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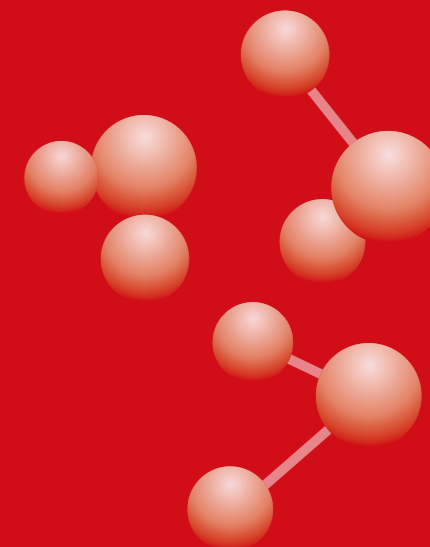
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# CHEMICAL TESTING

## 化学测试



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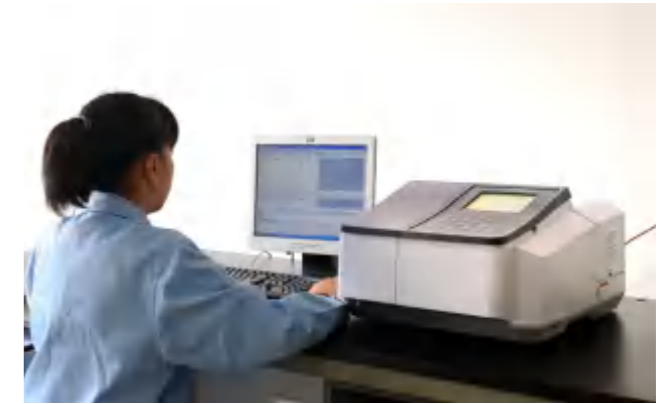
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## 电子电器产品中有有害物质限制指令 ( RoHS 2011/65/EU )

自2013年1月3日起,关于电子电气设备(EEE)中限用有害物质的欧盟指令RoHS2.0 (2011/65/EU)已全面替代原RoHS指令2002/95/EC并强制执行。2015年6月4日,欧盟在其官方公报上发布指令(EU)2015/863对RoHS2.0(2011/65/EU)附录II进行修订,将四种邻苯二甲酸酯(DEHP、BBP、DBP、DIBP)列入RoHS2.0附录II中。至此,RoHS2.0附录II中的限制物质增加到10种。(EU)2015/863中规定了相应的过渡期:所有电子电气产品(除医疗设备和监控设备)自2019年7月22日起需满足新要求,医疗设备和监控设备自2021年7月22日起需满足新要求。

RoHS指令要求电子电气产品中所有的均质材料中最大允许限用物质的浓度为镉100mg/kg,铅、汞、六价铬、多溴联苯和多溴联苯醚分别为1000 mg/kg,以及新增的四项邻苯二甲酸酯(DEHP、BBP、DBP、DIBP)限值均为1000 mg/kg。



Since 3rd January 2013, on electrical and electronic equipment (EEE) limited use of harmful substances in the European Union directive RoHS 2.0 (2011/65 / EU) has been fully replace the original RoHS directive 2002/95 / EC and enforced. On 4th June 2015, the European Union (EU) published (EU) No 2015/863 to amend appendix II of RoHS 2.0 ( 2011/65/EU ) , four kinds of phthalate (DEHP, BBP, DBP and DIBP) was added to appendix II of RoHS 2.0. Now, RoHS 2.0 has 10 kinds of restricted substances in appendix II . (EU) No 2015/863 specified in the corresponding transition: all electrical products (except for medical equipment and monitoring equipment) since 22th July 2019 to meet the new requirements, medical equipment and monitoring equipment since 22th July 2021, to meet the new requirements.

Under the RoHS directive requirements of electronic electrical products all homogeneous materials in the maximum permissible limit for cadmium with the concentration of the substance in 100 mg/kg, lead, mercury, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ether 1000 mg/kg, respectively, as well as the new four phthalate (DEHP, BBP, DBP, DIBP) limit is 1000 mg/kg.



## 首卷语 Preamble

沃特测试是具有多年产品检测经验的专业第三方检测机构,实验室严格按ISO/IEC17025的要求建立,并取得中国合格评定国家认可委员会(CNAS)认可资质、质量技术监督局实验室资质认定(CMA)的资质、国际电工委员会(IECEE)的CB测试实验室资质(CBTL)以及国家质检总局进出口商品检验鉴定业务(AQSIQ)许可资质。同时,公司还是香港机电工程署EMSD认可核证团体、美国国家实验室自愿认可程序NVLAP的认可实验室、美国联邦通讯委员会FCC认可实验室、美国消费品安全委员会CPSC认可实验室、美国能源之星Energy Star认可实验室、美国加州能效CEC注册认可实验室,加拿大工业部IC认可实验室,ELI全球高效照明产品认证认可实验室,是UL、Intertek(ETL-SEMKO)、CSA、TÜV Rheinland、TÜV SÜD等国际权威认证机构的战略合作伙伴和数据认可实验室。

公司是中国第三方检测与检验服务的领先机构,其总部位于深圳、在佛山、东莞、中山、苏州、宁波和香港等地分别设立分支机构,拥有产品安全,EMC电磁兼容,性能和能效,化学测试四大领域的测试能力,作为专业性,综合性,公正性的国际化检测机构,我们秉承科学严谨的工作态度,肩负着中国第三方检测行业发展的重任,诚意的协助每一个客户使其产品达到不断更新的国际标准而不懈努力。

Waltek Services Test Group Ltd. is a professional third-party testing and certification organization with multi-year product testing and certification experience, established strictly in accordance with ISO/IEC 17025 requirements, and accredited by CNAS (China National Accreditation Service for Conformity Assessment) AQSIQ, CMA and IECEE for CBTL. Meanwhile, Waltek has got recognition as registration and accreditation laboratory from EMSD (Electrical and Mechanical Services Department), and American Energy star, NVLAP (National Voluntary Laboratory Accreditation Program), FCC (The Federal Communications Commission), CPSC (Consumer Product Safety Commission), CEC (California energy efficiency), IC (Industry Canada) and ELI (Efficient Lighting Initiative). It's the strategic partner and data recognition laboratory of international authoritative organizations, such as UL, Intertek (ETL-SEMKO), CSA, TÜV Rheinland, TÜV SÜD, etc.

Waltek Services Test Group Ltd. is one of the largest and the most comprehensive third party testing organizations in China, our headquarter located in Shenzhen and have branches in Foshan, Dongguan, Zhongshan, Suzhou, Ningbo and Hong Kong. Our test capability covered four large fields: safety test, ElectroMagnetic Compatibility (EMC), reliability and energy performance, Chemical test. As a professional, comprehensive, justice international test organization, we still keep the scientific and rigorous work attitude to help each client satisfy the international standards and assist their product enter into globe market smoothly.



## 废弃电子电器产品回收指令 ( WEEE 2012/19/EU )

欧盟 WEEE 指令最新修订版 – 2012/19/EU 废弃电子电气设备指令，于2012年7月24日在欧盟官方期刊上正式公布，现已正式实施。原 WEEE 指令 2002/96/EC 已于2014年2月15日废除。欧盟 WEEE 指令修订版 (2012/19/EU)，对范围、产品回收系统的建立、收集率、再生目标、注册及报告要求等作了重新修订。



The new recast WEEE Directive (DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4th July 2012 on waste electrical and electronic equipment (WEEE) (recast)) has been published in the Official Journal of the European Union on 24th July 2012, and has forced now. The new Directive 2012/19/EU will take effect and the 2002/96/EC will be repealed from 15th February 2014.

The new Directive 2012/19/EU make amendment to the Scope, Take-back systems, Collection Rate, Recovery targets, Registration and reporting requirement, and so on.

## 电池指令/Batteries directive ( 2006/66/EC&2013/56/EU )

电池中含有铅，镉，汞，酸，碱等污染物质，当其任意丢弃在环境中，会对生态环境和人类健康产生严重的危害。因此，电池中有害物质的限制，废旧电池回收处理和再生利用已经引起社会各界的广泛关注。

相关法规和我们的服务：

欧盟推出的与电池和蓄电池有关的指令2006/66/EC及修订指令2013/56/EC，规定了电池生产商的责任，回收细节，回收率，电池标示图案的规范还有限制物质铅，镉，汞含量要求及相关的豁免。

- 其限制物质要求如下：
1. 禁止汞含量超过0.0005%及镉含量超过0.002%的电池和蓄电池出售。
  2. 含汞2%以下的纽扣电池豁免至2015年10月1日。
  3. 电池镉含量不超过0.002%的要求不适用于紧急用灯和报警系统（无线电动工具豁免至2016年12月31日）。

所有电池，蓄电池和电池组须带有“打叉垃圾箱”标识以表明需要“单独回收”。除了欧盟，美国，中国，加拿大，日本，澳大利亚均出台了本国的电池法案。

Batteries contains the substance such as Pb, Cd, Hg, acid, alkali which can caused serious affect on environment and human health, how to restrict the toxic substance and better recycle the waste batteries is widely attention by the society.

Related regulation and our services:

The batteries directive 2006/66/EC and amendment directive 2013/56/EC have defined the responsibility of manufacture, recycling, Recycle rate, batteries marking, restricted substances Pb, Cd, Hg content requirements and exemptions.

The restricted requirement as below:

1. Forbid the batteries and accumulators sold in the market which contain: Hg>0.0005% or Cd>0.002%
2. The cell batteries can be exempt to October 1 2015 if it contains Hg<2%.
3. The requirement of Cd<0.0002% not suitable for the emergency light and alarm system (Wireless electric tools can be exempt to December 31, 2016)

All batteries and accumulators shall print "the crossed-out wheeled bin" symbol to indicate for "separate collection". Except the European, USA, China, Canada, Japan, Australia also have issued the local batteries regulation.



## REACH解决方案 / Reach solution



欧盟在2007年5月颁布了被认为是欧盟20年来最重要的一部法规，REACH法规，即(EC) No 1907/2006《关于化学品注册，评估，授权和限制的法规》，这一部化学品法规于2007年6月1日起在欧盟正式实施，而且管控的对象是化学品即化学物质，所以几乎覆盖了所有的行业，对各行各业都产生了深远的影响。REACH法规对在欧盟市场上销售的产品提出了包括注册、限制、授权、通报等要求，要求制造商和进口商都要履行相应的义务。同时按批次公布包括致癌、致畸变、生殖毒性、生物累积性等一系列高关注物质SVHC ( Substance of Very High Concern ) 的清单，更有针对性的对高关注物质进行管控和限制，以此来保障人类的健康。

我们的服务：

根据最新的高度关注物质列表和REACH附录17限制物质要求对产品进行检测，让企业明确产品中含有高度关注物质和限制物质的部件及其浓度。

我们可以为客户准备产品的安全技术说明书 ( SDS )，以协助企业将产品的安全信息提供给下游用户，确保产品在储存，运输和使用过程中的安全。



REACH can be considered as the one of most important regulation in European in the recent 20 years, the full name is " Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals" and effective on Jun 01 2007, the control object of this regulation is for all chemical materials, the scope almost covered all products and make further influences for the various industries, REACH required both the manufacturers and importers take responsibility to carry out registration, restriction, authorization, notification for chemical product which sold in European market, at the same time, they also release SVHC (substance of very high concern) list which chemicals included has been clearly shown to cause cancer or birth defects or other reproductive harm, let people can more focus on and control the SVHC chemicals to ensure the healthy life.

Our services

We can provide test services according to the most updated SVHC list and requirement of restricted substances in REACH annex XVII, and let client understand which parts contained SVHC substances or restricted substances and its concentration.

We can prepare safety data sheet (SDS) and let client pass the safety information to downstream users and make sure the product can be safe under the condition of storage, transport and use.

## 玩具安全 / Toys safety

玩具是特别强调安全的一种商品，为了保护消费者特别是儿童的人身安全和健康，世界各国政府历来都是将玩具的安全纳入政府的严密监督控制下。目前全球70%的玩具都来自中国，如何面对欧盟以及各国日益严格的检测标准将是我国玩具企业面临的巨大挑战。

Safety is most important for toys, in order to protect consumer especially children's health and safe, toys always under the most strict control by every government in the world. Currently have 70% toys exported from China in the world, how to face the more and more strict regulation is a challenge for our toys enterpriser.

测试 Testing	欧盟 European	美国 USA
玩具标准 Toy standard	物理机械性 Mechanical & physical 燃烧性 Flammability 化学性能 Chemical properties	2009/48/EC EN 71-1~14 ASTM F963
带电和产生电池干扰的玩具测试 Test for electrical toys	EN62115 EN62471 EMC R&TTE	ASTM F963 4.25 16CFR1505 FCC
其它与玩具相关法规指令和测试 Other test related to toys	RoHS, ERP REACH 高关注物质(SVHC)和限制物质 REACH SVHC & Restricted Substance	美国消费品安全改进法案CPSIA 微生物USP61&62和抗腐能力USP 51 填充物的宾夕法尼亚法规 艺术材料LHAMA测试 CPSIA Microbial test USP 61&62 Antimicrobial test USP 51 Pennsylvania test for stuffed toys LHAMA for art material
证书 Certificate	CE 证书 CE certificate	CPSC COC证书 CPSC COC certificate

我们还可以提供国际玩具标准ISO 8124，加拿大《消费品安全法案》CCPSA和加拿大玩具条例SOR/2011-17，日本食品卫生法&日本玩具标准ST 2016，澳大利亚和新西兰玩具标准AS/NZS 8124以及中国玩具安全标准GB6675等玩具标准测试服务。

We also can provide related toys test for ISO 8124, Canada CCPSA & SOR/2011-17, Japan JFSL&ST 2016, Australia and New Zealand AS/NZS 8124 and Chinese toys safety standard GB6675.



## 邻苯二甲酸盐测试 / Phthalates testing

邻苯二甲酸盐是一类人工合成的用途广泛的塑料增塑剂，它被广泛应用于玩具、育儿用品、食品包装材料、PVC材料、润滑油和个人护理用品（如指甲油、香皂、洗发液等）。目前已有研究表明邻苯二甲酸盐会导致荷尔蒙分泌失调及影响生殖器官发育，影响胎儿或儿童正常发育，所以我们需要对它的使用进行限制。

### 相关法规和我们的服务：

欧盟2005/84/EC指令及其附件对玩具及儿童护理用品的塑胶所含的邻苯二甲酸盐均有浓度要求。后该指令的相关要求被全部纳入REACH法规的限制列表中。

美国消费品安全改进法案（CPSIA）里也有管控到邻苯二甲酸盐的相关要求。加州65提案及加州法规AB1108对邻苯二甲酸盐的相关要求。我们可以针对您的成品和材料进行邻苯二甲酸盐的风险评估并根据各法案的要求进行浓度的测试，让您顺利的满足不同国家及买家对该物质的要求。



Phthalates is a kind of synthetic chemical which commonly used for plastic plasticizer, it widely existed in toys, children care articles, food packaging material, PVC material, lubricants and personal care products (such as nail polish, soap, shampoo). And now, already have studies shows that Phthalates can cause hormonal imbalance and reproductive harm and affect the fetus or the children's normal development, so we need limit the use for it.

### Related regulation and our services:

The directive 2005/84/EC have phthalates requirement for plastic which used for the toys and related children care products, and this requirement later are incorporated into the REACH regulations list.

Consumer Product Safety Improvement Act (CPSIA) also have requirement for Phthalates. AB1108 and California Proposition 65 also have related requirements for Phthalates. We can provide Phthalates test and risk evaluation service for your samples according to the different regulations and help you satisfy the requirement of different countries and the buyers.

## 多环芳香烃PAHs / Polycyclic aromatic hydrocarbon PAHs

### 德国修订GS认证产品的多环芳烃管控要求

2014年8月，德国产品安全委员会(Ausschuss für Produktsicherheit, AfPS)公布了需要进行GS认证产品的多环芳烃（PAHs）新的管控要求，其生效时间为2015年7月1日。受影响的产品主要为需要申请GS认证的电子电器、玩具、食品包装材料、塑料制品、橡胶制品、机械等产品。

### Germany revised products PAHs control requirements for GS certification

In August 2014, German Product Safety Commission (Ausschuss für Produktsicherheit, AfPS) announced the new control requirements of Polycyclic Aromatic Hydrocarbon (PAHs) for GS products certification, the effective date is from July 1, 2015. Affected products are mainly these need to apply for GS certification, such as electronic appliances, toys, food packaging materials, plastic products, rubber products, machinery and other products.



新标准对PAH的限制要求表 (单位: mg/kg) :

Below form is the limit and requirement for PAH of the new standard (Unit: mg/kg)

	类别 1 Category I	类别 2 Category II		类别 3 Category III	
		未包含在类别1中和皮肤会长时间接触 (超过30秒), 或者和皮肤反复短时间接触的材料 Materials not included in Category I and contact with skin (more than 30 sec.), or contact with skin by short time repeatedly	其他类产品 Other products	未包含在类别1和2中, 和皮肤短期接触 (不超过30秒) 的材料 Materials not included in Category I and II, contact with skin (No more than 30 sec.)	其他类产品 Other products
多环芳烃 (PAHs)	放入口中的材料, 或和皮肤长时间接触的玩具材料 (超过30秒) Material placed in the mouth and toy material contacted with skin (more than 30 sec.)	2009/48/EC 范围内的玩具 Toys in the scope of 2009/48/EC	其他类产品 Other products	2009/48/EC 范围内的玩具 Toys in the scope of 2009/48/EC	其他类产品 Other products
BENZO(a)PYRENE 苯并(a)芘	< 0.2	< 0.2	< 0.5	< 0.5	< 1
BENZO(e)PYRENE 苯并(e)芘	< 0.2	< 0.2	< 0.5	< 0.5	< 1
BENZO(a)ANTHRACENE 苯并(a)蒽	< 0.2	< 0.2	< 0.5	< 0.5	< 1
BENZO(b)FLUORANTHENE 苯并(b)荧蒽	< 0.2	< 0.2	< 0.5	< 0.5	< 1
BENZO(j)FLUORANTHENE 苯并(j)荧蒽	< 0.2	< 0.2	< 0.5	< 0.5	< 1
BENZO(k)FLUORANTHENE 苯并(k)荧蒽	< 0.2	< 0.2	< 0.5	< 0.5	< 1
CHRYSENE 屈	< 0.2	< 0.2	< 0.5	< 0.5	< 1
DIBENZO(a,h)ANTHRACENE 二苯并(a,h)蒽	< 0.2	< 0.2	< 0.5	< 0.5	< 1
BENZO(g,h,i)PERYLENE 苯并(g,h,i)芘	< 0.2	< 0.2	< 0.5	< 0.5	< 1
INDENO(1,2,3-cd)PYRENE 茚并(1,2,3-cd)芘	< 0.2	< 0.2	< 0.5	< 0.5	< 1
ACENAPHTHYLENE 苊烯, ACENAPHTHENE 苊, FLUORENE 苊, PHENANTHRENE 菲, PYRENE 芘, ANTHRACENE 蒽, FLUORANTHENE 荧蒽	< 1(Sum 总量)	< 5(Sum 总量)	< 10(Sum 总量)	< 20(Sum 总量)	< 50(Sum 总量)
NAPHTHALENE 萘	< 1	< 2		< 10	
18种 PAH总量	< 1	< 5	< 10	< 20	< 50

## 食品接触材料安全性 / Food contact material safety

随着全社会对食品安全问题的关注不断增加, 食品接触材料导致的食品安全问题逐渐引起了社会各界的注意, 目前, 欧盟食品接触材料法规体系中相当一部分法规都是以指令的形式颁布的, 需要各个成员国转化为本国的法规加以执行, 在转化的同时, 各成员国会根据本国的实际情况增加一些要求, 尤其是德国, 法国, 意大利等还额外制定本国食品接触材料法规, 因此, 出口欧盟的产品除了应遵守欧盟的相关指令外, 还应当遵守各个成员国法规要求。

With the growing concern about the food safety, food contact stuff causes food unsafe problem has raise attention gradually, At present, most food contact material regulations were issued by the form of directive in European, so the member countries need transferred it into local regulation, some countries such as Germany, French, Italy etc have added his own requirement base on the directives, so the product need satisfy the both requirement of European and local country when export to European market

相关法规和我们的服务:

Related regulation and our services:

地区 Districts	法规 Regulation
欧盟 European	(EC) No 1935/2004
德国 Germany	LFGB
法国 France	DGCCRF 2004-64
美国 USA	FDA CFR 21 第170-189章节&加州65 FDA CFR 21 part 170-189&California proposition65
日本 Japan	《食品卫生法》 《Food Sanitation Law 370》
中国 China	《食品安全法》, 聚乙烯, 仿瓷等各种食品容器和包装的国家标准检测 Chinese Law for food safety, standard for the food contact stuff and packaging which made of polythene and melamine.

适用范围:

各种和食品接触的材料, 包括金属、塑料、硅橡胶、涂层、玻璃、陶瓷、木材、纸张等。

常见食品级材料所涉及的产品包括: 电饭煲、烤炉、咖啡机等与食品接触的电器产品, 食品储藏用器皿、菜板、不锈钢等厨具, 碗、勺、杯、盘、刀叉等餐具。

除了以上列表的国家测试标准, 还有英国, 意大利, 等均有自己的食品级材料测试要求, 我们能按照标准针对不同的出口国的不同的食品级材质进行检测并出具相应的报告, 帮助您的产品快速的进入国际市场。

Applicable scope:

Various food contact materials, including metal, plastic, silicone rubber, coating, glass, ceramics, wood, paper etc.

Commonly products made of food grade material: Electric rice cooker, oven, coffee machine and other food contact electrical products, food storage containers, cutting boards, stainless steel kitchen utensils, bowl, cup, plate, spoon, fork and knife.

Except the above standards, other countries such as England, Italy also have his own requirement, we can provide test services for various food contact material of different countries, help you access the globe market swiftly.



## 包装及废弃物指令 ( 94/62/EC&2013/2/EU )

### Packaging directive(94/62/EC&2013/2/EU)

包装材料在回收过程中，其所含的有毒物质将通过渗透对地下水源和环境造成污染。为了降低其带来的潜在危害，很多国家都指定了标准对包装材料中的有害物质含量进行限制。

#### 相关法规:

欧盟指令94/62/EC及其修订指令2013/2/EU规定包装材料中四种有害重金属（铅，镉，汞，六价铬）含量之和的最大允许极限为100ppm。

除此之外，其他国家例如美国的TPCH，中国的包装材料法规等都有包装材料限用物质的规定。



During the process of recycle the package material .the toxic substances in packaging may infiltrate into underground water and cause the pollution. In order to reduce this potential hazards, many countries have developed standards for the restricted materials in packaging.

#### Related regulation and our services:

The directive 94/62/EC and amendment directive 2013/2/EU have requirement that the total amount of four kinds of heavy metals (Pb, Cd, Hg, Cr(VI)) can't exceed 100ppm for all package materials.

Other countries such as USA TPCH ,Chinese regulation for package material also have restrict requirement for package.

## 纺织品测试 / Textile testing

倡导"绿色", "环保", "健康"已经成为一种世界性的纺织品消费潮流,尤其是长期和人体甚至口腔接触的纺织品: 服装, 床上用品, 毛巾, 帽子, 鞋袜, 等等, 越来越多的消费者都倾向于对人体和环境无害的消费品。

#### 我们的服务:

我们可以针对纺织品提供以下测试服务:

- 可萃取重金属含量
- 六价铬
- pH值
- 五氯苯酚, 四氯苯酚, 三氯苯酚
- 有机锡化合物
- 特定偶氮化合物
- 邻苯二甲酸酯
- 游离和水解甲醛含量
- 阻燃剂
- 多环芳香烃
- 全氟辛酸磺酸 /全氟辛酸
- 其它

With the world trend of "Green", "Environmental protection", "healthy" for textile products, especially for the textile which contact with skin and mouth, such as clothing, bedding, towels, hats, shoes etc. more and more consumer will prefer the harmless product.

#### Our services

we can provide test services for the textiles:

- Extractable heavy metals
- Chromium(VI)
- pH test
- PCP, TeCP, TCP
- Organic tin compounds
- Specific Azo compounds
- Phthalates
- Formaldehyde
- Flame retardant
- PAHs
- PFOS / PFOA
- etc.



## 加州65号提案 / California Proposition 65

加州65号提案，即《加州安全饮用水和有毒物执行法》，于1986年11月经加州居民投票，以压倒性的票数一致通过。提案规定，从事买卖的个体，其雇员人数达10个或10个以上的（另有豁免的除外），须在含已知致癌或生殖毒性的化学物质的产品上贴上清晰、合理的警告标签，以避免与人体接触，且不得该化学物排放到饮用水中。

#### 哪些产品曾被诉讼而写进加州65号提案?

- 纺织品
- 玩具
- 陶瓷餐具
- 珠宝
- 儿童护理产品
- PVC电脑周边设备
- 油漆等等

如果您的产品需要出口到美国加州，可以向我们咨询并了解您的产品在加州的限制要求并按照要求做相应的测试，以免由于不合格被投诉并遭到巨额罚款。

California Proposition 65 is "California safe drinking water and Toxic Enforcement Law", it voted by California citizen in Nov. 1986 and passed overwhelmingly. The proposal regulated each business more than 10 person, ask them should provide a clear and reasonable warning if the chemical has been clearly shown to cause cancer or birth defects or other reproductive harm to keep away from people and prohibit discharging it into drinking water sources.

#### Which product have been lawsuit and written into the California Proposition 65?

- Textile
- Toys
- Ceramic tableware
- Jewelry
- Children care products
- PVC computer peripheral equipment
- Paintetc.

if your product need export to California of USA, you can consult with us the limitation of your product in California and conduct the related test to avoid the lawsuit and penalty.

## 卤素及特定卤系有机物限制要求

卤素元素是指周期表第7主族非金属元素，包括了氟，氯，溴，碘，砷等五种元素。卤素一般以化合物的方式存在于人们日常生活中，而且本身具有非常大的毒性，在燃烧处理中会造成二次污染，产生二噁英等剧毒有机物。随着“无卤化”的呼声越来越高，RoHS, REACH, 挪威PoHS和美国各州的相关法规中都纷纷对某些卤素化合物提出了限制要求。

#### 我们的服务:

同RoHS的XRF扫描测试原理相似，在卤素的管控上，XRF同样也可发挥其重要作用，我们可以提供扫描服务,对来料中的氯元素和溴元素的含有情况进行初步的筛分和判定。

由于XRF测试结果存在一定的偏差，对于高风险的物质，卤素的化学测试技术必不可少，我们实验室可以按照EN14582标准（目前卤素测试最为认可的方法）来测试样品卤素的含量。

### Restriction for Halogen and Halogen compounds



Halogen is the seventh group of non-metallic elements in Periodic Table, including Fluorine, Chlorine, Bromine, Iodine, Astatine five elements. Halogen always as compounds existed our daily life. itself is toxicity and will cause the second pollution to produce virulent chemical-- dioxin when burn as waste material. With the voice "halogen-free" is louder and louder, RoHS, REACH, Norway PoHS and the States regulations in USA all issued limit requirement for it.

#### Our services

It's more like the principle for RoHS XRF scan test, XRF also can play it's important role in halogen test, we can provide scan service for the preliminary screen the compounds of Cl and Br. As XRF test result exists deviation, so chemical test is also a necessary measure to obtain more accurate result for high risk material. We can detect according to EN 14582(the most acceptable test method currently) for halogen content detection.