



检测报告

Test Report

报告编号 A2230463990101005E
Report No. A2230463990101005E

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报告抬头公司名称 深圳琦富瑞电子有限公司
Company Name 3F ELECTRONICS INDUSTRY CORP.LTD
shown on Report
地 址 深圳市光明新区公明街道楼村社区鲤鱼河工业区振兴路 5 号
Address NO.5, ZHENXING ROAD, LIYUHE INDUSTRY PARK, LOUCUN VILLAGE,
GONGMING STREET, GUANGMING NEW DISTRICT, SHENZHEN ,
GUANGDONG , CHINA

以下测试之样品及样品信息由申请者提供并确认

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

| | |
|----------------------|-------------------------------|
| 样品名称 | 黑色 PE 热缩管 |
| Sample Name | BLACK PE HEAT SHRINKABLE TUBE |
| 物料编码 | HST-06000A-02QFR12 |
| Material No. | HST-06000A-02QFR12 |
| 买家 | 美的 |
| Buyer | Midea |
| 样品接收日期 | 2023.09.07 |
| Sample Received Date | Sep. 7, 2023 |
| 样品检测日期 | 2023.09.07-2023.09.13 |
| Testing Period | Sep. 7, 2023 to Sep. 13, 2023 |

测试内容 Test Conducted:

根据客户的申请要求，具体要求详见下一页。

As requested by the applicant. For details refer to next page(s).

批 准

Approved by

郑晴涛

郑晴涛

技术经理 Technical Manager

日 期

Date

2023.09.13

No. R393381730

广东省深圳市宝安区新安街道兴东社区华测检测大楼

华测检测认证集团股份有限公司

检验检测专用章
Centre Testing International Group Co.,Ltd.

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

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测试摘要 Executive Summary:

测试要求

TEST REQUEST

美的要求及欧盟持久性有机污染物(POPs)法规(EU) 2019/1021
Midea requirements and Regulation (EU) 2019/1021 on persistent organic pollutants (POPs)

- 多溴二苯醚
Polybrominated Diphenyl Ethers (PBDEs)
- 全氟辛烷磺酸(PFOS)及其衍生物
Perfluorooctane sulfonic acid (PFOS) and its derivatives
- 六溴环十二烷
Hexabromocyclododecane (HBCDD)
- 短链氯化石蜡
Short Chain Chlorinated Paraffins (SCCPs)
- 滴滴涕(1,1,1-三氯-2,2-二(对-氯苯基)乙烷)
DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl)ethane)
- 氯丹
Chlordane
- 六氯环己烷, 包括林丹
Hexachlorocyclohexanes, including Lindane
- 狄氏剂
Dieldrin
- 异狄氏剂
Endrin
- 七氯
Heptachlor
- 硫丹
Endosulfan
- 十氯酮
Chlordecone
- 艾氏剂
Aldrin
- 灭蚁灵
Mirex

测试结果

CONCLUSION

见结果页
See test result(s)

符合
PASS

符合
PASS

符合
PASS

符合
PASS

符合
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| | |
|--|------------|
| - 毒杀芬 Toxaphene | 符合 PASS |
| - 五氯苯 Pentachlorobenzene | 符合 PASS |
| - 六氯苯 Hexachlorobenzene | 符合 PASS |
| - 六溴联苯 Hexabromobiphenyl | 符合 PASS |
| - 多氯联苯 Polychlorinated Biphenyls(PCBs) | 符合 PASS |
| - 多氯化萘 Polychlorinated Naphthalenes (PCNs) | 符合 PASS |
| - 六氯丁二烯 Hexachlorobutadiene (HCBd) | 符合 PASS |
| - 五氯苯酚及其盐和酯 Pentachlorophenol and its salts and esters | 符合 PASS |
| - 全氟辛酸(PFOA)及其盐和相关物质 Perfluorooctanoic acid (PFOA) and its salts & related substances | 符合 PASS |
| - 三氯杀螨醇 Dicofol | 符合 PASS |
| - 全氟己基磺酸(PFHxS)及其盐和相关物质 Perfluorohexane-1-sulphonic acid (PFHxS) and its salts & related substances | 符合 PASS |

*****详细结果，请见下页*****

***** For further details, please refer to the following page(s) *****

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美的要求及欧盟持久性有机污染物(POPs)法规(EU) 2019/1021 Midea requirements and Regulation (EU) 2019/1021 on persistent organic pollutants (POPs)

▼多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)

测试方法: IEC 62321-6:2015; 测试仪器: GC-MS

Test Method: IEC 62321-6:2015; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) |
|-----------------------------------|-------------------|-------------------|
| | 005 | |
| 四溴二苯醚 Tetrabromodiphenyl ether | N.D. | 3 |
| 五溴二苯醚 Pentabromodiphenyl ether | N.D. | 3 |
| 六溴二苯醚 Hexabromodiphenyl ether | N.D. | 3 |
| 七溴二苯醚 Heptabromodiphenyl ether | N.D. | 3 |
| 十溴二苯醚 Decabromodiphenyl ether | N.D. | 3 |

备注 Remark:

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- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ 全氟辛烷磺酸(PFOS)及其衍生物 Perfluorooctane sulfonic acid (PFOS) and its derivatives[#]

测试方法: CEN/TS 15968:2010; 测试仪器: LC-MS-MS & GC-MS

Test Method: CEN/TS 15968:2010; Test Equipment: LC-MS-MS & GC-MS

| 序号 No. | 测试项目 Tested Item(s) | CAS No. | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|-----------|---|-------------|-------------------|----------------------|---------------------|
| | | | 005 | | |
| 1 | 全氟辛基磺酸 Perfluorooctanesulfonic acid (PFOS) | 1763-23-1 | N.D. | 0.010 | -- |
| 2 | 全氟辛基磺酸钠 Sodium perfluorooctane sulfonate (PFOS-Na)* | 4021-47-0 | N.D. | 0.010 | -- |
| 3 | 全氟辛基磺酸钾 Perfluorooctanesulfonic acid, potassium salt (PFOS-K)* | 2795-39-3 | N.D. | 0.010 | -- |
| 4 | 全氟辛基磺酸锂 Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)* | 29457-72-5 | N.D. | 0.010 | -- |
| 5 | 全氟辛基磺酸镁 1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptafluoro-, magnesium salt (2:1) (PFOS-Mg)* | 91036-71-4 | N.D. | 0.020 | -- |
| 6 | 全氟辛基磺酸铵 Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH ₄)* | 29081-56-9 | N.D. | 0.010 | -- |
| 7 | 全氟辛基磺酸二乙醇铵 Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) ₂)* | 70225-14-8 | N.D. | 0.010 | -- |
| 8 | 全氟辛基磺酸四乙基铵 Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C ₂ H ₅) ₄)* | 56773-42-3 | N.D. | 0.010 | -- |
| 9 | 全氟辛基磺酸二癸二甲基铵 Didecyl dimethyl ammonium perfluorooctane sulfonate (PFOS-DDA)* | 251099-16-8 | N.D. | 0.010 | -- |
| 10 | 全氟辛基磺酰氟 Perfluoro-1-octanesulfonyl fluoride (PFOSF)* | 307-35-7 | N.D. | 0.010 | -- |
| 11 | 全氟辛基磺酸哌啶 Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptafluorooctanesulfonate | 71463-74-6 | N.D. | 0.020 | -- |
| 12 | 氟虫胺 N-Ethylperfluoro-1- octanesulfonamide (N-Et-FOSA) | 4151-50-2 | N.D. | 0.050 | -- |

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| 序号 No. | 测试项目 Tested Item(s) | CAS No. | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|-----------|---|------------|-------------------|----------------------|---------------------|
| | | | 005 | | |
| 13 | 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8- 十七氟-N-甲基-辛磺酰胺 N-Methylperfluoro-1- octanesulfonamide (N-Me-FOSA) | 31506-32-8 | N.D. | 0.050 | -- |
| 14 | N-乙基全氟辛基磺酰胺乙醇 2-(N-Ethylperfluoro-1- octanesulfonamido)-ethanol (N-Et-FOSE) | 1691-99-2 | N.D. | 0.050 | -- |
| 15 | 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8- 十七氟-N-(2-羟乙基)-N-甲基-1-辛基 磺酰胺 2-(N-Methylperfluoro-1- octanesulfonamido)-ethanol (N-Me-FOSE) | 24448-09-7 | N.D. | 0.050 | -- |
| 16 | 全氟辛基磺酰胺 Perfluorooctane sulfonamide (PFOSA) | 754-91-6 | N.D. | 0.010 | -- |
| 17 | 全氟辛基磺酰胺锂盐(1:1) Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)* | 76752-79-9 | N.D. | 0.010 | -- |
| 18 | 全氟辛烷磺酰氨基乙酸 Glycine, N-[(heptadecafluorooctyl)sulfonyl]- (FOSAA) | 2806-24-8 | N.D. | 0.050 | -- |
| 19 | N-(十七氟辛基磺酰基)-N-甲基甘 氨酸 N-Methyl perfluorooctanesulfonamidoacetic acid (N-Me-FOSAA) | 2355-31-9 | N.D. | 0.050 | -- |
| 20 | N-乙基-N-((十七氟辛基)磺酰基) 甘氨酸 N-ethyl-N-[(heptadecafluorooctyl) sulphonyl]glycine (N-Et-FOSAA) | 2991-50-6 | N.D. | 0.050 | -- |
| 21 | 总和 Total | -- | N.D. | -- | 1000 |

备注 Remark:

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- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- 1000 mg/kg = 0.1%
- *该物质的结果由其特定化合物的结果换算而来。

Result(s) shown of the substance(s) is/ are converted from the result(s) of certain compound(s).

- 根据欧盟持久性有机污染物(POPs)法规(EU) 2019/1021, 全氟辛烷磺酸(PFOS)及其衍生物被定义为一类化学物质, 但法规中并未给出物质清单。结论是根据所测试的项目含量得出的。

According to Regulation (EU) 2019/1021 on persistent organic pollutants (POPs), Perfluorooctane sulfonic acid (PFOS) and its derivatives are defined as a class of chemicals. There is not an official list in the regulation. The conclusion is based on the tested chemicals.

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▼ **六溴环十二烷 Hexabromocyclododecane (HBCDD)**

测试方法: 参考 US EPA 3540C:1996 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3540C:1996 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | CAS No. | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|---|--|-------------------|-------------|----------|
| | | 005 | MDL (mg/kg) | (mg/kg) |
| 六溴环十二烷 Hexabromocyclododecane (HBCDD) | 25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8 | N.D. | 5 | 100 |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- “六溴环十二烷(HBCDD)”指: 六溴环十二烷(HBCDD)、1,2,5,6,9,10-六溴环十二烷及其非对映异构体 (α -HBCDD, β -HBCDD, γ -HBCDD)
- ‘Hexabromocyclododecane (HBCDD)’ means: Hexabromocyclododecane (HBCDD), 1,2,5,6,9,10-hexabromocyclododecane and its main diastereoisomers: α -HBCDD, β -HBCDD, γ -HBCDD

▼ **短链氯化石蜡 Short Chain Chlorinated Paraffins (SCCPs)**

测试方法: 参考 US EPA 3540C:1996 & US EPA 8270E:2018; 测试仪器: GC-MS(NCI)

Test Method: Refer to US EPA 3540C:1996 & US EPA 8270E:2018; Test Equipment: GC-MS(NCI)

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|---|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 短链氯化石蜡 Short Chain Chlorinated Paraffins (SCCPs) | N.D. | 50 | 1500 |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
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▼ **滴滴涕(1,1,1-三氯-2,2-二(对-氯苯基)乙烷) DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl)ethane) #**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|--|-------------------|----------------------|---------------------|
| | 005 | | |
| 滴滴涕(1,1,1-三氯-2,2-二(对-氯苯基)乙烷) DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl)ethane) | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ **氯丹 Chlordane#**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|---------------------|-------------------|----------------------|---------------------|
| | 005 | | |
| 氯丹 Chlordane | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ **六氯环己烷, 包括林丹 Hexachlorocyclohexanes, including Lindane[#]**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|---|-------------------|----------------------|---------------------|
| | 005 | | |
| 六氯环己烷, 包括林丹 Hexachlorocyclohexanes, including Lindane | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ **狄氏剂 Dieldrin[#]**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|---------------------|-------------------|----------------------|---------------------|
| | 005 | | |
| 狄氏剂 Dieldrine | N.D. | 5 | N.D. |

备注 Remark:

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- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ 异狄氏剂 Endrin[#]

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|---------------------|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 异狄氏剂 Endrine | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
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- mg/kg = ppm = 百万分之一 parts per million

▼ 七氯 Heptachlor[#]

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|---------------------|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 七氯 Heptachlor | N.D. | 5 | N.D. |

备注 Remark:

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- mg/kg = ppm = 百万分之一 parts per million

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▼ 硫丹 Endosulfan[#]

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|---------------------|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 硫丹 Endosulfan | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ 十氯酮 Chlordecone[#]

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|---------------------|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 十氯酮 Chlordecone | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ 艾氏剂 Aldrin[#]

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|---------------------|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 艾氏剂 Aldrine | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ 灭蚁灵 Mirex

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|---------------------|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 灭蚁灵 Mirex | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ 毒杀芬 Toxaphene[#]

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|---------------------|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 毒杀芬 Toxaphene | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ 五氯苯 Pentachlorobenzene[#]

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|------------------------|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 五氯苯 Pentachlorobenzene | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ 六氯苯 Hexachlorobenzene[#]

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|-----------------------|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 六氯苯 Hexachlorobenzene | N.D. | 3 | 10 |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ 六溴联苯 Hexabromobiphenyl

测试方法: IEC 62321-6:2015; 测试仪器: GC-MS

Test Method: IEC 62321-6:2015; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 | 限值 Limit |
|------------------------|-------------------|-------------|----------|
| | 005 | MDL (mg/kg) | (mg/kg) |
| 六溴联苯 Hexabromobiphenyl | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ 多氯联苯 Polychlorinated Biphenyls(PCBs)

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|---|-------------------|----------------------|---------------------|
| | 005 | | |
| 多氯联苯 Polychlorinated Biphenyls(PCBs) | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ 多氯化萘 Polychlorinated Naphthalenes (PCNs)

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|---|-------------------|----------------------|---------------------|
| | 005 | | |
| 多氯化萘 Polychlorinated Naphthalenes (PCNs) | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ **六氯丁二烯 Hexachlorobutadiene (HCBD) #**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|---------------------------|-------------------|----------------------|---------------------|
| | 005 | | |
| 六氯丁二烯 Hexachlorobutadiene | N.D. | 5 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ **五氯苯酚及其盐和酯 Pentachlorophenol and its salts and esters#**

测试方法: 参考 ISO 17070:2015; 测试仪器: GC-MS

Test Method: Refer to ISO 17070:2015; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|---|-------------------|----------------------|---------------------|
| | 005 | | |
| 五氯苯酚及其盐和酯 Pentachlorophenol and its salts and esters | N.D. | 1 | 5 |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- 五氯苯酚及其盐和酯的结果以五氯苯酚计。
The test result of Pentachlorophenol and its salts and esters is calculated by Pentachlorophenol.

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▼ 全氟辛酸(PFOA)及其盐和相关物质 Perfluorooctanoic acid (PFOA) and its salts & related substances[#]

测试方法: CEN/TS 15968:2010; 测试仪器: LC-MS-MS & GC-MS

Test Method: CEN/TS 15968:2010; Test Equipment: LC-MS-MS & GC-MS

| 序号 No. | 测试项目 Tested Item(s) | CAS No. | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|-----------|---|-------------|-------------------|----------------------|---------------------|
| | | | 005 | | |
| 1 | 全氟辛酸 Perfluorooctanoic acid (PFOA) | 335-67-1 | N.D. | 0.008 | -- |
| 2 | 全氟辛酸铵 Ammonium pentadecafluorooctanoate (APFO)* | 3825-26-1 | N.D. | 0.010 | -- |
| 3 | 全氟辛酸钠 Sodium perfluorooctanoate (PFOA-Na)* | 335-95-5 | N.D. | 0.010 | -- |
| 4 | 全氟辛酸钾 Potassium perfluorooctanoate (PFOA-K)* | 2395-00-8 | N.D. | 0.010 | -- |
| 5 | 全氟辛酸银 Silver perfluorooctanoate (PFOA-Ag)* | 335-93-3 | N.D. | 0.010 | -- |
| 6 | 全氟辛氟 Perfluorooctanoyl fluoride (PFOA-F)* | 335-66-0 | N.D. | 0.010 | -- |
| 7 | 全氟辛酸锂 Lithium perfluorooctanoate (PFOA-Li)* | 17125-58-5 | N.D. | 0.010 | -- |
| 8 | 全氟辛酸(PFOA)及其盐 Perfluorooctanoic acid (PFOA) and its salts | - | N.D. | -- | 0.025 |
| 9 | 全氟辛酸甲酯 Methyl perfluorooctanoate (Me-PFOA) | 376-27-2 | N.D. | 0.200 | 1 |
| 10 | 全氟辛酸乙酯 Ethyl perfluorooctanoate (Et-PFOA) | 3108-24-5 | N.D. | 0.200 | 1 |
| 11 | 全氟正辛基碘烷 Perfluorooctyl iodide (PFOI) | 507-63-1 | N.D. | 0.200 | 1 |
| 12 | 1H,1H,2H,2H-全氟-1-癸醇 1H,1H,2H,2H-perfluoro-1-decanol (8:2 FTOH) | 678-39-7 | N.D. | 0.200 | 1 |
| 13 | 1H,1H,2H,2H-全氟癸磺酸 1H,1H,2H,2H-perfluorodecane sulfonic acid (8:2 FTS) | 39108-34-4 | N.D. | 0.200 | 1 |
| 14 | 丙烯酸 1H,1H,2H,2H-十七氟癸酯 1,1,2,2-Tetrahydroperfluorodecyl acrylate (8:2 FTAC) | 27905-45-9 | N.D. | 0.200 | 1 |
| 15 | 2-(全氟辛基)乙基甲基丙烯酸酯 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl ester (8:2 FTMA) | 1996-88-9 | N.D. | 0.200 | 1 |
| 16 | 1H,1H,2H,2H-全氟癸基三乙氧基硅烷 1H,1H,2H,2H-Perfluorodecyltriethoxysilane (PFSI) | 101947-16-4 | N.D. | 0.200 | 1 |

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| 序号 No. | 测试项目 Tested Item(s) | CAS No. | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|-----------|--|-------------|-------------------|----------------------|---------------------|
| | | | 005 | | |
| 17 | 1-碘-1H,1H,2H,2H-全氟癸烷 Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8- heptadecafluoro-10-iodo- (8:2 FTI) | 2043-53-0 | N.D. | 0.200 | 1 |
| 18 | 双(2-(全氟乙基)磷酸 8:2 Fluorotelomer phosphate diester (8:2diPAP) | 678-41-1 | N.D. | 0.200 | 1 |
| 19 | 双(2-(全氟乙基)磷酸钠 Sodium bis(1H,1H,2H,2H- perfluorodecyl)phosphate (8:2diPAP-Na)* | 114519-85-6 | N.D. | 0.200 | 1 |
| 20 | 四丁基磷 2H,2H-全氟癸酸酯 Tetrabutylphosphonium 2H,2H-Perfluorodecanoate (H ₂ PFDA-P(C ₄ H ₉) ₄) | 882489-14-7 | N.D. | 0.010 | 1 |
| 21 | 2H,2H,3H,3H-全氟十一酸 2H,2H,3H,3H-Perfluoroundecanoic acid (H ₄ PFUnA) | 34598-33-9 | N.D. | 0.010 | 1 |
| 22 | 3-(全氟辛基)丙酸钾 Potassium 3-(perfluorooctyl)propanoate (H ₄ PFUnA-K)* | 83310-58-1 | N.D. | 0.020 | 1 |
| 23 | 2H,2H-全氟癸酸 2H,2H-Perfluorodecanoate (H ₂ PFDA) | 27854-31-5 | N.D. | 0.010 | 1 |
| 24 | 全氟辛基乙烯 1-Decene, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10- heptadecafluoro- (PFOE) | 21652-58-4 | N.D. | 0.200 | 1 |
| 25 | 全氟癸基三氯硅烷 Perfluorooctylethyltrichlorosilane (FDTs) | 78560-44-8 | N.D. | 0.200 | 1 |
| 26 | 全氟癸基三甲氧硅烷 Perfluorooctylethyltrimethoxysilane (FDTMOS) | 83048-65-1 | N.D. | 0.200 | 1 |
| 27 | 双[2-(全氟癸基)乙基]磷酸酯 Bis[2-(perfluorodecyl)ethyl] Phosphate (10:2 diPAP) | 1895-26-7 | N.D. | 0.200 | 1 |
| 28 | 全氟辛酸(PFOA)相关物质 Perfluorooctanoic acid (PFOA) related substances | - | N.D. | -- | 1 |

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备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- *该物质的结果由其特定化合物的结果换算而来。

Result(s) shown of the substance(s) is/ are converted from the result(s) of certain compound(s).

- 根据欧盟持久性有机污染物(POPs)法规(EU) 2019/1021, 全氟辛酸(PFOA)及其盐和相关物质被定义为一类化学物质, 但法规中并未给出物质清单。结论是根据所测试的项目含量得出的。

According to Regulation (EU) 2019/1021 on persistent organic pollutants (POPs), Perfluorooctanoic acid (PFOA) and its salts & related substances are defined as a class of chemicals. There is not an official list in the regulation. The conclusion is based on the tested chemicals.

▼ **三氯杀螨醇 Dicofol#**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

| 测试项目 Tested Item(s) | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|---------------------|-------------------|----------------------|---------------------|
| | | 005 | |
| 三氯杀螨醇 Dicofol | N.D. | 0.05 | N.D. |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ 全氟己基磺酸(PFHxS)及其盐和相关物质 Perfluorohexane-1-sulphonic acid (PFHxS) and its salts & related substances#

测试方法: CEN/TS 15968:2010; 测试仪器: LC-MS-MS & GC-MS

Test Method: CEN/TS 15968:2010; Test Equipment: LC-MS-MS & GC-MS

| 序号 No. | 测试项目 Tested Item(s) | CAS No. | 结果 Result (mg/kg) | 方法检出限 MDL (mg/kg) | 限值 Limit (mg/kg) |
|-----------|---|-------------|-------------------|----------------------|---------------------|
| | | | 005 | | |
| 1 | 全氟己基磺酸 Perfluorohexanesulfonic acid (PFHxS) | 355-46-4 | N.D. | 0.010 | -- |
| 2 | 全氟己基磺酸钠 1-Hexanesulfonic acid,1,1,2,2,3,3,4,4, 5,5,6,6,6- tridecafluoro-, sodium salt (PFHxS-Na)* | 82382-12-5 | N.D. | 0.010 | -- |
| 3 | 全氟己基磺酸钾 Potassium perfluorohexane-1- sulphonate (PFHxS-K)* | 3871-99-6 | N.D. | 0.010 | -- |
| 4 | 全氟己基磺酸锂 1-Hexanesulfonic acid,1,1,2,2,3,3,4,4, 5,5,6,6,6-tridecafluoro-, lithium salt(1:1) (PFHxS-Li)* | 55120-77-9 | N.D. | 0.010 | -- |
| 5 | 全氟己基磺酸锌 1-Hexanesulfonic acid,1,1,2,2,3,3,4,4, 5,5,6,6,6-tridecafluoro-, zinc salt (PFHxS-Zn)* | 70136-72-0 | N.D. | 0.010 | -- |
| 6 | 全氟己基磺酸镓盐(9CI) 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4, 5,5,6,6,6-tridecafluoro-, gallium salt (9CI) (PFHxS-Ga)* | 341035-71-0 | N.D. | 0.010 | -- |
| 7 | 全氟己基磺酸钪盐(3:1) 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4, 5,5,6,6,6-tridecafluoro-, scandium(3+) salt (3:1) (PFHxS-Sc)* | 350836-93-0 | N.D. | 0.010 | -- |
| 8 | 全氟己基磺酸钕盐(3:1) 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4, 5,5,6,6,6-tridecafluoro-, neodymium(3+) salt (3:1) (PFHxS-Nd)* | 41184-65-0 | N.D. | 0.010 | -- |
| 9 | 全氟己基磺酸钇盐(3:1) 1-Hexanesulfonic acid,1,1,2,2,3,3,4,4, 5,5,6,6,6-tridecafluoro-, yttrium(3+) salt (3:1) (PFHxS-Y)* | 41242-12-0 | N.D. | 0.010 | -- |
| 10 | 全氟己基磺酸铯 Cesium Perfluorohexanesulfonate (PFHxS-Cs)* | 92011-17-1 | N.D. | 0.010 | -- |
| 11 | 全氟己基磺酸铵 1-Hexanesulfonic acid,1,1,2,2,3,3,4,4, 5,5,6,6,6-tridecafluoro-, ammonium salt (1:1) (PFHxS-NH ₄)* | 68259-08-5 | N.D. | 0.010 | -- |

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|-----------|--|------------|-------------------|----------------------|---------------------|
| | | | 005 | | |
| 12 | 全氟己基磺酸(PFHxS)及其盐 Perfluorohexane-1-sulphonic acid (PFHxS) and its salts | -- | N.D. | -- | 0.025 |
| 13 | 全氟己基磺酰氟 1-Hexanesulfonyl fluoride, 1,1,2,2,3,3, 4,4,5,5,6,6,6-tridecafluoro- (PFHxSF)* | 423-50-7 | N.D. | 0.010 | -- |
| 14 | 全氟己基磺酰胺 1-Hexane-sulfonamide,1,1,2,2,3,3,4,4, 5,5,6,6,6- tridecafluoro- (FHxSA) | 41997-13-1 | N.D. | 0.010 | -- |
| 15 | N-甲基全氟己烷磺酰胺 N-methylperfluorohexanesulfonamide (MeFHxSA) | 68259-15-4 | N.D. | 0.200 | -- |
| 16 | 全氟己基磺酸(PFHxS)相关物质 Perfluorohexane-1-sulphonic acid (PFHxS) related substances | -- | N.D. | -- | 1 |

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- *该物质的结果由其特定化合物的结果换算而来。

Result(s) shown of the substance(s) is/ are converted from the result(s) of certain compound(s).

样品/部位描述 Sample/Part Description

| 序号 No. | CTI 样品 ID CTI Sample ID | 描述 Description |
|-----------|----------------------------|--|
| 1 | 005 | 有白色印字的黑色塑料套管 Black plastic tube with white printing |

注释 Note:

-#表示该项目/方法不在 CNAS 认可范围内。

indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.

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The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

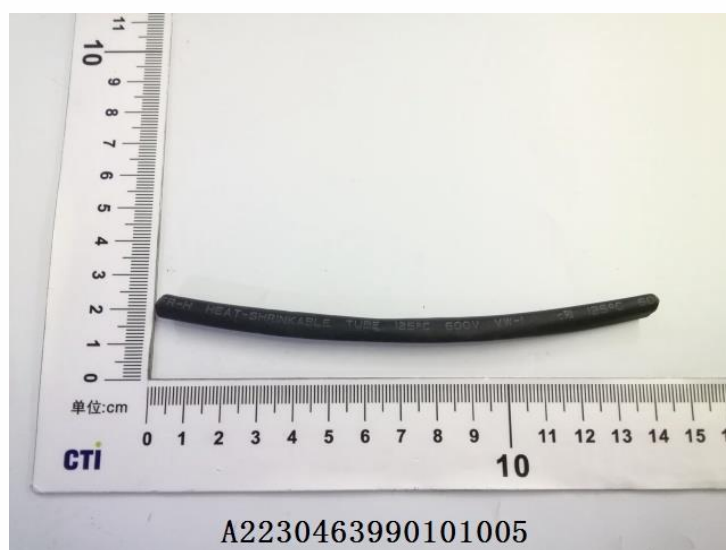
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样品图片

Photo(s) of the sample(s)



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*** 报告结束 ***

*** End of Report ***