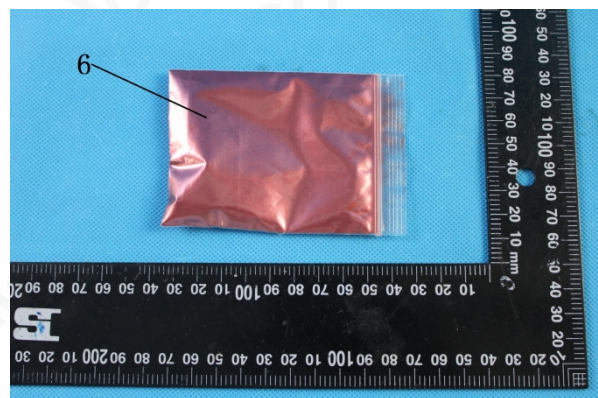
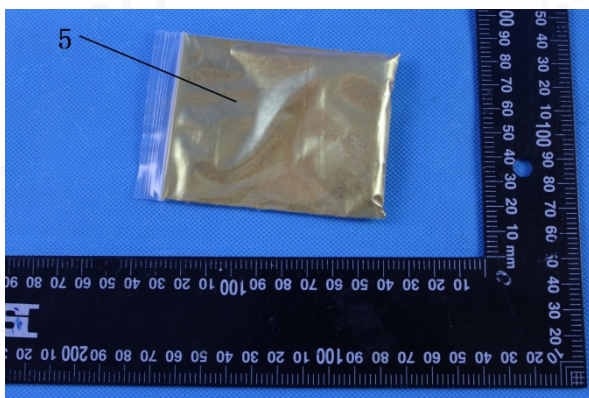
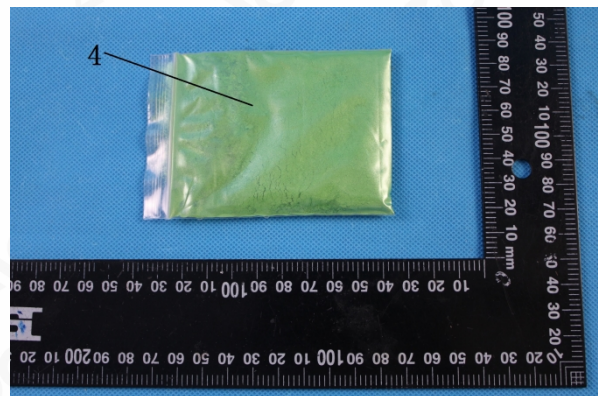
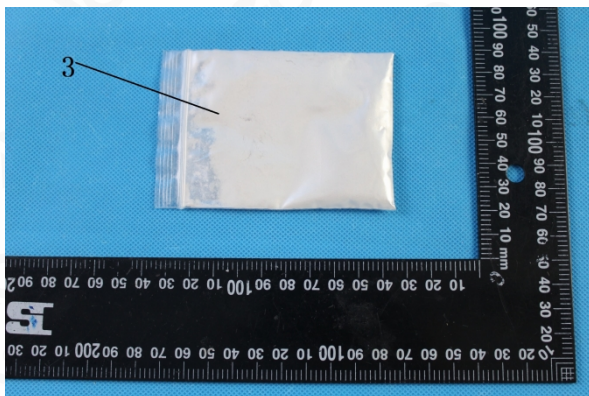
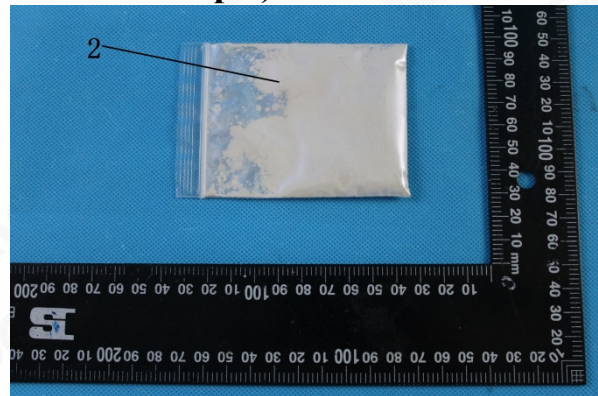
**2. PBBs, PBDEs, DBP, BBP, DEHP 和DIBP的测试流程图(The Test Flow Chart of PBBs, PBDEs, DBP, BBP, DEHP and DIBP)**


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样品附图(The photo of the sample)

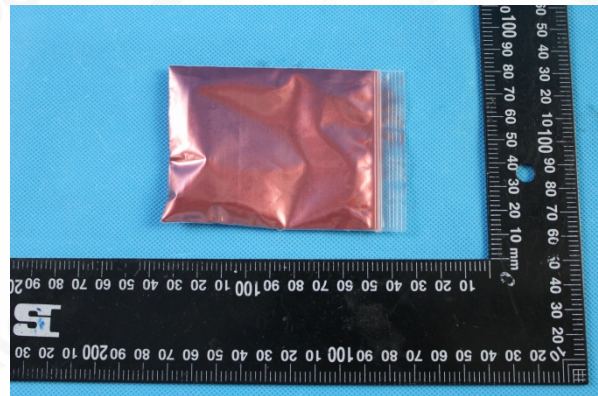
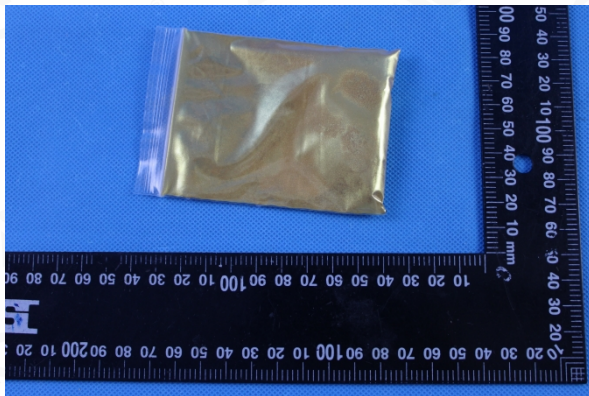
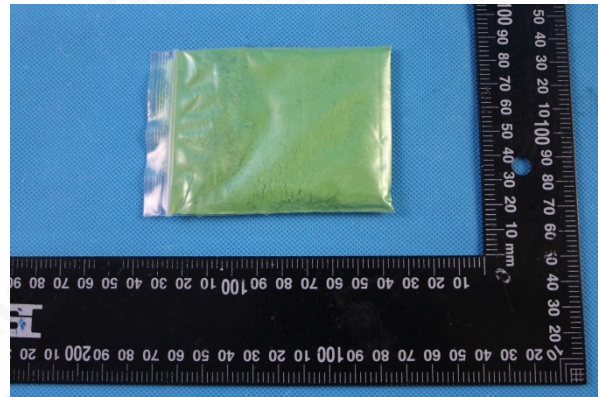
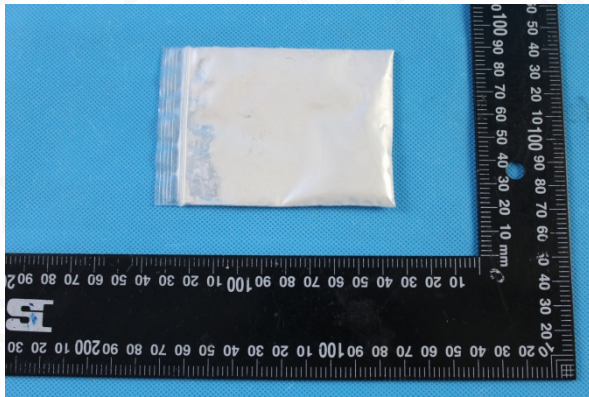
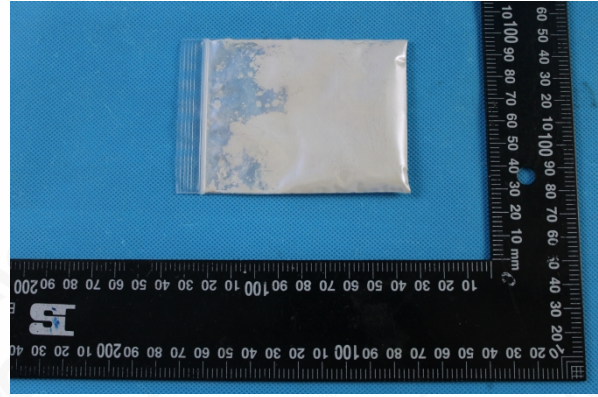
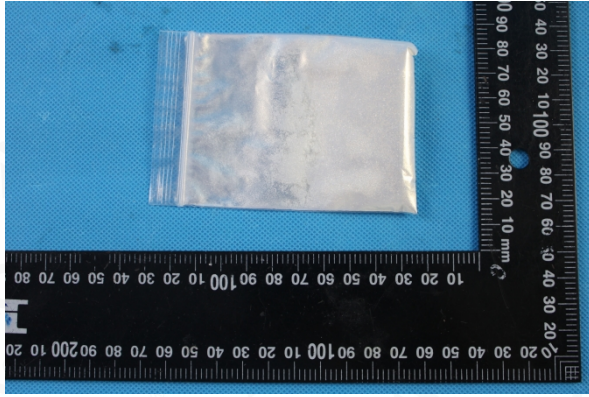


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1. 深圳市鑫宇环标准技术有限公司(以下简称[本公司])为提供符合下述条款的测试和报告, 而接受有关样品和货品。本公司基于下述条款提供服务, 下述条款为本公司与申请服务的个人, 企业或公司(以下简称[客户])的协议。All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd. (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
2. 由此测试申请所发出的任何报告(以下简称[报告]), 本公司会严格为客户保密。未经本公司的书面同意, 报告的整体或部分不得复制, 也不得用于广告或授权的其他用途。然而, 客户可以将本公司印制的报告或认可的副本, 向其客户、供货商或直接相关的其他人出示或提交。除非相关政府部门、法律或法规要求, 否则未经客户同意, 本公司不得将报告内容向任何第三方讨论或披露。Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3. 除非相关政府部门、法律或法院要求, 否则未经公司预先书面同意, 本公司毋需也无义务到法院对有关报告作证。The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. 无 CMA 标志的报告, 仅供使用方内部参考, 不具有对社会的证明作用。The non-CMA report issued by AGC is only permitted to be used by the client as internal reference use and shall not be used for public demonstration purpose.
5. 如果本公司确定报告被不当地使用, 本公司保留撤回报告的权利, 并有权要求其它适当的额外赔偿。In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
6. 本公司接受样品进行测试的前提是, 该测试报告不能作为针对本公司法律行动的依据。Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
7. 如因使用本公司任何报告内的资料, 或任何传播信息所描述与之有关的测试或研究导致的任何损失或损害, 本公司概不负责。The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
8. 若需要在法院审理程序或仲裁过程中使用测试报告, 客户必须在提交测试样品前将该意图告知本公司。Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15 days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by [agc@agc-cert.com](mailto:agc@agc-cert.com).







9. 电子版报告更改后将不被追回，客户有义务将更改后的报告提供给使用原报告的相关方。The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

10. 该测试报告的支持数据和信息本公司保存 6 年。个别评审机构有特别要求的，检测数据和报告的保存期可依情况变动。一旦超过上述提交的保存期限，数据和信息将被处理掉。任何情况下，本公司不必提供任何被处理的过期数据或信息。即使本公司事先被告知可能会发生相关的损害，本公司在任何情况下也不必承担任何损害，包括(但不限于)补偿性赔偿、利润损失、数据遗失、或任何形式的特殊损害、附带损害、间接损害、从属损害或任何违反约定、违反承诺、侵权(包括疏忽)、产品责任或其他原因的惩罚性损害。Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

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