

# TEST REPORT

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**Applicant:** HUNAN AIHUA GROUP CO.,LTD. / SICHUAN AIHUA ELECTRONIC CO., LTD./ SI CHUAN MIANYANG ZIJIAN ELECTRONIC ELEMENNTS CO.,LTD.

**客户/申请商:** 湖南艾华集团股份有限公司/四川艾华电子有限公司/四川绵阳资江电子元件有限公司

**Address:** EAST TAOHUALUN RD OF YI YANG CITY, HUNAN PROVINCE, CHINA./ LUOJIANG COUNTY INDUSTRIAL PARK OF DEYANG CITY,SICHUAN PROVINCE, CHINA./ NO.132 EAST SECTION,PUMING SOUTH RD MIANYANG STATE HIGH-TECH INDUSTRIAL PARKS SICHUAN PR.CHINA

**地 址:** 湖南省益阳市桃花仑东路/四川省德阳市罗江县工业园区/中国四川绵阳市高新区东段南路 132 号

**Report on the submitted sample said to be**

委托测试的样品及申请者对样品的说明如下

**Sample name:** Aluminum electrolytic capacitor

**样品名称:** 铝电解电容器

**Sample received date:** Nov 29, 2013

**样品接收日期:** 2013-11-29

**Testing period:** From Nov 29, 2013 to Dec 05, 2013

**样品测试周期:** 2013-11-29 至 2013-12-05

**Test Requested 测试要求:**

As specified by client, based on the list published by European chemicals agency (ECHA) for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the one hundred and forty-four(144) Substances of Very High Concern (SVHC) and seven(7) potential Substances of Very High Concern content in the submitted sample.

根据客户要求及 REACH 法规 1907/2006/EC, 依据欧洲化学品管理局发布的高度关注物质清单, 测定委托样品中 144 种高度关注物质和 7 种潜在的高关注物质的的含量。

**Summary 总结:**

According to the specified scope and analytical techniques, concentrations of SVHC are less than 0.1%(w/w) in the submitted sample. 根据指定范围和分析技术, 委托样品中高度关注物质(SVHC)的浓度均小于 0.1%(w/w)	PASS 通过
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\*\*\*\*\*FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) 更多详细信息请查阅下页\*\*\*\*\*



Signed for and on behalf of 谨代表

Shenzhen AOV Testing Technology Co., Ltd 深圳市安姆特检测技术有限公司

 Tested by: Hugo

 主 检 Chen Ru Chun, Hugo 陈汝春  
 Project Leader 项目负责人

 Reviewed by: Lewis

 主 审 Liu Lin Wen, Lewis 刘林文  
 Laboratory Supervisor 实验室主管

 Approved by: Jeewah

 签 发 Lv Jie Hua, Jeewah 吕杰华  
 Technical Director 技术总监



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**Test Method:**

测试方法:

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1	Arsenic 砷	EPA 3052, ICP-OES	Diarsenic pentaoxide **, 五氧化二砷**, Diarsenic trioxide **, 三氧化二砷**, Triethyl arsenate **, 三乙基砷酸酯**, Lead hydrogen arsenate **, 砷酸氢铅**, Arsenic acid**, 砷酸**, Calcium arsenate**, 砷酸钙**, Trilead diarsenate**, 砷酸铅**
2	Lead 铅	EPA 3052, ICP-OES	Lead hydrogen arsenate **, 砷酸氢铅**, Lead chromate **, 铬酸铅**, Lead sulfochromate yellow (C.I.Pigment Yellow 34)**, 铬酸铅黄 (C.I.颜料黄 34) **, Lead chromate molybdate sulphate red (C.I. Pigment Red 104)**, 钼铬酸铅红 (C.I.颜料红 104) **, Trilead diarsenate**, 砷酸铅**, Lead diazide Lead azide **, 叠氮化铅**, Lead styphnate**, 2,4,6-三硝基苯二酚铅(收敛酸铅)**, Lead dipicrate**, 苦味酸铅**, Lead(II) bis(methanesulfonate) **, 甲基磺酸铅**, Acetic acid, lead salt, basic**, 碱式乙酸铅**, Basic lead carbonate (trilead 碱式碳酸铅**, bis(carbonate)dihydroxide) **, 碱式硫酸铅**,



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2	Lead 铅	EPA 3052, ICP-OES	Lead oxide sulfate (basic lead sulfate) ** [1,2-苯二羧酸根合]二氧化三铅**, [Phthalato(2-)]dioxotrilead (dibasic lead phthalate) ** 双(十八酸基)二氧代三铅**, Dioxobis(stearato)trilead** C16-18-脂肪酸铅盐**, Fatty acids, C16-18, lead salts** 四氟硼酸铅**, Lead bis(tetrafluoroborate) ** 氨基氰铅盐**, Lead cyanamate**, Lead dinitrate** 硝酸铅**, Lead oxide (lead monoxide) ** 氧化铅**, Lead tetroxide (orange lead) ** 四氧化三铅, 铅丹**, Lead titanium trioxide** 钛酸铅**, Lead Titanium Zirconium Oxide** 钛酸铅锆**, Pentalead tetraoxide sulphate** 氧化铅与硫酸铅的复合物**, Pyrochlore, antimony lead yellow** C.I.颜料黄 41**, Silicic acid, barium salt, lead-doped** 铅掺杂的硅钡酸盐**, Silicic acid, lead salt** 硅酸铅**, Sulfurous acid, lead salt, dibasic** 亚硫酸铅 (II) **, Tetraethyllead** 四乙基铅**, Tetralead trioxide sulphate** 三碱式硫酸铅**, Trilead dioxide phosphonate** 磷酸氧化铅**, Lead di(acetate)** 乙酸铅**

SHENZHEN AOV TESTING TECHNOLOGY CO., LTD



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3	Molybdenum 钼	EPA 3052, ICP-OES	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)** 钼铬酸铅红 (C.I.颜料红 104) **
4	Hexavalent Chromium 六价铬	IEC 62321, Annex B or Annex C , UV-VIS IEC 62321 附件 B 或 附件 C, UV-VIS	<p>Sodium dichromate **, 重铬酸钠**, Sodium chromate**, 铬酸钠**, Potassium chromate**, 铬酸钾**, Ammonium dichromate**, 重铬酸铵**, Potassium dichromate**, 重铬酸钾**, Chromium trioxide**, 三氧化铬**, Acids generated from chromium trioxide and their oligomers: 铬酸及其低聚物产生的酸类: Chromic acid**, 铬酸**, Dichromic acid**, 重铬酸**, Oligomers of chromic acid and dichromic acid**, 铬酸和重铬酸的低聚物**, Strontium chromate**, 铬酸锶**, Lead chromate **, 铬酸铅**, Lead sulfochromate yellow (C.I.Pigment Yellow 34)**, 铬酸铅黄 (C.I.颜料黄 34) **, Lead chromate molybdate sulphate red (C.I. Pigment Red 104)**, 钼铬酸铅红 (C.I.颜料红 104) ** Dichromium tris(chromate)**, 铬酸铬**, Potassium hydroxyoctaoxidizincatedi- chromate**, 氢氧化铬酸锌钾**, Pentazinc chromate octahydroxide**, 锌黄(C.I.颜料黄 36)**</p>
5	Strontium 锶	EPA 3052, ICP-OES	Strontium chromate**, 铬酸锶**
6	Cobalt 钴	EPA 3052, ICP-OES	<p>Cobalt dichloride **, 氯化钴**, Cobalt(II) sulphate**, 硫酸钴**, Cobalt(II) dinitrate**, 硝酸钴**, Cobalt(II) carbonate**, 碳酸钴**, Cobalt(II) diacetate**, 醋酸钴**</p>



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7	Boron 硼	EPA 3052, ICP-OES	Boric acid**, 硼酸**, Disodium tetraborate, anhydrous**, 四硼酸钠, 无水**, Tetraboron disodium heptaoxide, hydrate** 水合硼酸钠** Diboron trioxide** 三氧化二硼** Lead bis(tetrafluoroborate) ** 四氟硼酸铅**,
8	Silicon 硅	EPA 3052, ICP-OES	Aluminosilicate Refractory Ceramic Fibres (RCF)**, 硅酸铝耐火陶瓷纤维(RCF)**, Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)**, 氧化锆硅酸铝耐火陶瓷纤维(Zr-RCF)** Silicic acid, barium salt, lead-doped** 硅酸铅**, Silicic acid, lead salt** 铅掺杂的硅钡酸盐**,
9	Aluminum 铝	EPA 3052, ICP-OES	Aluminosilicate Refractory Ceramic Fibres (RCF)**, 硅酸铝耐火陶瓷纤维(RCF)**, Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)**, 氧化锆硅酸铝耐火陶瓷纤维(Zr-RCF)**
10	Zirconium 锆	EPA 3052, ICP-OES	Aluminosilicate Refractory Ceramic Fibres (RCF)**, 硅酸铝耐火陶瓷纤维(RCF)**, Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)**, 氧化锆硅酸铝耐火陶瓷纤维(Zr-RCF)** Lead Titanium Zirconium Oxide** 钛酸铅锆**,



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11	Cadmium 镉	EPA 3052, ICP-OES	Cadmium, Cadmium oxide** 镉, 氧化镉** Cadmium sulphide** 硫化镉**
12	Bis(tributyltin)oxide (TBTO) 三丁基氧化锡(TBTO)	EN ISO 17353, GC-MS	Bis(tributyltin)oxide (TBTO) 三丁基氧化锡(TBTO)
13	4,4'-Diaminodiphenylmethane (MDA) 4,4'-二氨基二苯基甲烷(MDA)	EPA 3540C, GC-MS	4,4'-Diaminodiphenylmethane (MDA) 4,4'-二氨基二苯基甲烷(MDA)
14	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene), 二甲苯麝香	EPA 3540C, GC-MS	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene), 二甲苯麝香
15	Dibutyl phthalate (DBP) 邻苯二甲酸二丁酯(DBP)	EPA 3540C, GC-MS	Dibutyl phthalate (DBP) 邻苯二甲酸二丁酯(DBP)
16	Benzyl butyl phthalate (BBP) 邻苯二甲酸丁苄酯(BBP)	EPA 3540C, GC-MS	Benzyl butyl phthalate (BBP) 邻苯二甲酸丁苄酯(BBP)
17	Bis (2-ethylhexyl)phthalate(DEHP) 邻苯二甲酸二(2-乙基己基) 酯(DEHP)	EPA 3540C, GC-MS	Bis (2-ethylhexyl)phthalate (DEHP) 邻苯二甲酸二(2-乙基己基) 酯(DEHP)
18	Diisobutyl phthalate (DIBP) 邻苯二甲酸二异丁酯 (DIBP)	EPA 3540C, GC-MS	Diisobutyl phthalate (DIBP) 邻苯二甲酸二异丁酯 (DIBP)
19	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)* 邻苯二甲酸二(C7-11支链与直链)烷基酯 (DHNUP)*	EPA 3540C, GC-MS	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)* 邻苯二甲酸二(C7-11支链与直链)烷基酯 (DHNUP)*
20	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) 邻苯二甲酸二(C6-8支链)烷基酯, 富C7 (DIHP)	EPA 3540C, GC-MS	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) 邻苯二甲酸二(C6-8支链)烷基酯, 富C7 (DIHP)
21	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified 六溴环十二烷及其主要同分异构体(HBCDD)	EPA 3540C, GC-MS	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified 六溴环十二烷及其主要同分异构体(HBCDD)
22	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) 短链氯化石蜡 (SCCP)	EPA 3540C, GC-MS	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) 短链氯化石蜡 (SCCP)
23	Anthracene 蒽	ZEK 01.4-08, GC-MS	Anthracene 蒽



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24	Anthracene oil 蒽油	ZEK 01.4-08, GC-MS	Anthracene oil 蒽油
25	Anthracene oil, anthracene paste, distn. lights 蒽油、蒽糊、轻油	ZEK 01.4-08, GC-MS	Anthracene oil, anthracene paste, distn. lights 蒽油、蒽糊、轻油
26	Anthracene oil, anthracene paste, anthracene fraction 蒽油、蒽糊、蒽馏分	ZEK 01.4-08, GC-MS	Anthracene oil, anthracene paste, anthracene fraction 蒽油、蒽糊、蒽馏分
27	Anthracene oil, anthracene-low 蒽油、少蒽	ZEK 01.4-08, GC-MS	Anthracene oil, anthracene-low 蒽油、少蒽
28	Anthracene oil, anthracene paste 蒽油、蒽糊	ZEK 01.4-08, GC-MS	Anthracene oil, anthracene paste 蒽油、蒽糊
29	Pitch, coal tar, high temp. 高温煤沥青	Distillation /蒸馏法	Pitch, coal tar, high temp. 高温煤沥青
30	Acrylamide 丙烯酰胺	EPA 3540C, HPLC	Acrylamide 丙烯酰胺
31	2,4-Dinitrotoluene 2,4-二硝基甲苯	EPA 3540C, GC-MS	2,4-Dinitrotoluene 2,4-二硝基甲苯
32	Tris(2-chloroethyl)phosphate 三(2-氯乙基)磷酸盐	EPA 3540C, GC-MS	Tris(2-chloroethyl)phosphate 三(2-氯乙基)磷酸盐
33	Trichloroethylene 三氯乙烯	EPA 3540C, GC-FID	Trichloroethylene 三氯乙烯
34	2-Methoxyethanol 乙二醇单甲醚	EPA8260C, HS-GC-FID	2-Methoxyethanol 乙二醇单甲醚
35	2-Ethoxyethanol 乙二醇单乙醚	EPA8260C, HS-GC-FID	2-Ethoxyethanol 乙二醇单乙醚
36	2-Ethoxyethyl acetate 乙二醇乙醚乙酸酯	EPA8260C, HS-GC-FID	2-Ethoxyethyl acetate 乙二醇乙醚乙酸酯
37	Hydrazine 肼	EPA8260C, HS-GC-FID	Hydrazine 肼
38	1-Methyl-2-pyrrolidone N-甲基吡咯烷酮	EPA 3540C, GC-FID	1-Methyl-2-pyrrolidone N-甲基吡咯烷酮
39	1,2,3-Trichloropropane 1,2,3-三氯丙烷	EPA 3540C, GC-FID	1,2,3-Trichloropropane 1,2,3-三氯丙烷
40	Formaldehyde, oligomeric reaction products with aniline (technical MDA) 甲醛苯胺共聚物	EPA 3540C, HPLC	Formaldehyde, oligomeric reaction products with aniline (technical MDA) 甲醛苯胺共聚物



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41	Bis(2-methoxyethyl) phthalate (DMEP) 邻苯二甲酸二甲氧乙酯 (DMEP)	EPA 3540C, GC-MS	Bis(2-methoxyethyl) phthalate (DMEP) 邻苯二甲酸二甲氧乙酯 (DMEP)
42	2-Methoxyaniline; o-Anisidine 邻甲氧基苯胺	EPA 3540C, GC-MS	2-Methoxyaniline; o-Anisidine 邻甲氧基苯胺
43	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol) 对特辛基苯酚	EPA 3540C, HPLC	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol) 对特辛基苯酚
44	1,2-Dichloroethane 1,2-二氯乙烷	EPA 3540C, GC-FID	1,2-Dichloroethane 1,2-二氯乙烷
45	Bis(2-methoxyethyl) ether 双(2-甲氧基乙基)醚	EPA8260C,HS-GC-FID	Bis(2-methoxyethyl) ether 双(2-甲氧基乙基)醚
46	N,N-dimethylacetamide (DMAC) N,N-二甲基乙酰胺 (DMAC)	EPA 3540C, HPLC	N,N-dimethylacetamide (DMAC) N,N-二甲基乙酰胺 (DMAC)
47	2,2'-dichloro-4,4'-methylenedianiline (MOCA) 2,2'-二氯-4,4'-二氨基二苯基甲烷(MOCA)	EPA 3540C, GC-MS	2,2'-dichloro-4,4'-methylenedianiline (MOCA) 2,2'-二氯-4,4'-二氨基二苯基甲烷(MOCA)
48	Phenolphthalein 酚酞	EPA 3540C, HPLC	Phenolphthalein 酚酞
49	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme) 三甘醇二甲醚	EPA8260C,HS-GC-FID	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme) 三甘醇二甲醚
50	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) 1,2-二甲氧基乙烷	EPA8260C,HS-GC-FID	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) 1,2-二甲氧基乙烷
51	Formamide 甲酰胺	EPA 3540C, HPLC	Formamide 甲酰胺
52	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6 (1H,3H,5H)-trione) 1,3,5-三缩水甘油-S-三嗪三酮	EPA 3540C, HPLC	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4, 6(1H,3H,5H)-trione) 1,3,5-三缩水甘油-S-三嗪三酮
53	β-TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H, 3H,5H)-trione) 1,3,5-三(环氧乙烷基甲基)-1,3,5-三嗪 -2,4,6-(1H,3H,5H)-三酮立体异构体	EPA 3540C, HPLC	β-TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1 H,3H,5H)-trione) 1,3,5-三(环氧乙烷基甲基)-1,3,5-三嗪 -2,4,6-(1H,3H,5H)-三酮立体异构体



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54	4,4'-bis(dimethylamino) benzophenone (Michler's ketone) 4,4'-二(N,N-二甲氨基)二苯甲酮	EPA 3540C, HPLC	4,4'-bis(dimethylamino) benzophenone (Michler's ketone) 4,4'-二(N,N-二甲氨基)二苯甲酮
55	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base) N,N,N',N'-四甲基-4,4'-二氨基二苯甲烷	EPA 3540C, HPLC	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base) N,N,N',N'-四甲基-4,4'-二氨基二苯甲烷
56	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-yliden e]dimethylammonium chloride (C.I. Basic Violet 3) 碱性紫3	EPA 3540C, HPLC	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylide ne]dimethylammonium chloride (C.I. Basic Violet 3) 碱性紫3
57	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)ph enyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) 碱性蓝26	EPA 3540C, HPLC	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)p henyl]methylene]cyclohexa-2,5-dien-1-ylide ne] dimethylammonium chloride (C.I. Basic Blue 26) 碱性蓝26
58	$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) 溶剂蓝4	EPA 3540C, HPLC	$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. . Solvent Blue 4) 溶剂蓝4
59	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol $\alpha,\alpha$ -二[(二甲氨基)苯基]-4-甲氨基苯甲醇	EPA 3540C, HPLC	4,4'-bis(dimethylamino)-4''-(methylamino)trit yl alcohol $\alpha,\alpha$ -二[(二甲氨基)苯基]-4-甲氨基苯甲醇
60	Bis(pentabromophenyl) ether (DecaBDE) 十溴联苯醚	EPA 3540C, GC-MS	Bis(pentabromophenyl) ether (DecaBDE) 十溴联苯醚
61	Pentacosafuorotridecanoic acid 全氟十三酸	EPA 3540C, LC-MS	Pentacosafuorotridecanoic acid 全氟十三酸
62	Tricosafuorododecanoic acid 全氟十二酸	EPA 3540C, LC-MS	Tricosafuorododecanoic acid 全氟十二酸
63	Henicosafuoroundecanoic acid 全氟十一烷酸	EPA 3540C, LC-MS	Henicosafuoroundecanoic acid 全氟十一烷酸
64	Heptacosafuorotetradecanoic acid 全氟十四酸	EPA 3540C, LC-MS	Heptacosafuorotetradecanoic acid 全氟十四酸



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Code 序号	Test Item 测试项目	Pretreatment Method/ Measuring Instrument 前处理方法/测试仪器	SVHC Item SVHC 项目
65	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated -covering well-defined substances and UVCB substances, polymers and homologues 对特辛基苯酚乙氧基醚（包括界定明确的物质以及 UVCB 物质、聚合物和同系物）	EPA 3540C, HPLC	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated -covering well-defined substances and UVCB substances, polymers and homologues 对特辛基苯酚乙氧基醚（包括界定明确的物质以及 UVCB 物质、聚合物和同系物）
66	4-Nonylphenol, branched and linear -substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof 4-壬基苯酚，支链和直链	EPA 3540C, HPLC	4-Nonylphenol, branched and linear -substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof 4-壬基苯酚，支链和直链
67	Diazeno-1,2-dicarboxamide (C,C'-azodi(formamide)) 偶氮二甲酰胺	EPA 3540C, HPLC	Diazeno-1,2-dicarboxamide (C,C'-azodi(formamide)) 偶氮二甲酰胺
68	Cyclohexane-1,2-dicarboxylic anhydride(Hexahydrophthalic anhydride - HHPA) 六氢邻苯二甲酸酐	EPA 3540C, GC-MS	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA) 六氢邻苯二甲酸酐
69	Hexahydromethylphthalic anhy, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride 甲基六氢苯酐、4-甲基六氢苯酐、 甲基六氢化邻苯二甲酸酐、3-甲基 六氢苯二甲酯酐	EPA 3540C, GC-MS	Hexahydromethylphthalic anhy, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride 甲基六氢苯酐、4-甲基六氢苯酐、 甲基六氢化邻苯二甲酸酐、3-甲基 六氢苯二甲酯酐
70	Methoxy acetic acid 甲氧基乙酸	EPA 3540C, LC-MS	Methoxy acetic acid 甲氧基乙酸
71	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear 支链和直链 1, 2-苯二羧二戊酯	EPA 3540C, GC-MS	1,2-Benzenedicarboxylic acid,dipentylester, branched and linear 支链和直链 1, 2-苯二羧二戊酯
72	Diisopentylphthalate (DIPP) 邻苯二甲酸二异戊酯(DIPP)	EPA 3540C, GC-MS	Diisopentylphthalate (DIPP) 邻苯二甲酸二异戊酯(DIPP)
73	N-pentyl-isopentylphthalate 邻苯二甲酸正戊基异戊基酯	EPA 3540C, GC-MS	N-pentyl-isopentylphthalate 邻苯二甲酸正戊基异戊基酯
74	1,2-Diethoxyethane 乙二醇二乙醚	EPA8260C,HS-GC-FID	1,2-Diethoxyethane 乙二醇二乙醚



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Code 序号	Test Item 测试项目	Pretreatment Method/ Measuring Instrument 前处理方法/测试仪器	SVHC Item SVHC 项目
75	N,N-dimethylformamide; dimethyl formamide N,N-二甲基甲酰胺	EPA 3540C, HPLC	N,N-dimethylformamide; dimethyl formamide N,N-二甲基甲酰胺
76	Dibutyltin dichloride (DBTC) 二丁基二氯化锡	EN ISO 17353, GC-MS	Dibutyltin dichloride (DBTC) 二丁基二氯化锡
77	Furan 呋喃	EPA 3540C, GC-FID	Furan 呋喃
78	Propylene oxide; 1,2-epoxypropane; methyloxirane 环氧丙烷	EPA 3540C, GC-FID	Propylene oxide; 1,2-epoxypropane; methyloxirane 环氧丙烷
79	Diethyl sulphate 硫酸二乙酯	EPA 3540C, GC-FID	Diethyl sulphate 硫酸二乙酯
80	Dimethyl sulphate 硫酸二甲酯	EPA 3540C, GC-FID	Dimethyl sulphate 硫酸二甲酯
81	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine 3-乙基-2-甲基-2-(3-甲基丁基)-1,3-恶唑烷	EPA 3540C, GC-MS	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine 3-乙基-2-甲基-2-(3-甲基丁基)-1,3-恶唑烷
82	Dinoseb 地乐酚 (二硝丁酚)	EPA 3540C, HPLC	Dinoseb 地乐酚 (二硝丁酚)
83	4,4'-methylenedi-o-toluidine 4,4'-二氨基-3,3'-二甲基二苯甲烷	EPA 3540C, GC-MS	4,4'-methylenedi-o-toluidine 4,4'-二氨基-3,3'-二甲基二苯甲烷
84	4,4'-oxydianiline and its salts 4,4'-二氨基二苯醚	EPA 3540C, GC-MS	4,4'-oxydianiline and its salts 4,4'-二氨基二苯醚
85	4-Aminoazobenzene; 4-Phenylazoaniline 4-氨基偶氮苯	EPA 3540C, GC-MS	4-Aminoazobenzene; 4-Phenylazoaniline 4-氨基偶氮苯
86	4-methyl-m-phenylenediamine (2,4-toluene-diamine) 2,4-二氨基甲苯	EPA 3540C, GC-MS	4-methyl-m-phenylenediamine (2,4-toluene-diamine) 2,4-二氨基甲苯
87	6-methoxy-m-toluidine (p-cresidine) 2-甲氧基-5-甲基苯胺	EPA 3540C, GC-MS	6-methoxy-m-toluidine (p-cresidine) 2-甲氧基-5-甲基苯胺
88	Biphenyl-4-ylamine 4-氨基联苯	EPA 3540C, GC-MS	Biphenyl-4-ylamine 4-氨基联苯
89	o-aminoazotoluene 邻氨基偶氮甲苯	EPA 3540C, GC-MS	o-aminoazotoluene 邻氨基偶氮甲苯
90	o-Toluidine; 2-Aminotoluene 邻甲基苯胺	EPA 3540C, GC-MS	o-Toluidine; 2-Aminotoluene 邻甲基苯胺



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Code 序号	Test Item 测试项目	Pretreatment Method/ Measuring Instrument 前处理方法/测试仪器	SVHC Item SVHC 项目
91	N-methylacetamide N-甲基乙酰胺	EPA 3540C, HPLC	N-methylacetamide N-甲基乙酰胺
92	1-bromopropane; n-propyl bromide 溴代正丙烷	EPA 3540C, GC-FID	1-bromopropane; n-propyl bromide 溴代正丙烷
93	Dipentyl phthalate (DPP) 邻苯二甲酸二正戊酯(DPP)	EPA 3540C, GC-MS	Dipentyl phthalate(DPP) 邻苯二甲酸二正戊酯(DPP)
94	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol , ethoxylated covering UVCB- and well-defined substances, polymers and homologues] 4-壬基酚乙氧基醚, 直链或支链	EPA 3540C, HPLC	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol , ethoxylated covering UVCB- and well-defined substances, polymers and homologues] 4-壬基酚乙氧基醚, 直链或支链
95	Ammonium pentadecafluorooctanoate (APFO) 全氟辛酸铵(APFO)	EPA 3540C, LC-MS	Ammonium pentadecafluorooctanoate (APFO) 全氟辛酸铵(APFO)
96	Pentadecafluorooctanoic acid (PFOA) 全氟辛酸(PFOA)	EPA 3540C, LC-MS	Pentadecafluorooctanoic acid (PFOA) 全氟辛酸(PFOA)
97	Dihexyl phthalate (DNHP) 邻苯二甲酸二己酯(DNHP)	EPA 3540C, GC-MS	Dihexyl phthalate (DNHP) 邻苯二甲酸二己酯(DNHP)
98	Direct Red 28 直接红28	EPA 3540C, LC-MS	Direct Red 28 直接红28
99	Direct Black 38 直接黑 38	EPA 3540C, LC-MS	Direct Black 38 直接黑 38
100	2-imidazoline-2-thiol 1,2-亚乙基硫脒	EPA 3540C, LC-MS	2-imidazoline-2-thiol 1,2-亚乙基硫脒
101	Trixylyl phosphate 磷酸三(二甲苯)酯	EPA 3540C, GC-MS	Trixylyl phosphate 磷酸三(二甲苯)酯



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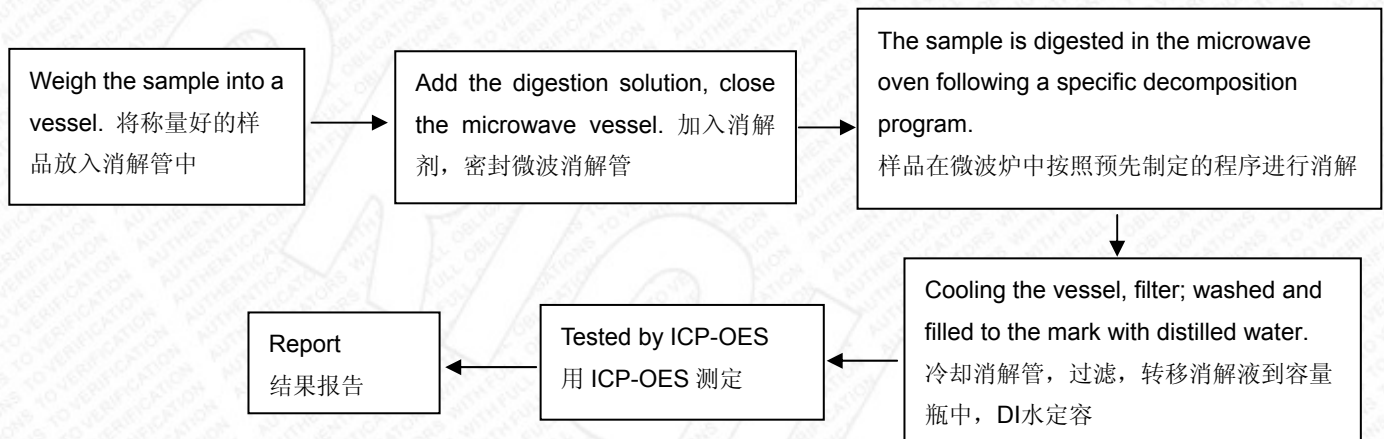
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## Test Flow:

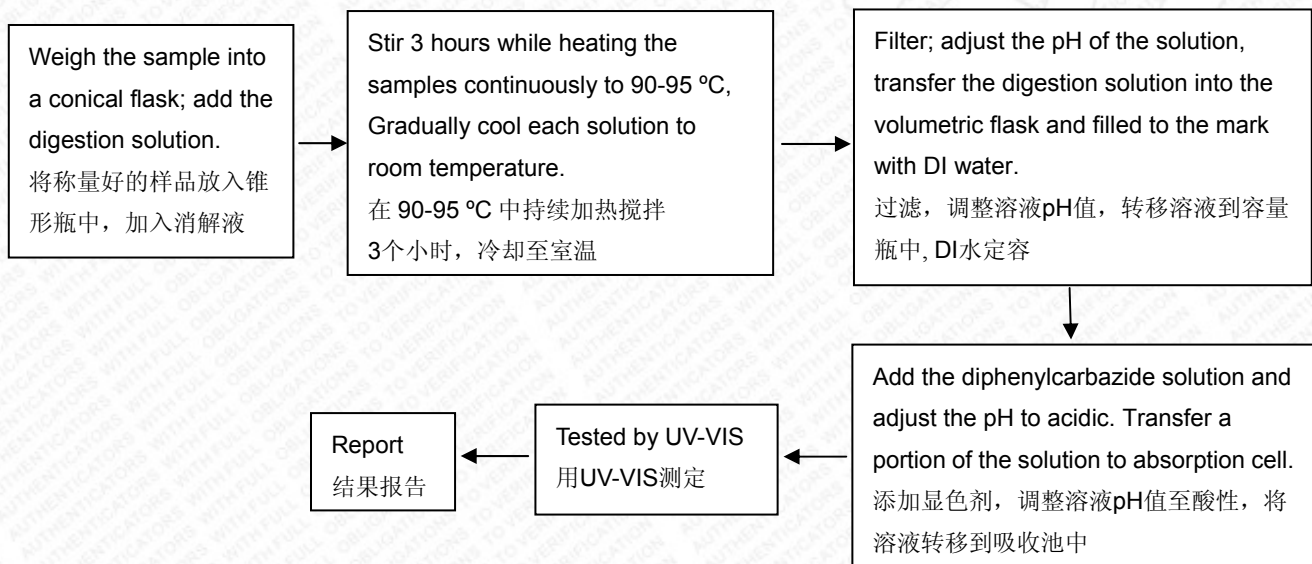
### 测试流程:

1. To Determine Lead, Arsenic, Cobalt, Silicon, Aluminum, Zirconium, Molybdenum, Boron, Strontium, Cadmium Content:

测定砷、铅、钴、硅、铝、钼、钨、硼、锶、镉的含量:



2. To Determine Hexavalent Chromium Content (for Polymer) (测定六价铬含量) (聚合物):





# TEST REPORT

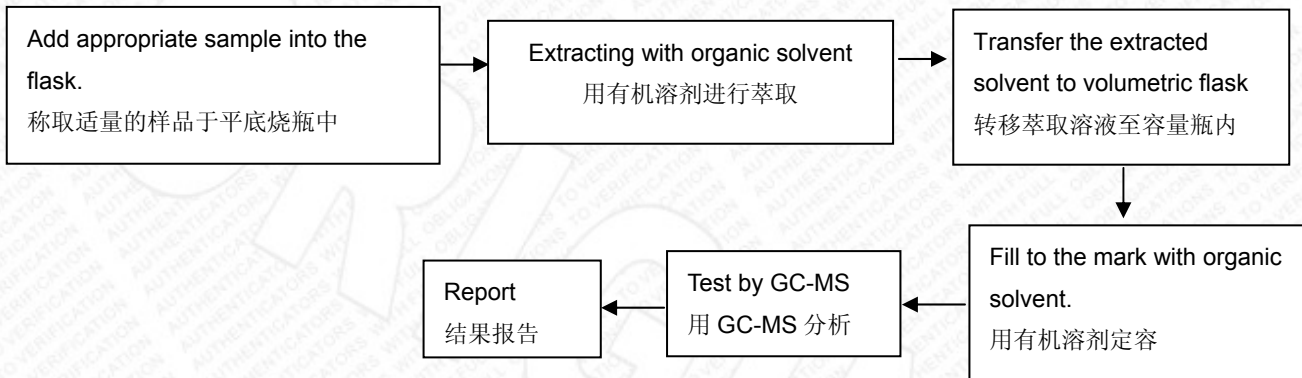
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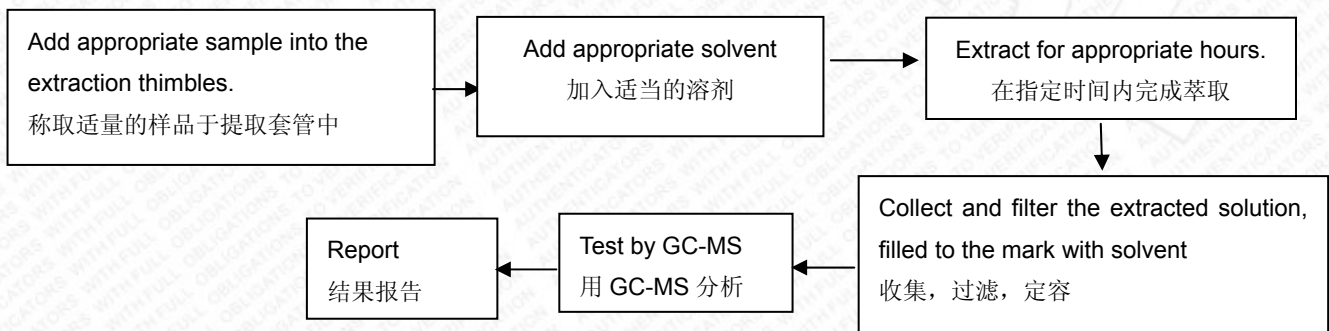
3. To Determine Anthracene; Anthracene oil; Anthracene oil, anthracene paste, distn. Lights; Anthracene oil, anthracene paste, anthracene fraction; Anthracene oil, anthracene-low; Anthracene oil, anthracene paste Content:

测定蒽、蒽油、蒽油、蒽糊、轻油、蒽油、蒽糊、蒸馏分、蒽油、少蒽、蒽油、蒽糊的含量



4. To Determine DEHP, DBP, BBP, DIBP, DHNUP, DIHP, DMEP, DIPP, DNHP, N-pentyl-isopentylphthalate, 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear, Dipentyl phthalate (DPP) Content:

测定DEHP、DBP、BBP、DIBP、DHNUP、DIHP、DMEP、DIPP、DNHP、支链和直链1, 2-苯二羧二戊酯、邻苯二甲酸正戊基异戊基酯、邻苯二甲酸二正戊酯的含量





# TEST REPORT

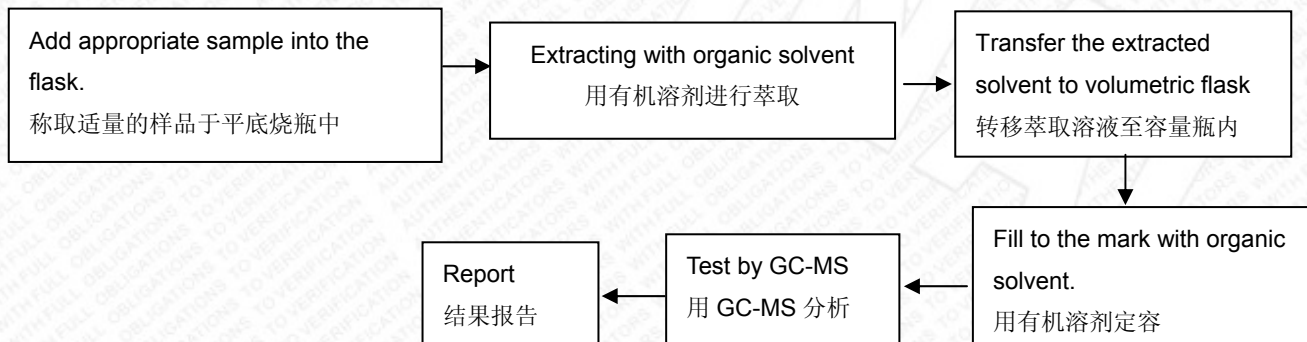
NO.: A001R131129042001A1

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5. To Determine 4,4'-Diaminodiphenylmethane (MDA), 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene), Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified, Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins), 2,4-Dinitrotoluene, Tris(2-chloroethyl)phosphate, 2-Methoxyaniline; o-Anisidine, 2,2'-dichloro-4,4'-methylenedianiline (MOCA), Bis(pentabromophenyl) ether (DecaBDE), anhydride(Hexahydrophthalic anhydride - HHPA), Hexahydromethylphthalic anhy, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride, 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine, 4,4'-methylenedi-o-toluidine, 4,4'-oxydianiline and its salts, 4-Aminoazobenzene; 4-Phenylazoaniline, 4-methyl-m-phenylenediamine (2,4-toluene-diamine), 6-methoxy-m-toluidine (p-cresidine), Biphenyl-4-ylamine, o-aminoazotoluene, o-Toluidine; 2-Aminotoluene, Trixylyl phosphate Content:

测定4,4'-二氨基二苯基甲烷(MDA), 二甲苯麝香, HBCDD, 短链氯化石蜡(SCCP), 2,4-二硝基甲苯, 三(2-氯乙基)磷酸盐, 邻甲氧基苯胺, 2,2'-二氯-4,4'-二氨基二苯基甲烷(MOCA), 十溴联苯醚, 六氢邻苯二甲酸酐, 甲基六氢苯酐、4-甲基六氢苯酐、甲基六氢化邻苯二甲酸酐、3-甲基六氢苯二甲酯酐, 3-乙基-2-甲基-2-(3-甲基丁基)-1,3-恶唑烷, 4,4'-二氨基-3,3'-二甲基二苯基甲烷, 4,4'-二氨基二苯醚, 4-氨基偶氮苯, 2,4-二氨基甲苯, 2-甲氧基-5-甲基苯胺, 4-氨基联苯, 邻氨基偶氮甲苯, 邻甲基苯胺, 磷酸三(二甲苯)酯的含量





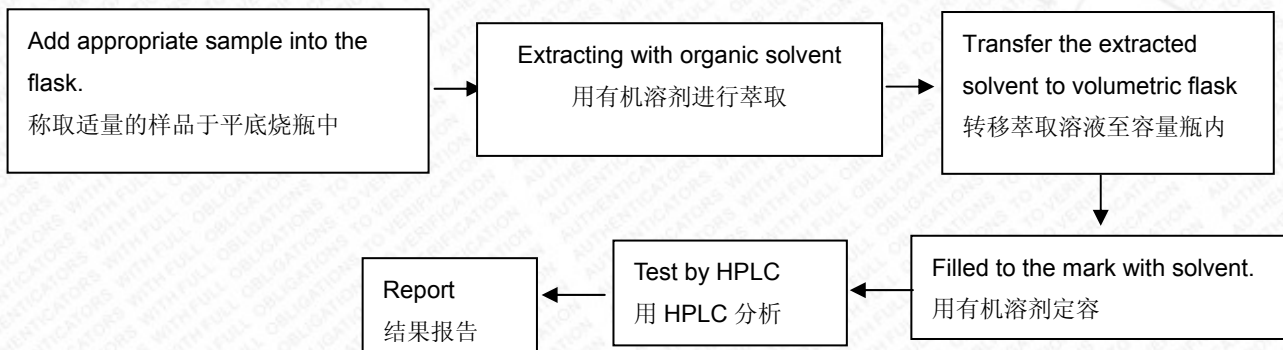
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6. To Determine Acrylamide, Formaldehyde, oligomeric reaction products with aniline (technical MDA), 4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol), N,N-dimethylacetamide (DMAC), Phenolphthalein, Formamide, TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione),  $\beta$ -TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione), 4,4'-bis(dimethylamino) benzophenone (Michler's ketone), N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base), Basic Violet 3, Basic Blue 26, Solvent Blue 4, 4,4'-bis(dimethylamino)-4''-(methylamino) trityl alcohol, 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated -covering well-defined substances and UVCB substances, polymers and homologues, 4-Nonylphenol, branched and linear -substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof, Diazene-1,2-dicarboxamide(C,C'-azodi(formamide)), N,N-dimethylformamide; dimethyl formamide, Dinoseb, N-methylacetamide、4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number r of 9 covalently bound in position 4 to phenol , ethoxylated coveringUVCB- and well-defined substances, polymers and homologues]、2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)、2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)、2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)、2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) Content: 测定丙烯酸胺, 甲醛苯胺共聚物, 对特辛基苯酚, N,N-二甲基乙酰胺, 酚酞, 甲酰胺, 1,3,5-三缩水甘油-S-三嗪三酮, 1,3,5-三(环氧乙烷基甲基)-1,3,5-三嗪-2,4,6-(1H,3H,5H)-三酮立体异构体, 4,4'-二(N,N-二甲氨基)二苯甲酮, N,N,N',N'-四甲基-4,4'-二氨基二苯甲烷, 碱性紫 3, 碱性蓝 26, 溶剂蓝 4,  $\alpha,\alpha$ -二[(二甲氨基)苯基]-4-甲氨基苯甲醇, 对特辛基苯酚乙氧基醚(包括界定明确的物质以及 UVCB 物质、聚合物和同系物), 4-壬基苯酚, 支链和直链, 偶氮二甲酰胺, N,N-二甲基甲酰胺, 地乐酚(二硝丁酚), N-甲基乙酰胺, 4-壬基酚乙氧基醚, 直链或支链、2-(2'-羟基-3'-异丁基-5'-叔丁基苯基)苯并三唑(UV-350)、紫外线吸收剂(UV-328)、紫外线吸收剂(UV-327)、紫外线吸收剂(UV-320)的含量





# TEST REPORT

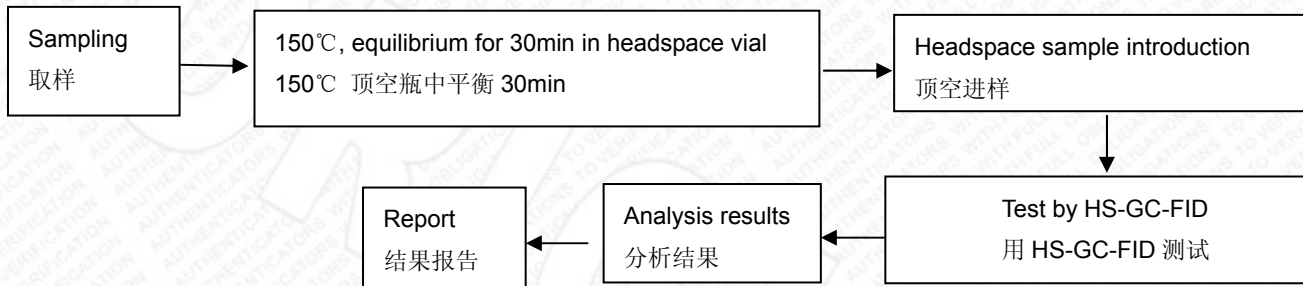
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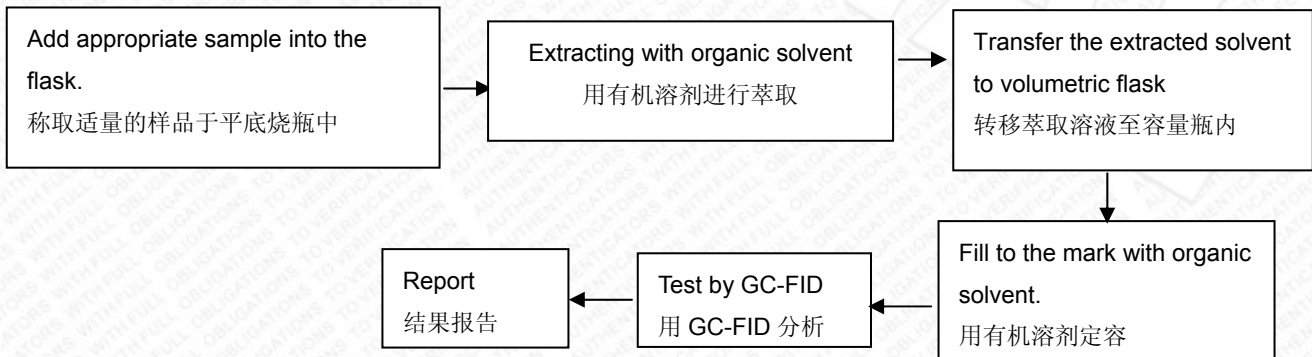
7. To Determine 2-Methoxyethanol, 2-Ethoxyethanol, 2-Ethoxyethyl acetate, Hydrazine, Bis(2-methoxyethyl) ether, 1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme), 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME), 1,2-Diethoxyethane Content:

测定乙二醇单甲醚, 乙二醇单乙醚, 乙二醇乙醚乙酸酯, 肼, 双(2-甲氧基乙基)醚, 三甘醇二甲醚, 1,2-二甲氧基乙烷, 乙二醇二乙醚的含量



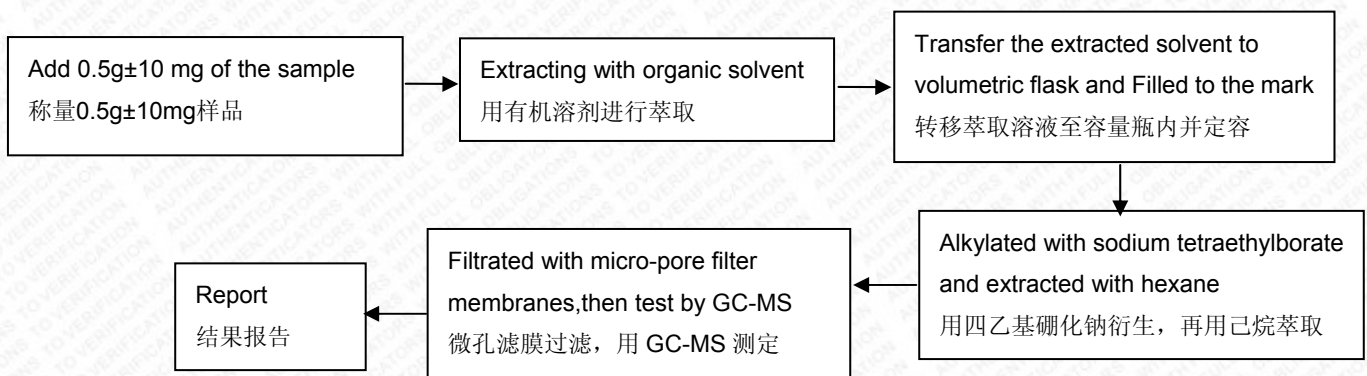
8. To Determine Trichloroethylene, 1-Methyl-2-pyrrolidone, 1,2,3-Trichloropropane, 1,2-Dichloroethane, Furan, Propylene oxide; 1,2-epoxypropane;methyloxirane, Diethyl sulphate, Dimethyl sulphate, 1-bromopropane; n-propyl bromide Content:

测定三氯乙烯, N-甲基吡咯烷酮, 1,2,3-三氯丙烷, 1,2-二氯乙烷, 呋喃, 环氧丙烷, 硫酸二乙酯, 硫酸二甲酯, 溴代正丙烷的含量



9. To Determine Bis(tributyltin)oxide (TBTO), Dibutyltin dichloride (DBT) Content:

测定三丁基氧化锡(TBTO), 二丁基二氯化锡的含量





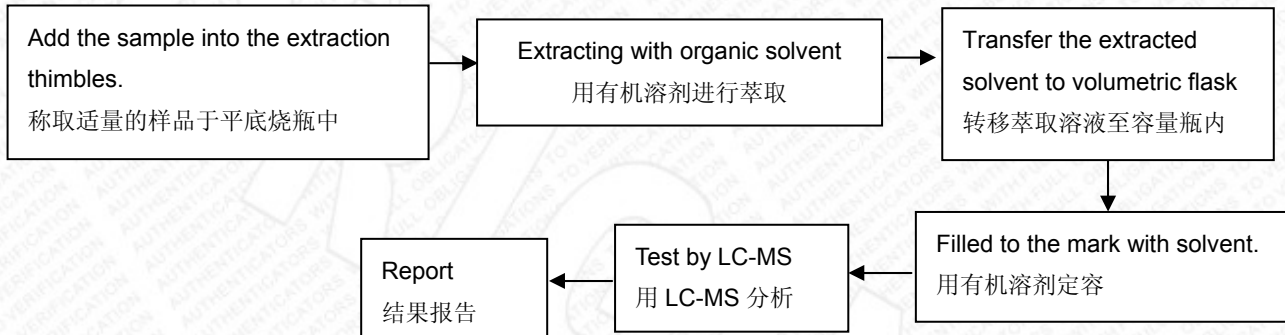
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10. To Determine Pentacosfluorotridecanoic acid, Tricosfluorododecanoic acid, Henicosfluoroundecanoic acid, Heptacosfluorotetradecanoic acid, Methoxy acetic acid、Ammonium pentadecafluorooctanoate (APFO)、Pentadecafluorooctanoic acid (PFOA), Direct Red 28, Direct Black 38, 2-imidazoline-2-thiol. Content: 测定全氟十三酸, 全氟十二酸, 全氟十一烷酸, 全氟十四酸, 甲氧基乙酸、全氟辛酸铵(APFO)、全氟辛酸(PFOA), 直接红 28, 直接黑 38, 1,2-亚乙基硫脲的含量



## Report Results:

### 报告结果:

The first fifteen Substances of Very High Concern (Released in Oct, 2008)

第一批15种SVHC (2008年10月公布)

Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
1	Bis(tributyltin)oxide (TBTO) 三丁基氧化锡(TBTO)	56-35-9	200-268-0	0.020	N.D.
2	Diarsenic pentaoxide** 五氧化二砷**	1303-28-2	215-116-9	0.020	N.D.
3	Diarsenic trioxide** 三氧化二砷**	1327-53-3	215-481-4	0.020	N.D.
4	Triethyl arsenate** 三乙基砷酸酯**	15606-95-8	427-700-2	0.020	N.D.
5	Lead hydrogen arsenate** 砷酸氢铅**	7784-40-9	232-064-2	0.020	N.D.
6	Cobalt dichloride** 氯化钴**	7646-79-9	231-589-4	0.020	N.D.
7	Sodium dichromate ** 重铬酸钠**	7789-12-0, 10588-01-9	234-190-3	0.020	N.D.
8	Anthracene 蒽	120-12-7	204-371-1	0.020	N.D.
9	4,4'-Diaminodiphenylmethane (MDA) 4,4'-二氨基二苯基甲烷(MDA)	101-77-9	202-974-4	0.020	N.D.
10	Dibutyl phthalate (DBP) 邻苯二甲酸二丁酯 (DBP)	84-74-2	201-557-4	0.020	N.D.



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Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
11	Benzyl butyl phthalate (BBP) 邻苯二甲酸丁苄酯(BBP)	85-68-7	201-622-7	0.020	N.D.
12	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene) 二甲苯麝香	81-15-2	201-329-4	0.020	N.D.
13	Bis (2-ethylhexyl)phthalate (DEHP) 邻苯二甲酸二(2-乙基己基)酯(DEHP)	117-81-7	204-211-0	0.020	N.D.
14	Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified 六溴环十二烷及其主要同分异构体(HBCDD)	25637-99-4, 3194-55-6 (134237-50-6, 134237-51-7, 134237-52-8)	247-148-4, 221-695-9	0.020	N.D.
15	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) 短链氯化石蜡 (SCCP)	85535-84-8	287-476-5	0.020	N.D.

The second thirteen Substances of Very High Concern (Released in Jan, 2010 and Mar, 2010)

第二批13种SVHC (2010年1月和3月公布)

Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
16	Anthracene oil 蒽油	90640-80-5	292-602-7	0.020	N.D.
17	Anthracene oil, anthracene paste, distn. lights 蒽油、蒽糊、轻油	91995-17-4	295-278-5	0.020	N.D.
18	Anthracene oil, anthracene paste, anthracene fraction 蒽油、蒽糊、蒽馏分	91995-15-2	295-275-9	0.020	N.D.
19	Anthracene oil, anthracene-low 蒽油、少蒽	90640-82-7	292-604-8	0.020	N.D.
20	Anthracene oil, anthracene paste 蒽油、蒽糊	90640-81-6	292-603-2	0.020	N.D.
21	Pitch, coal tar, high temp. 高温煤沥青	65996-93-2	266-028-2	0.020	N.D.



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Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
22	Acrylamide 丙烯酰胺	79-06-1	201-173-7	0.020	N.D.
23	2,4-Dinitrotoluene 2,4-二硝基甲苯	121-14-2	204-450-0	0.020	N.D.
24	Diisobutyl phthalate(DIBP) 邻苯二甲酸二异丁酯(DIBP)	84-69-5	201-553-2	0.020	N.D.
25	Lead chromate** 铬酸铅**	7758-97-6	231-846-0	0.020	N.D.
26	Lead chromate molybdate sulphate red (C.I. Pigment Red 104) ** 钼铬酸铅红 (C.I.颜料红 104) **	12656-85-8	235-759-9	0.020	N.D.
27	Lead sulfochromate yellow (C.I.Pigment Yellow 34) ** 铬酸铅黄 (C.I.颜料黄 34) **	1344-37-2	215-693-7	0.020	N.D.
28	Tris(2-chloroethyl)phosphate 三(2-氯乙基)磷酸盐	115-96-8	204-118-5	0.020	N.D.

The third eight Substances of Very High Concern (Released in Jun, 2010)

第三批 8 种 SVHC (2010 年 6 月公布)

Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
29	Trichloroethylene 三氯乙烯	79-01-6	201-167-4	0.020	N.D.
30	Boric acid** 硼酸**	10043-35-3/ 11113-50-1	233-139-2/ 234-343-4	0.020	N.D.
31	Disodium tetraborate, anhydrous** 四硼酸钠, 无水**	1330-43-4/ 12179-04-3/ 1303-96-4	215-540-4	0.020	N.D.
32	Tetraboron disodium heptaoxide, hydrate** 水合硼酸钠**	12267-73-1	235-541-3	0.020	N.D.
33	Sodium chromate** 铬酸钠**	7775-11-3	231-889-5	0.020	N.D.



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Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
34	Potassium chromate** 铬酸钾**	7789-00-6	232-140-5	0.020	N.D.
35	Ammonium dichromate** 重铬酸铵**	7789-09-5	232-143-1	0.020	N.D.
36	Potassium dichromate** 重铬酸钾**	7778-50-9	231-906-6	0.020	N.D.

The fourth eight Substances of Very High Concern (Released in Dec, 2010)

第四批 8 种 SVHC (2010 年 12 月公布)

Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)	
					A	
37	Cobalt(II) sulphate** 硫酸钴**	10124-43-3	233-334-2	0.020	N.D.	
38	Cobalt(II) dinitrate** 硝酸钴**	10141-05-6	233-402-1	0.020	N.D.	
39	Cobalt(II) carbonate** 碳酸钴**	513-79-1	208-169-4	0.020	N.D.	
40	Cobalt(II) diacetate** 醋酸钴**	71-48-7	200-755-8	0.020	N.D.	
41	2-Methoxyethanol 乙二醇单甲醚	109-86-4	203-713-7	0.020	N.D.	
42	2-Ethoxyethanol 乙二醇单乙醚	110-80-5	203-804-1	0.020	N.D.	
43	Chromium trioxide** 三氧化铬**	1333-82-0	215-607-8	0.020	N.D.	
44	Acids generated from chromium trioxide and their oligomers 铬酸及其低聚物产生的酸类:	Chromic acid** 铬酸**	7738-94-5	231-801-5	0.020	N.D.
		Dichromic acid** 重铬酸**	13530-68-2	236-881-5	0.020	N.D.
		Oligomers of chromic acid and dichromic acid** 铬酸和重铬酸的低聚物**	--	--	0.020	N.D.



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The fifth seven Substances of Very High Concern (Released in Jun, 2011)

第五批 7 种 SVHC (2011 年 6 月公布)

Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
45	2-Ethoxyethyl acetate 乙二醇乙醚乙酸酯	111-15-9	203-839-2	0.020	N.D.
46	Strontium chromate** 铬酸锶**	7789-06-2	232-142-6	0.020	N.D.
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters(DHNUP)* 邻苯二甲酸二(C7-11支链与直链)烷基酯(DHNUP)*	68515-42-4	271-084-6	0.020	N.D.
48	Hydrazine 肼	7803-57-8 302-01-2	206-114-9	0.020	N.D.
49	1-Methyl-2-pyrrolidone N-甲基吡咯烷酮	872-50-4	212-828-1	0.020	N.D.
50	1,2,3-Trichloropropane 1,2,3-三氯丙烷	96-18-4	202-486-1	0.020	N.D.
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters,C7-rich(DIHP) 邻苯二甲酸二(C6-8支链)烷基酯, 富C7(DIHP)	71888-89-6	276-158-1	0.020	N.D.

The sixth twenty Substances of Very High Concern (Released in Dec, 2011)

第六批 20 种 SVHC (2011 年 12 月公布)

Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
52	Dichromium tris(chromate)** 铬酸铬**	24613-89-6	246-356-2	0.020	N.D.
53	Potassium hydroxyoctaoxodizincatedichromate** 氢氧化铬酸锌钾**	11103-86-9	234-329-8	0.020	N.D.
54	Pentazinc chromate octahydroxide** 锌黄(C.I.颜料黄 36)**	49663-84-5	256-418-0	0.020	N.D.
55	Aluminosilicate Refractory Ceramic Fibres (RCF)** 硅酸铝耐火陶瓷纤维(RCF)**	-	-	0.020	N.D.



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Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
56	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)** 氧化锆硅酸铝耐火陶瓷纤维 (Zr-RCF)**	-	-	0.020	N.D.
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA) 甲醛苯胺共聚物	25214-70-4	500-036-1	0.020	N.D.
58	Bis(2-methoxyethyl) phthalate (DMEP) 邻苯二甲酸二甲氧乙酯 (DMEP)	117-82-8	204-212-6	0.020	N.D.
59	2-Methoxyaniline; o-Anisidine 邻甲氧基苯胺	90-04-0	201-963-1	0.020	N.D.
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol) 对特辛基苯酚	140-66-9	205-426-2	0.020	N.D.
61	1,2-Dichloroethane 1,2-二氯乙烷	107-06-2	203-458-1	0.020	N.D.
62	Bis(2-methoxyethyl) ether 双(2-甲氧基乙基)醚	111-96-6	203-924-4	0.020	N.D.
63	Arsenic acid** 砷酸**	7778-39-4	231-901-9	0.020	N.D.
64	Calcium arsenate** 砷酸钙**	7778-44-1	231-904-5	0.020	N.D.
65	Trilead diarsenate** 砷酸铅**	3687-31-8	222-979-5	0.020	N.D.
66	N,N-dimethylacetamide (DMAC) N,N-二甲基乙酰胺(DMAC)	127-19-5	204-826-4	0.020	N.D.
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA) 2,2'-二氯-4,4'-二氨基二苯基甲烷(MOCA)	101-14-4	202-918-9	0.020	N.D.
68	Phenolphthalein 酚酞	77-09-8	201-004-7	0.020	N.D.
69	Lead diazide Lead azide ** 叠氮化铅**	13424-46-9	236-542-1	0.020	N.D.
70	Lead styphnate** 2,4,6-三硝基苯二酚铅 (收敛酸铅)**	15245-44-0	239-290-0	0.020	N.D.
71	Lead dipicrate** 苦味酸铅**	6477-64-1	229-335-2	0.020	N.D.



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The seventh thirteen Substances of Very High Concern (Released in Jun, 2012)

第七批13种SVHC (2012年6月公布)

Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme) 三甘醇二甲醚(TEGDME)	112-49-2	203-977-3	0.020	N.D.
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) 1,2-二甲氧基乙烷 (EGDME)	110-71-4	203-794-9	0.020	N.D.
74	Diboron trioxide** 三氧化二硼**	1303-86-2	215-125-8	0.020	N.D.
75	Formamide 甲酰胺	75-12-7	200-842-0	0.020	N.D.
76	Lead(II) bis(methanesulfonate) ** 甲基磺酸铅Lead(II) **	17570-76-2	401-750-5	0.020	N.D.
77	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6 (1H,3H,5H)-trione) 1,3,5-三缩水甘油-S-三嗪三酮	2451-62-9	219-514-3	0.020	N.D.
78	$\beta$ -TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5- triazine-2,4,6-(1H,3H,5H)-trione) 1,3,5-三(环氧乙烷基甲基)-1,3,5-三嗪-2,4,6-(1H,3H,5H)- 三酮立体异构体	59653-74-6	423-400-0	0.020	N.D.
79	4,4'-bis(dimethylamino) benzophenone (Michler's ketone) 4,4'-二(N,N-二甲氨基)二苯甲酮	90-94-8	202-027-5	0.020	N.D.
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base) N,N,N',N'-四甲基-4,4'-二氨基二苯甲烷	101-61-1	202-959-2	0.020	N.D.
81	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa- 2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) 碱性紫3	548-62-9	208-953-6	0.020	N.D.
82	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]met hylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) 碱性蓝26	2580-56-5	219-943-6	0.020	N.D.



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Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
83	$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) 溶剂蓝4	6786-83-0	229-851-8	0.020	N.D.
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol $\alpha,\alpha$ -二[(二甲氨基)苯基]-4-甲氨基苯甲醇	561-41-1	209-218-2	0.020	N.D.

The eighth fifty-four Substances of Very High Concern (Released in Dec, 2012)

第八批54种SVHC (2012年12月公布)

Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
85	Bis(pentabromophenyl) ether (DecaBDE) 十溴联苯醚	1163-19-5	214-604-9	0.020	N.D.
86	Pentacosafuorotridecanoic acid 全氟十三酸	72629-94-8	276-745-2	0.020	N.D.
87	Tricosafuorododecanoic acid 全氟十二酸	307-55-1	206-203-2	0.020	N.D.
88	Henicosafuoroundecanoic acid 全氟十一烷酸	2058-94-8	218-165-4	0.020	N.D.
89	Heptacosafuorotetradecanoic acid 全氟十四酸	376-06-7	206-803-4	0.020	N.D.
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated -covering well-defined substances and UVCB substances, polymers and homologues 对特辛基苯酚乙氧基醚(包括界定明确的物质以及 UV CB 物质、聚合物和同系物)	-	-	0.020	N.D.
91	4-Nonylphenol, branched and linear - substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defin ed substances which include any of the individual isomers or a combination thereof 4-壬基苯酚, 支链和直链	-	-	0.020	N.D.



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Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) 偶氮二甲酰胺	123-77-3	204-650-8	0.020	N.D.
93	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA) 六氢邻苯二甲酸酐	85-42-7 13149-00-3 14166-21-3	201-604-9 236-086-3 238-009-9	0.020	N.D.
94	Hexahydromethylphthalic anhy, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride 甲基六氢苯酐、4-甲基六氢苯酐、 甲基六氢化邻苯二甲酸酐、3-甲基 六氢苯二甲酯酐	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	247-094-1, 243-072-0, 256-356-4, 260-566-1	0.020	N.D.
95	Methoxy acetic acid 甲氧基乙酸	625-45-6	210-894-6	0.020	N.D.
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear 支链和直链 1, 2-苯二羧二戊酯	84777-06-0	284-032-2	0.020	N.D.
97	Diisopentylphthalate (DIPP) 邻苯二甲酸二异戊酯(DIPP)	605-50-5	210-088-4	0.020	N.D.
98	N-pentyl-isopentylphthalate 邻苯二甲酸正戊基异戊基酯	776297-69-9	-	0.020	N.D.
99	1,2-Diethoxyethane 乙二醇二乙醚	629-14-1	211-076-1	0.020	N.D.
100	N,N-dimethylformamide; dimethyl formamide N,N-二甲基甲酰胺	68-12-2	200-679-5	0.020	N.D.
101	Dibutyltin dichloride (DBTC) 二丁基二氯化锡	683-18-1	211-670-0	0.020	N.D.
102	Acetic acid, lead salt, basic** 碱式乙酸铅	51404-69-4	257-175-3	0.020	N.D.
103	Basic lead carbonate (trilead bis(carbonate)dihydroxide) ** 碱式碳酸铅	1319-46-6	215-290-6	0.020	N.D.
104	Lead oxide sulfate (basic lead sulfate) ** 碱式硫酸铅	12036-76-9	234-853-7	0.020	N.D.



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Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
105	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate) ** [1,2-苯二羧酸根合]二氧化三铅	69011-06-9	273-688-5	0.020	N.D.
106	Dioxobis(stearato)trilead** 双(十八酸基)二氧化三铅	12578-12-0	235-702-8	0.020	N.D.
107	Fatty acids, C16-18, lead salts** C16-18-脂肪酸铅盐	91031-62-8	292-966-7	0.020	N.D.
108	Lead bis(tetrafluoroborate) ** 四氟硼酸铅	13814-96-5	237-486-0	0.020	N.D.
109	Lead cyanamidate** 氨基氰铅盐	20837-86-9	244-073-9	0.020	N.D.
110	Lead dinitrate** 硝酸铅	10099-74-8	233-245-9	0.020	N.D.
111	Lead oxide (lead monoxide) ** 氧化铅	1317-36-8	215-267-0	0.020	N.D.
112	Lead tetroxide (orange lead) ** 四氧化三铅, 铅丹	1314-41-6	215-235-6	0.020	N.D.
113	Lead titanium trioxide** 钛酸铅	12060-00-3	235-038-9	0.020	N.D.
114	Lead Titanium Zirconium Oxide** 钛酸铅锆	12626-81-2	235-727-4	0.020	N.D.
115	Pentalead tetraoxide sulphate** 氧化铅与硫酸铅的复合物	12065-90-6	235-067-7	0.020	N.D.
116	Pyrochlore, antimony lead yellow** C.I.颜料黄41	8012 -00-8	232-382-1	0.020	N.D.
117	Silicic acid, barium salt, lead-doped** 铅掺杂的硅钡酸盐	68784-75-8	272-271-5	0.020	N.D.
118	Silicic acid, lead salt** 硅酸铅	11120-22-2	234-363-3	0.020	N.D.
119	Sulfurous acid, lead salt, dibasic** 亚硫酸铅 (II)	62229-08-7	263-467-1	0.020	N.D.
120	etraethyllead** 四乙基铅	78-00-2	201-075-4	0.020	N.D.
121	Tetralead trioxide sulphate** 三碱式硫酸铅	12202-17-4	235-380-9	0.020	N.D.



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Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结果 (%)
					A
122	Trilead dioxide phosphonate** 磷酸氧化铅	12141-20-7	235-252-2	0.020	N.D.
123	Furan 呋喃	110-00-9	203-727-3	0.020	N.D.
124	Propylene oxide; 1,2-epoxypropane; methyloxirane 环氧丙烷	75-56-9	200-879-2	0.020	N.D.
125	Diethyl sulphate 硫酸二乙酯	64-67-5	200-589-6	0.020	N.D.
126	Dimethyl sulphate 硫酸二甲酯	77-78-1	201-058-1	0.020	N.D.
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine 3-乙基-2-甲基-2-(3-甲基丁基)-1,3-恶唑烷	143860-04-2	421-150-7	0.020	N.D.
128	Dinoseb 地乐酚 (二硝丁酚)	88-85-7	201-861-7	0.020	N.D.
129	4,4'-methylenedi-o-toluidine 4,4'-二氨基-3,3'-二甲基二苯甲烷	838-88-0	212-658-8	0.020	N.D.
130	4,4'-oxydianiline and its salts 4,4'-二氨基二苯醚	101-80-4	202-977-0	0.020	N.D.
131	4-Aminoazobenzene; 4-Phenylazoaniline 4-氨基偶氮苯	60-09-3	200-453-6	0.020	N.D.
132	4-methyl-m-phenylenediamine (2,4-toluene-diamine) 2,4-二氨基甲苯	95-80-7	202-453-1	0.020	N.D.
133	6-methoxy-m-toluidine (p-cresidine) 2-甲氧基-5-甲基苯胺	120-71-8	204-419-1	0.020	N.D.
134	Biphenyl-4-ylamine 4-氨基联苯	92-67-1	202-177-1	0.020	N.D.
135	o-aminoazotoluene 邻氨基偶氮甲苯	97-56-3	202-591-2	0.020	N.D.
136	o-Toluidine; 2-Aminotoluene 邻甲基苯胺	95-53-4	202-429-0	0.020	N.D.
137	N-methylacetamide N-甲基乙酰胺	79-16-3	201-182-6	0.020	N.D.
138	1-bromopropane; n-propyl bromide 溴代正丙烷	106-94-5	203-445-0	0.020	N.D.



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**The ninth six Substances of Very High Concern (Released in Jun, 2013)**

第九批 6 种 SVHC (2013 年 6 月发布)

Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结 果 (%)
					A
139	Cadmium ** 镉**	7440-43-9	231-152-8	0.020	N.D.
140	Cadmium oxide ** 氧化镉**	1306-19-0	215-146-2	0.020	N.D.
141	Dipentyl phthalate (DPP) 邻苯二甲酸二正戊酯	131-18-0	205-017-9	0.020	N.D.
142	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues] 4-壬基酚乙氧基醚, 直链或支链	/	/	0.020	N.D.
143	Ammonium pentadecafluorooctanoate (APFO) 全氟辛酸铵(APFO)	3825-26-1	223-320-4	0.020	N.D.
144	Pentadecafluorooctanoic acid (PFOA) 全氟辛酸(PFOA)	335-67-1	206-397-9	0.020	N.D.

**The tenth seven potential Substances of Very High Concern (Released in Sept, 2013)**

第十批 7 种潜在高关注物 (2013 年 9 月发布)

Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结 果 (%)
					A
145	Cadmium sulphide** 硫化镉**	1306-23-6	215-147-8	0.020	N.D.



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Code 序号	Test Item 测试项目	CAS No.	EC No.	Report Limit 报告限 (%)	Report Results 报告结 果 (%)
					A
146	Dihexyl phthalate (DNHP) 邻苯二甲酸二己酯(DNHP)	84-75-3	201-559-5	0.020	N.D.
147	Direct Red 28 直接红28	573-58-0	209-358-4	0.020	N.D.
148	Direct Black 38 直接黑 38	1937-37-7	217-710-3	0.020	N.D.
149	2-imidazoline-2-thiol 1,2-亚乙基硫脲	96-45-7	202-506-9	0.020	N.D.
150	Lead di(acetate)** 乙酸铅**	301-04-2	206-104-4	0.020	N.D.
151	Trixylyl phosphate 磷酸三(二甲苯)酯	25155-23-1	246-677-8	0.020	N.D.

## Specimen Description:

### 样品描述:

A: Capacitor 电容器

## Note:

### 备注:

- mg/kg =ppm=10<sup>6</sup>
- %=w/w
- N.D. :< Report Limit
- N.D. :< 报告限
- \*The detected DHNUP are consisted of six phthalates which CAS number are 85507-79-5, 68515-44-6, 68515-45-7, 111381-89-6, 111381-90-9 and 111381-91-0. according to the Annex 15 of REACH.
- \*所测的 DHNUP 依据 REACH 附件 15, 主要包括 CAS 号为 85507-79-5, 68515-44-6, 68515-45-7, 111381-89-6, 111381-90-9 和 111381-91-0 的六种邻苯二甲酸酯。
- \*\* According to the 5.2.1 item of the second version of ECHA "Guidance on requirements for substances in articles", 2011, the selected test methods only show the existence of certain elements rather than the existence of substances, using additional measurements to screen for the existence and identification of substances in a sample when necessary.
- \*\*依据 ECHA "物品中的物质要求指南"-2011 年第二版第 5.2.1 条规定, 所采用的测试方法只能得到样品中含有的元素而不是物质, 当需要时则对样品中的物质的甄选和鉴别进行进一步测试。
- Report Results: based on measurements in most cases will identify the chemical constituents in the sample but not necessarily "the substance" which were originally used to produce the article, professional consults, products information,



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testing processes, features of materials, characteristics of the SVHC and chemical analysis etc to obtain the assessments results according to the 5.2 item of the second version of ECHA "Guidance on requirements for substances in articles", 2011.

- 报告结果: 依据 ECHA "物品中的物质要求指南"-2011 年第二版第 5.2 条: 基于大多数情况下测试方法鉴别的是样品中的化学组成, 而不一定是产品生产过程中原始添加的物质, 以及专业咨询, 产品资料信息, 测试过程, 材料特性, SVHC 特性和化学分析等手段评估而得到。

- Report Limit: Be obtained from the uncertainty, the 0.1 % threshold and the ECHA "Guidance on requirements for substances in articles".

- 报告限: 根据不确定度和 0.1%的报告门槛以及 ECHA "物品中的物质要求指南"规定而得到。

- The test report A001R131129042001A1 supersedes the test report A001R131129042001 which is withdrawn.

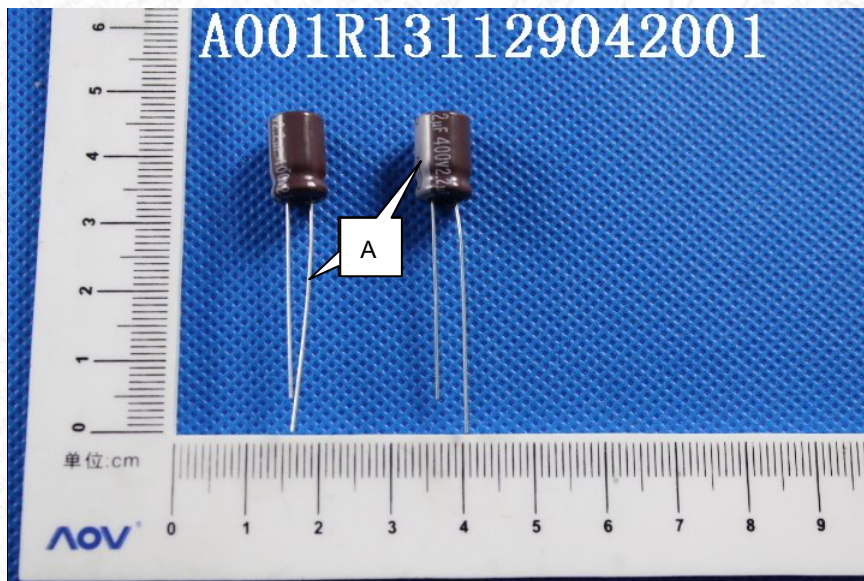
- 报告 A001R131129042001A1 取代原报告 A001R131129042001, 原报告同时作废。

- Photo is included

- 附照片.

## Photograph of Sample

样品照片



Aluminum electrolytic capacitor

铝电解电容器

\*\*\*End of Report\*\*\*

\*\*\*报告结束\*\*\*