



**BUREAU  
VERITAS**

# TEST REPORT

## 测试报告

**LAB NO.** 报告号码 : (9310)062-0017  
**DATE** 完成日期 : Mar 16, 2010  
**PAGE** 页码 : 1 OF 10

**APPLICANT** : **SHENZHEN LEADFAR INDUSTRY CO., LTD**  
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PINGSHAN, LONGGANG DISTRICT, SHENZHEN CITY, CHINA  
申请人公司名称 深圳市联奕实业有限公司  
深圳市龙岗区坪山镇坪环居委牛角龙村同富路 1-2 号

**CONTACT PERSON** : Wang Xi xi  
联系人名称 王茜茜

**DATE OF SUBMISSION** : Mar 11, 2010  
样品收取日期 2010 年 3 月 11 日

**TEST PERIOD** : Mar 11, 2010 to Mar 16, 2010  
所需工作周期 2010 年 3 月 11 日至 2010 年 3 月 16 日

**NO. OF WORKING DAYS** : 4  
所需工作日

**SAMPLE DESCRIPTION** : Dia 63mm  
样品描述 蘑菇头吸盘

Color: /  
颜色

Style No.: PVC 吸盘  
款号

P.O. No.: /  
报价单号

Country of Origin: /  
来源地

Country of Destination: /  
目的地

**MANUFACTURER** : /  
制造商

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**SUMMARY OF TEST RESULTS**  
测试结果摘要

| TEST REQUESTED<br>测试项目  | CONCLUSION<br>结论 | REMARK<br>备注 |
|---|------------------|--------------|
| PHthalates<br>邻苯二甲酸盐  | DATA<br>数据       |              |
| $\Sigma$ of POLYCYCLIC AROMATIC<br>HYDROCARBONS (PAHs) INCLUDING<br>BENZO(a)PYRENE (BaP)<br>多环芳烃包含苯并(a)芘              | DATA<br>数据       |              |
| Restriction of Hazardous Substances Directive<br>(RoHS), 2002/95/EC<br>有关欧洲针对电子产品的指令 (电子电器禁用某些有害<br>物质指令), 2002/95/EC | PASS<br>通过       |              |

**BUREAU VERITAS CONSUMER PRODUCTS SERVICES (GUANGZHOU) CO., LTD**

PREPARED BY : \_\_\_\_\_ Ivy Lin \_\_\_\_\_

APPROVED BY: \_\_\_\_\_

  
SANDROS FENG  
ANALYTICAL LAB MANAGER

  
\_\_\_\_\_  
JOEIE TSANG  
REGIONAL LABORATORY DIRECTOR

**REMARK**

If there are questions or concerns on this report, please contact the following persons:

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**Photo of the Submitted Sample**

递交样品照片



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**TEST RESULT**

测试结果

**Phthalate Test**

**邻苯二甲酸盐含量**

| Parameter<br>项目                                 | CAS No.    | Unit<br>单位 | Result 结果 |
|---|------------|------------|-----------|
|   |            |            | 1         |
| Dibutyl phthalate (DBP)<br>邻苯二甲酸二丁酯             | 84-74-2    | %          | <0.005    |
| Butyl benzyl phthalate (BBP)<br>邻苯二甲酸丁苄酯        | 85-68-7    | %          | <0.005    |
| Di-2-ethylhexyl phthalate (DEHP)<br>邻苯二甲酸-2-乙基酯 | 117-81-7   | %          | 0.018     |
| Di-n-octyl phthalate (DNOP)<br>邻苯二甲酸-n-辛基酯      | 117-84-0   | %          | <0.005    |
| Di-iso-decyl phthalate (DIDP)<br>邻苯二甲酸二异葵酯      | 26761-40-0 | %          | <0.005    |
| Di-iso-nonyl phthalate (DINP)<br>邻苯二甲酸壬基酯       | 28553-12-0 | %          | 0.032     |

Test Item 1: Transparent soft plastic

Note: “<” = less than  
“<” = 少于

Method: Sample was extracted with organic solvent and then analyzed by Liquid Chromatograph Mass Spectrometer / Gas Chromatograph Mass Spectrometer.

方法: 样品用有机溶剂萃取, 气质联用/液质联用仪分析.

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**TEST RESULT**

测试结果

**Polycyclic Aromatic Hydrocarbons (PAHs) Content**

多环芳烃含量

| Parameter<br>物质                             | CAS No.  | Unit<br>单位 | Result 结果 |
|---|----------|------------|-----------|
|   |          |            | 1         |
| Naphthalene<br>萘                            | 91-20-3  | mg/kg      | 0.18      |
| Acenaphthylene<br>芴烯                        | 208-96-8 | mg/kg      | <0.1      |
| Acenaphthene<br>芴                           | 83-32-9  | mg/kg      | <0.1      |
| Fluorene<br>芴                               | 86-73-7  | mg/kg      | <0.1      |
| Phenanthrene<br>菲                           | 85-01-8  | mg/kg      | <0.1      |
| Anthracene<br>蒽                             | 120-12-7 | mg/kg      | <0.1      |
| Fluoranthene<br>荧蒽                          | 206-44-0 | mg/kg      | <0.1      |
| Pyrene<br>芘                                 | 129-00-0 | mg/kg      | <0.1      |
| Benzo (a) anthracene<br>苯并 (a) 蒽            | 56-55-3  | mg/kg      | <0.1      |
| Chrysene<br>屈                               | 218-01-9 | mg/kg      | <0.1      |
| Benzo (b) fluoranthene<br>苯并 (b) 荧蒽         | 205-99-2 | mg/kg      | <0.1      |
| Benzo (k) fluoranthene<br>苯并 (k) 荧蒽         | 207-08-9 | mg/kg      | <0.1      |
| Benzo (a) pyrene<br>苯并 (a) 芘                | 50-32-8  | mg/kg      | <0.1      |
| Indeno (1,2,3-cd) pyrene<br>茚并 (1,2,3-cd) 芘 | 193-39-5 | mg/kg      | <0.1      |
| Dibenzo (a,h) anthracene<br>二苯并 (a,h) 蒽     | 53-70-3  | mg/kg      | <0.1      |
| Benzo (g,h,i) perylene<br>苯并 (g,h,i) 芘      | 191-24-2 | mg/kg      | <0.1      |
| <b>Sum<br/>总和</b>                           | -        | mg/kg      | 0.18      |

Test Item 1: Transparent soft plastic

Note: mg/kg = milligram per kilogram  
 “<” = less than

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注: mg/kg = 毫克/千克  
“<” = 少于

Method: ZEK 01-08, Testing and Validation of PAH (in Products) in the course of GS-mark  
Certification. The PAH content was analyzed by Gas Chromatograph Mass Spectrometer.  
方法: 参照 ZEK 01. 2-08, 气质联用分析。

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**TEST RESULT**

测试结果

**Restriction of Hazardous Substances Directive (RoHS), 2002/95/EC**

有关欧洲针对电子产品的指令 (电子电器禁用某些有害物质指令), 2002/95/EC

| Compounds<br>化合物                               | Tested Item<br>测试项目 (ppm) |  | RoHS' Limits<br>RoHS' 建议最高界限<br>(ppm) |
|--|---------------------------|--|---------------------------------------|
|  | 1                         |  |                                       |
| Lead 铅 (Pb)                                    | ND                        |  | 1000                                  |
| Mercury 汞 (Hg)                                 | ND                        |  | 1000                                  |
| Cadmium 镉 (Cd)                                 | ND                        |  | 100                                   |
| Chromium VI 六价铬 (Cr VI)                        | ND                        |  | 1000                                  |
| Polybrominated Biphenyls 多溴联苯 (PBBs) :         |                           |  |                                       |
| Bromobiphenyls 一溴联苯                            | ND                        |  |                                       |
| Dibromobiphenyls 二溴联苯                          | ND                        |  |                                       |
| Tribromobiphenyls 三溴联苯                         | ND                        |  |                                       |
| Tetrabromobiphenyls 四溴联苯                       | ND                        |  |                                       |
| Pentabromobiphenyls 五溴联苯                       | ND                        |  |                                       |
| Hexabromobiphenyls 六溴联苯                        | ND                        |  |                                       |
| Heptabromobiphenyls 七溴联苯                       | ND                        |  |                                       |
| Octabromobiphenyls 八溴联苯                        | ND                        |  |                                       |
| Nonabromobiphenyls 九溴联苯                        | ND                        |  |                                       |
| Decabromobiphenyl 十溴联苯                         | ND                        |  |                                       |
| Sum of PBBs 多溴联苯总和                             | ND                        |  |                                       |
| Polybrominated Diphenyl Ethers 多溴联苯醚 (PBDEs) : |                           |  |                                       |
| Bromodiphenyl ethers 一溴联苯醚                     | ND                        |  |                                       |
| Dibromodiphenyl ethers 二溴联苯醚                   | ND                        |  |                                       |
| Tribromodiphenyl ethers 三溴联苯醚                  | ND                        |  |                                       |
| Tetrabromodiphenyl ethers 四溴联苯醚                | ND                        |  |                                       |
| Pentabromodiphenyl ethers 五溴联苯醚                | ND                        |  |                                       |
| Hexabromodiphenyl ethers 六溴联苯醚                 | ND                        |  |                                       |
| Heptabromodiphenyl ethers 七溴联苯醚                | ND                        |  |                                       |
| Octabromodiphenyl ethers 八溴联苯醚                 | ND                        |  |                                       |
| Nonabromodiphenyl ethers 九溴联苯醚                 | ND                        |  |                                       |
| Decabromodiphenyl ether 十溴联苯醚                  | ND                        |  |                                       |
| Sum of PBDEs 多溴联苯醚总和                           | ND                        |  |                                       |

| Tested Item 测试项目            | Conclusion 结论 |
|-----------------------------|---------------|
| 1) Transparent soft plastic | PASS 通过       |

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**Note / 注释:**

Detection limits for regulated substances and limit of RoHS (in ppm) reference to 2002/95/EC

| Regulated Substances 受限物质  | Detection Limit 检测限 | RoHS' Limit (ppm) RoHS' 建议最高界限 |
|--|---------------------|--------------------------------|
| Pb 铅   | 10                  | 1000                           |
| Hg 汞   | 10                  | 1000                           |
| Cd 镉   | 10                  | 100                            |
| Cr VI 六价铬  | 10                  | 1000                           |
| PBBs 多溴联苯<br><i>Bromobiphenyls</i><br><i>Dibromobiphenyls</i><br><i>Tribromobiphenyls</i><br><i>Tetrabromobiphenyls</i><br><i>Pentabromobiphenyls</i><br><i>Hexabromobiphenyls</i><br><i>Heptabromobiphenyls</i><br><i>Octabromobiphenyls</i><br><i>Nonabromobiphenyls</i><br><i>Decabromobiphenyl</i>   | 50 (each)           | 1000 (sum)                     |
| PBDEs 多溴联苯醚<br><i>Bromodiphenyl ethers</i><br><i>Dibromodiphenyl ethers</i><br><i>Tribromodiphenyl ethers</i><br><i>Tetrabromodiphenyl ethers</i><br><i>Pentabromodiphenyl ethers</i><br><i>Hexabromodiphenyl ethers</i><br><i>Heptabromodiphenyl ethers</i><br><i>Octabromodiphenyl ethers</i><br><i>Nonabromodiphenyl ethers</i><br><i>Decabromodiphenyl ether</i> | 50 (each)           | 1000 (sum)                     |

ppm = mg/kg 百万分之一

Negative = 阴性

Pb = Lead 铅

Br = Bromine 溴

< = less than 小于 等于

Positive = 阳性

Hg = Mercury 汞

PBBs = Polybrominated Biphenyls 多溴联苯

ND = not detected 未检出

NR = not requested 没有要求

Cd = Cadmium 镉

PBDEs = Polybrominated Diphenyl Ethers 多溴联苯醚

NA = not applicable 不适用

Cr = Chromium 铬

**Test Method / 测试方法:**

Wet Chemistry Tests – Reference to IEC 62321:2008, "Electrotechnical Products- Determination of Levels of Six Regulated Substances": 湿化学方法 – 参照 IEC 62321:2008, 电子电器产品中六种受限物质浓度测定

- i. Lead (Pb) and Cadmium (Cd): The sample is comminuted and digested with acid mixtures. Pb/ Cd contents are determined with ICP-AES technique. (Chapter 8, 9 & 10)  
铅和镉: 先将样品粉碎, 然后用混酸消解。铅/镉的含量由等离子发射光谱仪测定 (第 8, 9 和 10 章)。
- ii. Mercury (Hg): The sample is comminuted and digested with acid mixtures. Hg content is determined with ICP-AES, ICP-MS or AAS-VGA technique. (Chapter 7)  
汞: 先将样品粉碎, 然后用混酸消解。汞含量由离子发射光谱仪, 或者原子吸收分光光度计-氢化物发生装置测定。(第 7 章)
- iii. Chromium (VI) (Cr VI) 六价铬:
  - A. Metal: Qualitative method for the presence of hexavalent chromium on metal surface on "Test for the presence of Hexavalent Chromium (Cr VI) in colourless and coloured corrosion-protection coatings on metals". The presence of hexavalent chromium is indicated by the formation of a red to violet color. The method is applied in turn to 1) untreated surface; 2) surface got by gently rubbing to scratch possibly reduced chromate surface but without completely removing the whole coating layer; 3) surface got by forcibly scratching into the deeper layers, even reaching the substrate. The sample is further verified by boiling water extraction method if the result of spot test shows ahead is negative or uncertain. (Annex B)  
金属: 金属表面六价铬存在的定性方法“金属表面无色和有色腐蚀防护涂层中六价铬 (Cr VI) 的测试”。测试颜色呈红-紫色, 则表明六价铬的存在。该方法适用于 1) 未磨损过的表面; 2) 轻微磨损过的表面, 以去除可能被还原的铬酸盐表层, 但不去除整个镀层; 3) 用力磨损的镀层表面, 甚至于基材表面。如果以上点测试结果呈阴性或无法确定, 则用沸水萃取方法作进一步确认。(附录 B)
  - B. Plastics & Electronics: The sample is comminuted and digested with alkaline mixtures. Chromium VI content is determined with UV-VIS spectroscopic technique. (Annex C)  
塑料和电子器件: 先将样品粉碎, 然后用混碱消解。六价铬含量由紫外可见分光光度计测定。(附录 C)
- iv. PBBs and PBDEs: The sample extracted by appropriate solvent is used for extraction and quantified GC-MS. (Annex A)  
多溴联苯和多溴联苯醚: 将样品用合适溶液进行提取, 再由气相色谱-质谱联用仪测定。(附录 A)



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**Remark / 备注:**

1. The result relates only to the tested item. The report shall not be reproduced except full without the written approval of the testing laboratory. Parameters which are not covered by the lab's testing scope are subcontracted to laboratories with government approval. The accreditation relates to competences given in the accreditation certificate.

测试结果仅代表被测样品。未经实验室书面许可，此报告不可被复制。对于本实验室未能涵盖的测试项目，实验室可以分包给其它政府承认的实验室。分包实验室的能力验证会在验证证书中注明。

END 结束

**APPENDIX – TEST PROCESS**

附录 – 测试程序

