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(Date): 12-Apr-2024

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# Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)

6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

(The following sample(s) was/were submitted and identified by the applicant as)

BASIC INFORMATION	
Type of Product	HIGH POWER
Supplier Company Name	EVERLIGHT
Address	NO.6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN
Tel / Fax / Email	TEL:886-2685-6688
	FAX:886-2685-6699
	E-MAIL: lindawang@everlight.com
Contact Person	LI LING WANG
EVERLIGHT REPORT NO	HIGH POWER ELSWD SERIES Sampling Product: ELSWD-F81Y1-OLPNE-C00Y1-SGS-12-Apr-2024
PRODUCT INFORMATION	
Product/component Sample description	LIGHTING
Quantity (numbers or weight)	0.0436 g
EVERLIGHT P/N	HIGH POWER ELSWD SERIES Sampling Product: ELSWD-F81Y1-OLPNE-C00Y1
Product Lot No	Y240315A0902GP39W6A
Country of Origin	TAIWAN
TEST INFORMATION	
Sample preparation	CUTTING
Test Method	RoHS: IEC 62321, Halogen: BS EN 14582
MDL	Cd, Pb, Hg: 2 mg/kg, PBBs/PBDEs: 5 mg/kg, Halogen: 50 mg/kg

(Sample Submitted By) : (EVERLIGHT ELECTRONICS CO., LTD.)

(Sample Receiving Date) : 28-Mar-2024  
(Testing Period) : 28-Mar-2024 to 12-Apr-2024

(Test Results) : (Please refer to following pages).



PIN CODE: 690A4DOE



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(Test Requested) : (1) RoHS 2011/65/EU Annex II (EU) 2015/863  
 , DBP, BBP, DEHP, DIBP (As  
 specified by client, with reference to RoHS 2011/65/EU Annex II and  
 amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury,  
 Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted  
 (2) PAHs (As specified by client, to test PAHs  
 and other item(s).)

(Conclusion) : (1) , DBP,  
 BBP, DEHP, DIBP RoHS 2011/65/EU Annex II (EU)  
 2015/863 (Based on the performed tests on submitted sample(s),  
 the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP,  
 DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863  
 amending Annex II to Directive 2011/65/EU.)

(2) (AfPS) GS  
 PAHs 3 (Based upon the performed tests on  
 the submitted sample(s), the test results of PAHs (15 items) comply with the  
 limits of PAHs requirement (Category 3) Other consumer products as set  
 by German Committee on Product Safety (AfPS) GS PAHs.)

## (Test Part Description)

No.1 : (TRANSPARENT GLUE)  
 No.2 : / (ORANGE / SILVER-WHITE COLORED SHEET)

## (Test Results)

(Test Items)	(Method)	(Unit)	MDL	(Result)		(Limit)
				No.1	No.2	
(Cd) (Cadmium (Cd))	IEC 62321-5: 2013 (With reference	mg/kg	2	n.d.	n.d.	100
(Pb) (Lead (Pb))	to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	n.d.	1000
(Hg) (Mercury (Hg))	IEC 62321-4: 2013+ AMD1: 2017 (With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	n.d.	1000



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(Test Items)	(Method)	(Unit)	MDL	(Result)		(Limit)
				No.1	No.2	
Cr(VI) (Hexavalent Chromium Cr(VI))	IEC 62321-7-2: 2017 (With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.)	- mg/kg	8	n.d.	n.d.	1000
(Monobromobiphenyl)		mg/kg	5	n.d.	n.d.	-
(Dibromobiphenyl)		mg/kg	5	n.d.	n.d.	-
(Tribromobiphenyl)		mg/kg	5	n.d.	n.d.	-
(Tetrabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
(Pentabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
(Hexabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
(Heptabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
(Octabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
(Nonabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
(Decabromobiphenyl)	IEC 62321-6: 2015	mg/kg	5	n.d.	n.d.	-
(Sum of PBBs)	/ (With reference to	mg/kg	-	n.d.	n.d.	1000
(Monobromodiphenyl ether)	IEC 62321-6: 2015, analysis was	mg/kg	5	n.d.	n.d.	-
(Dibromodiphenyl ether)	performed by GC/MS.)	mg/kg	5	n.d.	n.d.	-
(Tribromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
(Tetrabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
(Pentabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
(Hexabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
(Heptabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
(Octabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
(Nonabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
(Decabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
(Sum of PBDEs)		mg/kg	-	n.d.	n.d.	1000
(BBP) (Butyl benzyl phthalate (BBP))		mg/kg	50	n.d.	n.d.	1000
(DBP) (Dibutyl phthalate (DBP))	IEC 62321-8: 2017	mg/kg	50	n.d.	n.d.	1000
(2- ) (DEHP)	/ (With reference to	mg/kg	50	n.d.	n.d.	1000
(Di-(2-ethylhexyl) phthalate (DEHP))	IEC 62321-8: 2017, analysis was	mg/kg	50	n.d.	n.d.	1000
(DIBP) (Diisobutyl phthalate (DIBP))	performed by GC/MS.)	mg/kg	50	n.d.	n.d.	1000



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(Method)	(Unit)	MDL		(Limit)	
		No.1	No.2		
	mg/kg	50	n.d.	n.d.	-
	mg/kg	50	n.d.	n.d.	-
	mg/kg	50			





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(Test Items)	(Method)	(Unit)	MDL	(Result)		(Limit)
				No.1	No.2	
(Polycyclic Aromatic Hydrocarbons) (PAHs)						
(a) (Benzo[a]pyrene) (CAS No.: 50-32-8)	A fPS GS 2019:01 PAK / (With reference to AfPS GS 2019:01 PAK, analysis was performed by GC/MS.)	mg/kg	0.2	n.d.	n.d.	
(e) (Benzo[e]pyrene) (CAS No.: 192-97-2)		mg/kg	0.2	n.d.	n.d.	
(Benzo[a]anthracene) (CAS No.: 56-55-3)		mg/kg	0.2	n.d.	n.d.	
(b) (Benzo[b]fluoranthene) (CAS No.: 205-99-2)		mg/kg	0.2	n.d.	n.d.	
(j) (Benzo[j]fluoranthene) (CAS No.: 205-82-3)		mg/kg	0.2	n.d.	n.d.	
(k) (Benzo[k]fluoranthene) (CAS No.: 207-08-9)		mg/kg	0.2	n.d.	n.d.	
(Chrysene) (CAS No.: 218-01-9)		mg/kg	0.2	n.d.	n.d.	
(Dibenzo[a,h]anthracene) (CAS No.: 53-70-3)		mg/kg	0.2	n.d.	n.d.	
(Benzo[g,h,i]perylene) (CAS No.: 191-24-2)		mg/kg	0.2	n.d.	n.d.	
(Indeno[1,2,3-c,d]pyrene) (CAS No.: 193-39-5)		mg/kg	0.2	n.d.	n.d.	
(Anthracene) (CAS No.: 120-12-7)		mg/kg	0.2	n.d.	n.d.	
(Fluoranthene) (CAS No.: 206-44-0)		mg/kg	0.2	n.d.	n.d.	
(Phenanthrene) (CAS No.: 85-01-8)		mg/kg	0.2	n.d.	n.d.	
(Pyrene) (CAS No.: 129-00-0)		mg/kg	0.2	n.d.	n.d.	
(Naphthalene) (CAS No.: 91-20-3)		mg/kg	0.2	n.d.	n.d.	
15 (Sum of 15 PAHs)		mg/kg	-	n.d.	n.d.	



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(Test Items)	(Method)	(Unit)	MDL	(Result)		(Limit)
				No.1	No.2	
(HBCDD) ( - HBCDD, - HBCDD, - HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( - HBCDD, - HBCDD, - HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	IEC 62321: 2008 / (With reference to IEC 62321: 2008, analysis was performed by GC/MS.)	mg/kg	5	n.d.	n.d.	-
(F) (Fluorine (F)) (CAS No.: 14762-94-8)	BS EN 14582: 2016 (With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	287	191	-
(Cl) (Chlorine (Cl)) (CAS No.: 22537-15-1)		mg/kg	50	n.d.	n.d.	-
(Br) (Bromine (Br)) (CAS No.: 10097-32-2)		mg/kg	50	n.d.	n.d.	-
(I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.	n.d.	-
(Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	US EPA 3052: 1996 (With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	n.d.	-

(Note)

1. mg/kg = ppm 0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit ( )
3. n.d. = Not Detected ( ); MDL / Less than MDL
4. "-" = Not Regulated ( )
5. ILAC-G8:09/2019 (w=0)

(Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.)



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## PAHs Remark

(AfPS): GS PAHs

AfPS (German commission for Product Safety): GS PAHs requirements

(Parameter)	1 (Category 1)	2 (Category 2)		3 (Category 3)	
	( $\leq 30$ ) 2009/48/EC (Materials intended to be placed in the mouth, or materials in toys (Directive 2009/48/EC) or articles for children up to 3 years of age with intended long-term skin contact (> 30 seconds))	1 30 (Materials that are not in Category 1, with intended or foreseeable long-term skin contact (> 30 seconds) or short-term repetitive contact with the skin)	1 30 (Materials that are not in Category 1, with intended or foreseeable long-term skin contact (> 30 seconds) or short-term repetitive contact with the skin)	1 2 30 (Materials not covered by Category 1 or 2, with intended or foreseeable short-term skin contact (< 30 seconds))	1 2 30 (Materials not covered by Category 1 or 2, with intended or foreseeable short-term skin contact (< 30 seconds))
Naphthalene	< 1	a. 14 (Use by children under 14)	b. (Other consumer products)	a. 14 (Use by children under 14)	b. (Other consumer products)
Phenanthrene					
	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum



# Test Report

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PFAS Remark

PFAS PFAS PFAS PFAS PFAS  
 ( PFAS PFAS )

(The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.))

(Group Name)	(Substance Name)	CAS No.
PFOS, & (PFOS, its salts & derivatives)	(Perfluorooctane sulfonates) (PFOS)	1763-23-1
	(PFOS-K) Potassium perfluorooctanesulfonate (PFOS-K)	2795-39-3
	(PFOS-Li) Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
	(PFOS-NH <sub>4</sub> ) Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH <sub>4</sub> )	29081-56-9
	(PFOS-NH(OH) <sub>2</sub> ) Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) <sub>2</sub> )	70225-14-8
	(PFOS-N(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> ) Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> )	56773-42-3
	(PFOS-DDA) N-decyl-N,N-dimethyldecyl-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluorooctane-1-sulfonate (PFOS-DDA)	251099-16-8
	(POSF) Perfluorooctane sulfonyl fluoride (POSF)	307-35-7
	(PFOS-Mg) Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4





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(Group Name)	(Substance Name)	CAS No.
PFOS, & (PFOS, its salts & derivatives)	(PFOS-Na) Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
	Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctanesulfonate	71463-74-6
PFOA, & (PFOA, its salts & derivatives)	(Perfluorooctanoic acid) (PFOA)	335-67-1
	(PFOA-Na) Sodium perfluorooctanoate (PFOA-Na)	335-95-5
	(PFOA-K) Potassium perfluorooctanoate (PFOA-K)	2395-00-8
	(PFOA-Ag) Silver perfluorooctanoate (PFOA-Ag)	335-93-3
	(PFOA-F) Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	(APFO) Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	(PFOA-Li) Lithium perfluorooctanoate (PFOA-Li)	17125-58-5



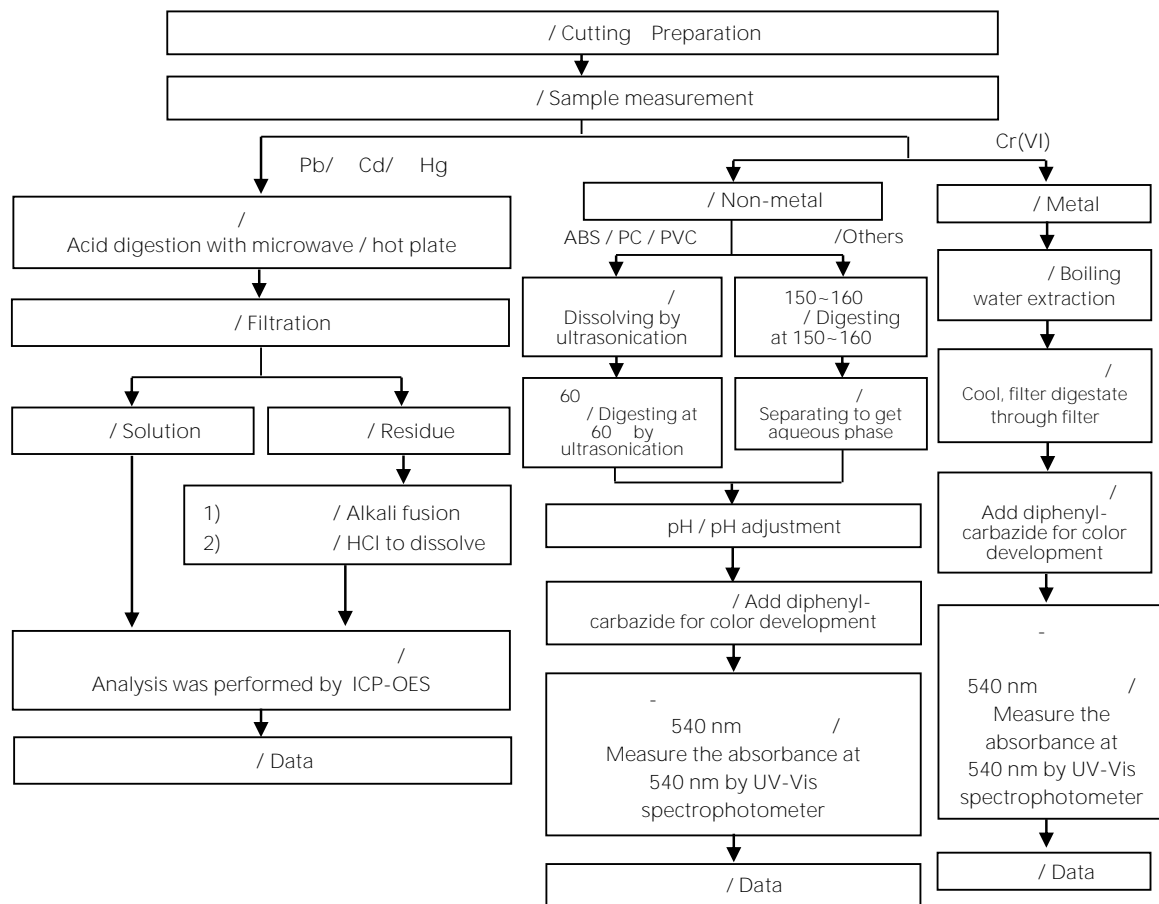
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(EVERLIGHT ELECTRONICS CO., LTD.)  
6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

## / Analytical flow chart of heavy metal

These samples were dissolved totally by pre-conditioning method according to below flow chart.

Cr<sup>6+</sup> test method excluded





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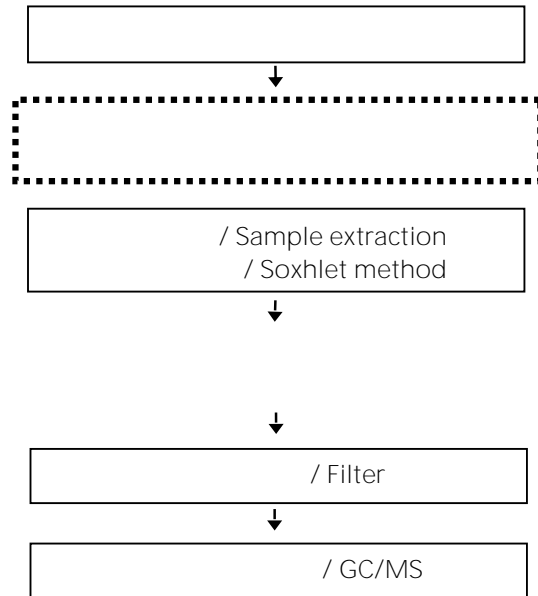
(EVERLIGHT ELECTRONICS CO., LTD.)  
6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

/ Analytical flow chart - PBBs/PBDEs

/ First testing process

/ Optional screen process

/ Confirmation process





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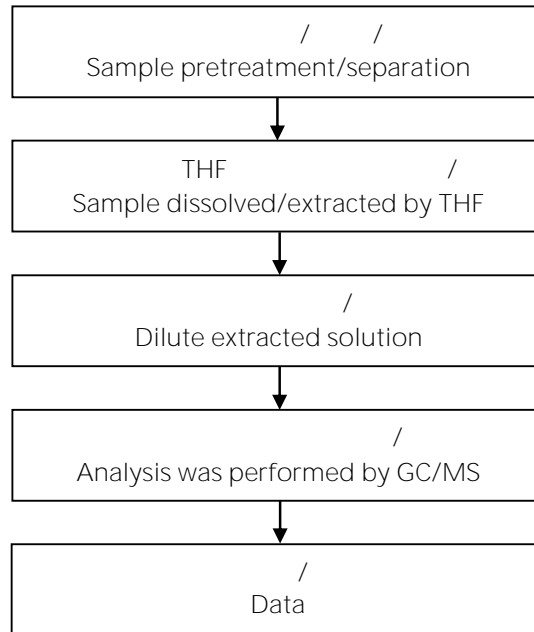
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/ Analytical flow chart - Phthalate

/Test method: IEC 62321-8





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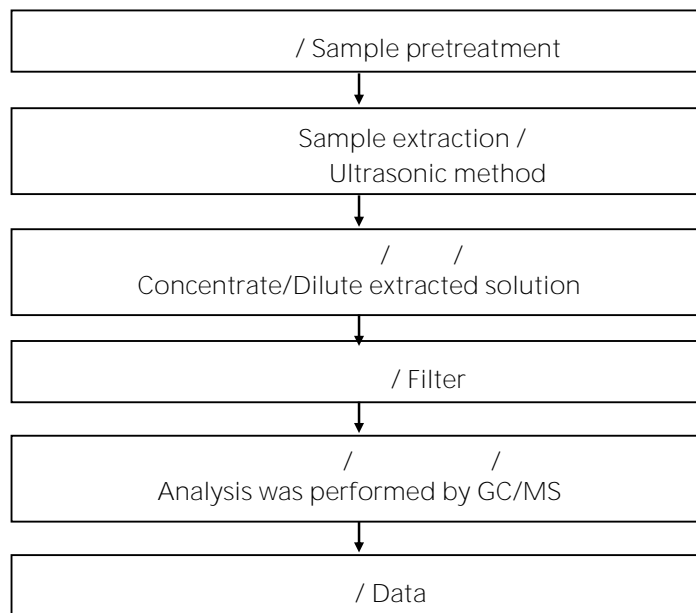
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/ Analytical flow chart - HBCDD





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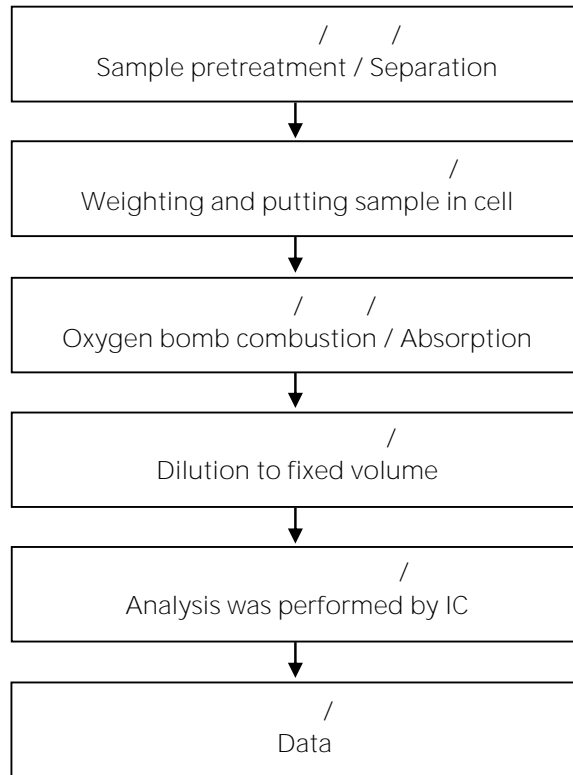
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/ Analytical flow chart - Halogen





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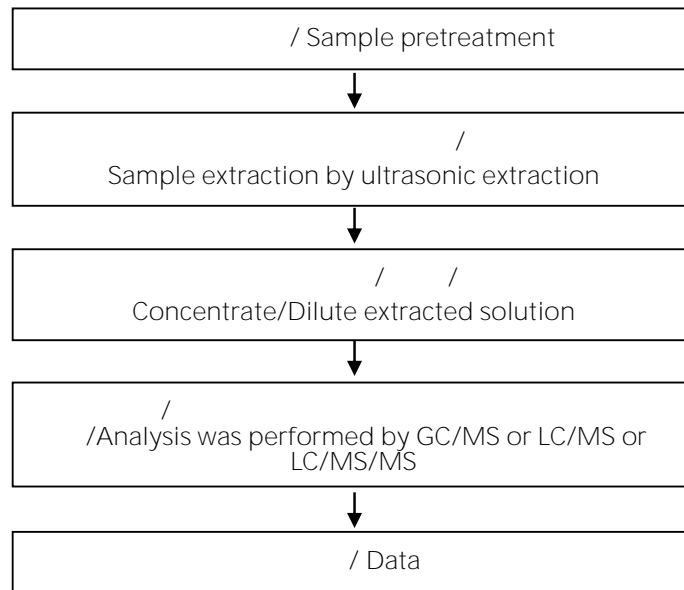
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( / / ) / Analytical flow  
chart - PFAS (including PFOA/PFOS/its related compound, etc.)





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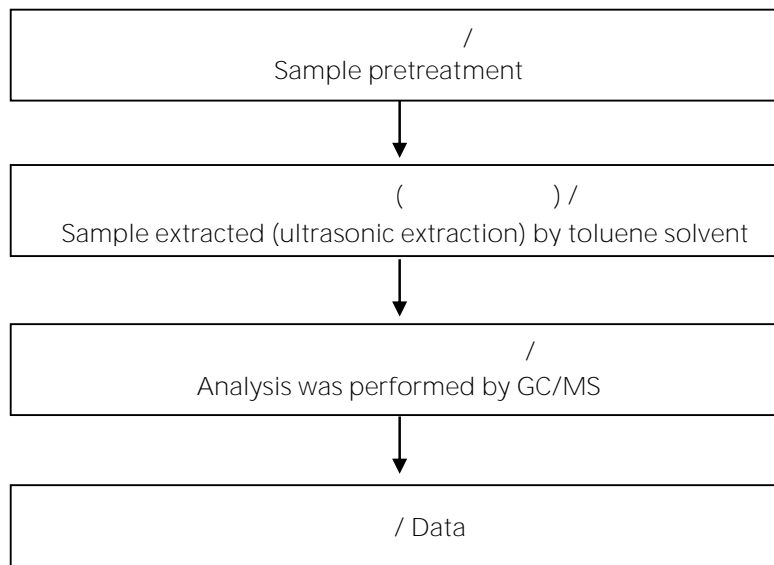
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/  
Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)







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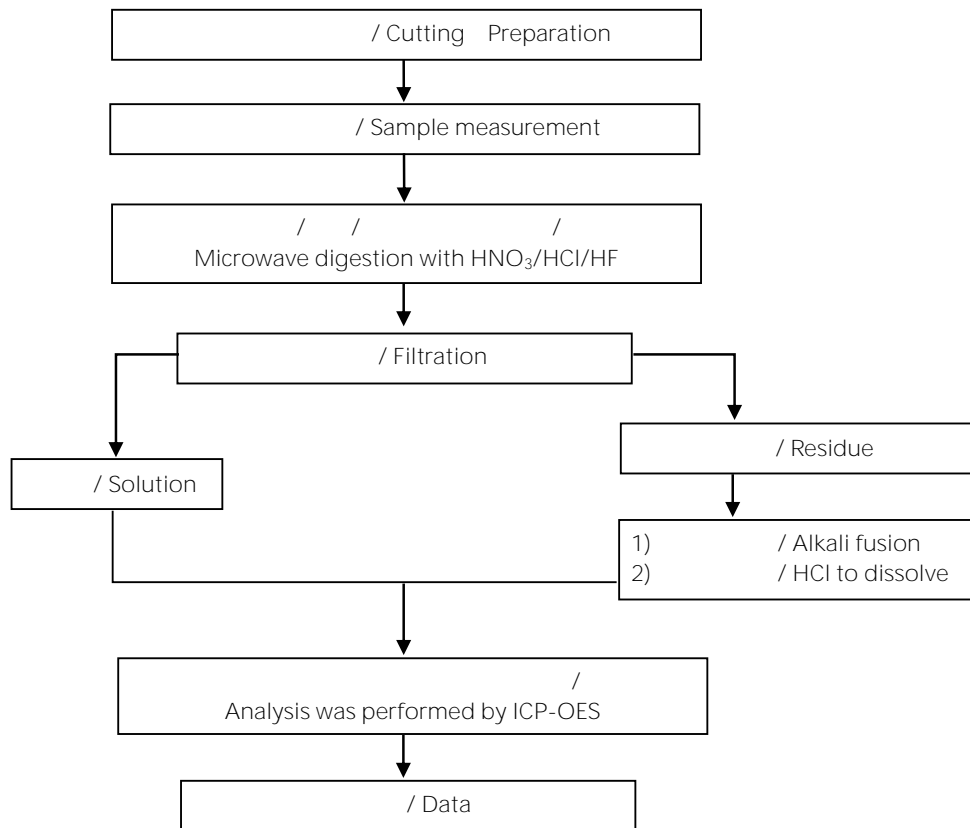
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( ) / Analytical flow chart of elements (Heavy metal included)

These samples were dissolved totally by pre-conditioning method according to below flow chart.

/Reference method US EPA 3051A US EPA 3052



\* US EPA 3051A

/ US EPA 3051A method does not add HF.



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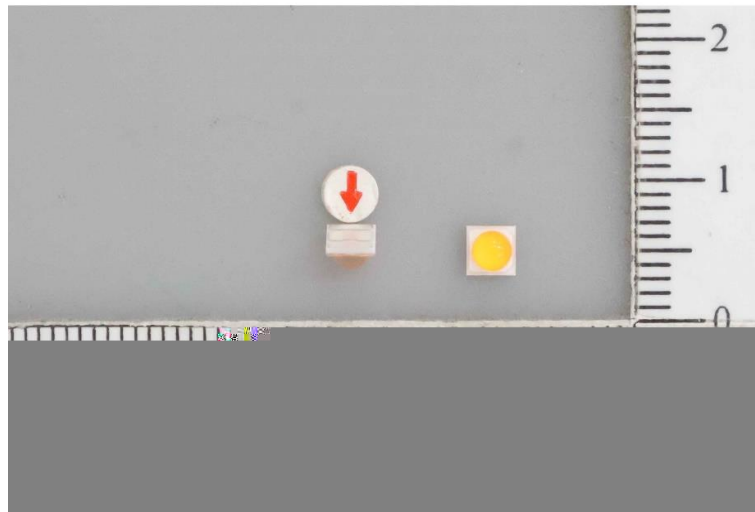
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\* / \*

(The tested sample / part is marked by an arrow if it's shown on the photo.)

## ETR24305689 NO.2



\*\* (End of Report) \*\*

