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Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
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	
Type	HIGH POWER LED 2X
Supplier Company Name	EVERLIGHT
Address	6-8, ZHONGH , SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN
Tel/Fax/Email	886-2685-66
	886-2685-66
	MAIL: allenchia ght.com
Contact Person	
REPORT NO	LIGHT-HIGH LED EHP A2X SERIES ding Produc 23/RGB33-P01/TR-SGS-15-Sep-2023
PRODUCT INFORMATION	
Item/component Sample Description	notive exter ng
Quantity (numbers or weight)	g
EVERLIGHT P/N	POWER LED 2X SERIES ing Produc A23/RGB33-P01/TR
Date Code/ Lot No	16A1802V
Country of Origin	AN
TEST INFORMATION	
Sample preparation	NG
Test method	IEC 62321, n: BS EN 14582
	, Hg: 2 mg/ s/PBDEs: 5 mg/kg, Halogen: 50 mg/kg
Date (Sample Submitted By)	(EVERLIGHT ELECTRONICS CO., LTD.)

Date (Sample Receiving Date) ep-2023
Date (Testing Period) ep-2023 to -2023

Test Results) : (Pl er to following pages).

Jerry Chang

SGS TAIWAN LTD

CHECK REPORT
PIN CODE: A35A415F

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S 2 Annex II (EU) 2015/863
, DBP, BBP, DEHP, DIBP (As specified by
ient, with refer R /EU Annex II and amending Directive (EU)
15/863 to det C um, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP,
HP, DIBP cont t ubmitted sample(s).)
(As specified by client, to test PAHs and
r item(s).)

(Conclusion) : (, DBP, BBP,
, DIBP RoHS 2011/65/EU Annex II (EU) 2015/863
(Base performed tests on submitted sample(s), the test results
dmium, Lea ury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with
nits as set Directive (EU) 2015/863 amending Annex II to Directive
65/EU.)

(2 (AfPS) GS PAHs
(Based upon the performed tests on the submitted
e(s), the te ts of PAHs (15 items) comply with the limits of PAHs
ement (Ca 3) Other consumer products as set by German
nittee on P Safety (AfPS) GS PAHs.)

(Test Part Descripti
o.1 : (BODY)
o.2 : NG LAYER ER COLORED METAL PIN)
o.3 : MATERIAL ER COLORED METAL PIN)
o.4 : (ILVER COL ETAL PIN (INCLUDING THE PLATING LAYER))

(Test Results)

(Test Items)	(M	(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
mium (Cd))	IEC 62321-5: ference to IEC	mg/kg	2	n.d.	---	---	100
(P))	62321-5: 2013, a vas performed by ICP-OES.)	mg/kg	2	n.d.	---	---	1000

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		(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
(ury (Hg))	IEC 62321-4: A 2017 (With rence to IEC 6 3+ AMD1: , analysis wa d by ICP-	mg/kg	2	n.d.	---	---	1000
(VI) (Hexavalent m Cr(VI))	EC 62321-7- - reference to 321-7-2: 20 ysis was med by UV	mg/kg	8	n.d.	---	---	1000
Cadmium (Cd))	-5: 2013 (IEC 62321-5:	mg/kg	2	---	n.d.	---	100
Lead (Pb))	pplication c ed digestion by e etching, a as performed -OES.)	mg/kg	2	---	3.33	---	1000
(Mercury (Hg))	-4: 2013+ 2017 C 62321-4: MD1: 2017 ation of mo gestion by e etching, a as performed -OES.)	mg/kg	2	---	n.d.	---	1000
Cadmium (Cd))	C 62321-5: (W ence to IEC	mg/kg	2	---	---	n.d.	100
Lead (Pb))	-5: 2013, an s performed by ES.)	mg/kg	2	---	---	3.43	1000
Mercury (Hg))	EC 62321-4: MD1: 2017 (With rence to IEC 6 2013+ AMD1: 7, analysis was ed by ICP- S.)	mg/kg	2	---	---	n.d.	1000

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(M	(Unit)	MDL	No.1	No.2	No.3	(Limit)
IEC 62321-7-1 -	µg/cm²	0.1	---	n.d.	n.d.	-
ice to IEC 21-7-1: 2015, a performed V-VIS.)						
Monobromobiphenyl)	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
C 62321-6: /	mg/kg	5	n.d.	---	---	-
(With e to IEC 62321-	mg/kg	-	n.d.	---	---	1000
5, analysis ormed by S.)	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	5	n.d.	---	---	-
	mg/kg	-	n.d.	---	---	1000

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			(Unit)	MDL	(Result)			(Limit)
					No.1	No.2	No.3	
(BBP) (Butyl benzyl phthalate (BBP))	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	1000
(DBP) (Dibutyl phthalate (DBP))	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	1000
(2-ethylhexyl) phthalate (DEHP)	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	1000
(DIBP)	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	1000
(DIDP)	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	-
(DINP)	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	-
(DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	-
(DNPP) (Di-n-pentyl phthalate (DNPP)) (CAS No.: 131-18-0)	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	-
(DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No.: 84-75-3)	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	-
(2-ethylhexyl) phthalate (DEHP) (Bis(2-ethylhexyl) phthalate (DEHP)) (CAS No.: 117-81-7)	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	-
(DMP) (Dimethyl phthalate (DMP)) (CAS No.: 131-11-3)	IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	/	mg/kg	50	n.d.	---	---	-

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		(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
(DIOP)	IEC 62321-8: 2 / (With refe 2321-8: 7, analysis was by GC/MS.)	mg/kg	50	n.d.	---	---	-
	EC 62321-8: 2 / (With refe C 62321-8: analysis was d by GC/MS.)	mg/kg	50	n.d.	---	---	-
	C 62321: 20 / (With refere C 62321: 2008, is was perfo GC/MS.)	mg/kg	5	n.d.	---	---	-
		mg/kg	50	262	---	---	-
	EN 14582: ith referen EN 14582: 2016, s was perfo IC.)	mg/kg	50	n.d.	---	---	-
		mg/kg	50	n.d.	---	---	-
		mg/kg	50	n.d.	---	---	-
	EN/TS 1596 (With ce to CEN/TS 8: 2010, anal performed by S/MS.)	mg/kg	0.01	n.d.	---	---	-
	CEN/TS 1596 (With ce to CEN/TS 968: 2010, anal performed by /MS/MS.)	mg/kg	0.01	n.d.	---	---	-
(um (Be)) (CAS 7440	US EPA 3052: (W ence to US EPA 3052: 1996, analys erformed by ICP-OES.)	mg/kg	2	n.d.	---	---	-

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		MDL	(Result)			(Limit)
(M	(Unit)		No.1	No.2	No.3	
lycyclic Aromati						
Hy ns) (PAHs)						
enzo[a]pyrene) (CAS N	mg/kg	0.2	n.d.	---	---	Δ
5(						
Benzo[e]pyrene) (CAS No	mg/kg	0.2	n.d.	---	---	Δ
1						
enzo[a]anthracene) (CAS	mg/kg	0.2	n.d.	---	---	Δ
5-3)						
(Benzo[b]fluoranthene)	mg/kg	0.2	n.d.	---	---	Δ
.: 205-99-2)						
(Benzo[j]fluoranthene)	mg/kg	0.2	n.d.	---	---	Δ
.: 205-82-3)						
(Benzo[k]fluoranthene)	mg/kg	0.2	n.d.	---	---	Δ
.: 207-08-9)						
PS GS 201						
sene) (CAS No.: 218-01-9)	mg/kg	0.2	n.d.	---	---	Δ
erence to AfPS						
19:01 PAK, was	mg/kg	0.2	n.d.	---	---	Δ
med by GC						
	mg/kg	0.2	n.d.	---	---	Δ
ndeno[1,2,3-c,d]pyrene) (CA	mg/kg	0.2	n.d.	---	---	Δ
-39-5)						
	mg/kg	0.2	n.d.	---	---	Δ
	mg/kg	0.2	n.d.	---	---	Δ
nthrene) (CAS No.: 85-01-	mg/kg	0.2	n.d.	---	---	Δ
	mg/kg	0.2	n.d.	---	---	Δ
	mg/kg	0.2	n.d.	---	---	Δ
	mg/kg	-	n.d.	---	---	Δ

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			(Unit)	MDL	(Result)	(Limit)
					No.4	
(...ium (Be)) (CAS N... 74...	US EPA 3050B (...e to US 3050B: 1996, ...performed ...P-OES.)		mg/kg	2	n.d.	-

...e)
...g/kg = ppm 0.1wt% = ...000ppm
...DL = Method Detection L...
...d. = Not Detected (...MDL / Less ...L
..." = Not Regulated (
..." = Not Conducted (
...2) =
0.13 µg/... . / The sample is positive for Cr(VI) if the Cr(VI) ...oncentration is greater tha...g/cm². The ...e coating is considered to contain Cr(VI).
n.d. (...µg/cm²) . / The sample is negative for Cr(VI) if Cr(VI) is ...d. (concentration less thar...g/cm²). The ...g is considered a non-Cr(VI) based coating
0.10 ...cm² . / The result between 0.10 µg/cm² and ...13 µg/cm² is considered t...onclusive ...dable coating variations may influence the determination.
ILAC-G8...9 ...=0)
...otherwise ...the decision rule for conformity reporting is based on ...mary Statement for Simpl...tance Rule ...tated in ILAC-G8:09/2019. According to this rule, the ...dgement of conformity is ...on the com...test results with limits.)

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PAHs
Δ PAHs
rman comm Product Safety A ents

(Parameter)	1 (Category 1)	2 (Category 2)		3 (Category 3)	
	(30) 2009/48/EC 3 (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 2 30 ( )(Materials not covered by Category 1 or 2, with intended or foreseeable short-term skin contact (30 seconds))	
		a. 14 (Use by children under 14)	b. (Other consumer products)	a. 14 (Use by children under 14)	b. (Other consumer products)
Naphthalene	< 1	< 2		< 10	
Phenanthrene	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Anthracene					
Fluoranthene					
Pyrene					
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[k]fluoranthene	< 0.2				

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PFAS R

PFAS P PFAS

PFAS PFAS)

uantitative technolo S is to analyze ci ructure of PFAS substances. However, PFAS acid and its salts e same carbon num have the sam ucture that can be identified. The tested results of the zed specific structure d distinguished the contribution from PFAS acid or its salts. Therefore, the d results display the sur entrations of and its salts with the same carbon number group. The centration of PFAS substa ne below tab en included in the tested results, please refer to the table for vant information: (The list substances a es only, it do not include all PFAS salts with the same carbon mber group.))

lassification of Substanc Concentration)	(Su e Name)	CAS No.
erfluorooctane sulfonates an s salts (PFOS and its salts) AS No.: 1763-23-1 and its lts)	(P ium perfluor ulfonate (PFOS-K)	2795-39-3
	(P rooctanesul , lithium salt (PFOS-Li)	29457-72-5
	(P) rooctanesu cid, ammonium salt NH_4)	29081-56-9
	OS-NH$(OH)_2$) rooctane su ethanolamine salt $NH(OH)_2$)	70225-14-8
	OS-N$(C_2H_5)_4$) orooctanesu cid,tetraethylammonium PFOS-N$(C_2H_5$	56773-42-3

Test Report

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ncentration	(Su e	CAS No.
rooctane sulfonates ts (PFOS and its salts) No.: 1763-23-1 and its)	ecyl-N,N-dimeth inium 2,2,3,3,4,4,5,5, adecafluorooct ate (PFOS-DDA)	251099-16-8
	(P orooctane su de (POSF)	307-35-7
	(P rooctanesulf magnesium salt -Mg)	91036-71-4
	(P rooctanesulf , sodium salt (PFOS-Na)	4021-47-0
erfluorooctanoic acid and its lts (PFOA and its salts) AS No.: 335-67-1 and its lts)	(PFOA perfluorooc (PFOA-Na)	335-95-5
	(PFOA um perfluor te (PFOA-K)	2395-00-8
	(PFOA erfluorooctа OA-Ag)	335-93-3
	(PFOA-F rooctanoyl f FOA-F)	335-66-0
	(APFO nium pentad octanoate (APFO)	3825-26-1
	(PFOA m perfluorooc (PFOA-Li)	17125-58-5

Test Report

or

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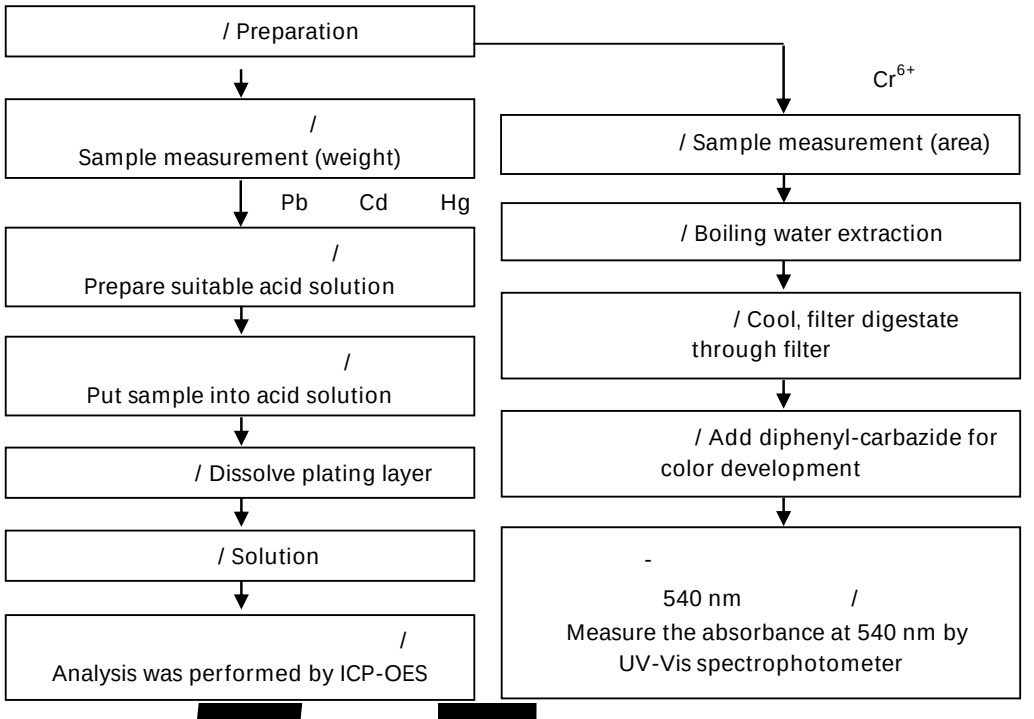
/ Flow chart of stripping method for metal analysis

/ The plating layer of samples were dissolved totally by pre-conditioning method according to below flow chart.

Cr^{6+} test method excluded



Test Report

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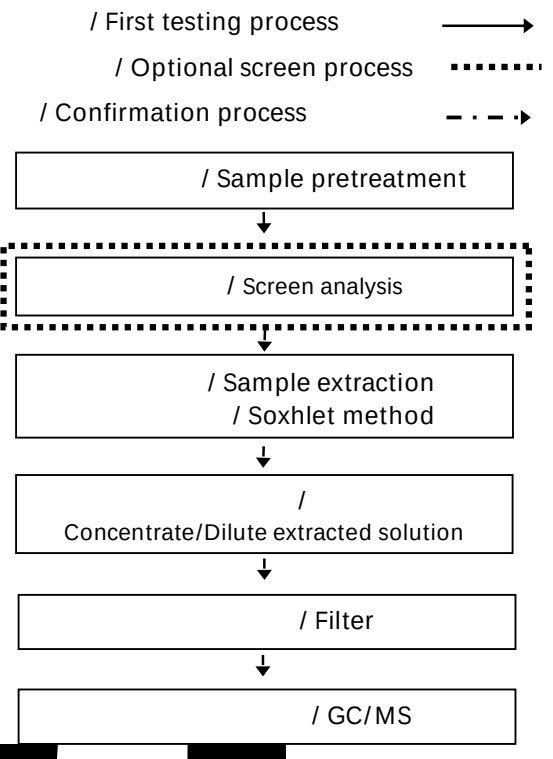
/ / Analytical flow chart - PBBs/PBDEs



Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
[redacted]

/ Analytical flow chart - Phthalate

/Test method: IEC 62321-8

/ /
Sample pretreatment/separation

↓

THF /
Sample dissolved/extracted by THF

↓

/
Dilute extracted solution

↓

/
Analysis was performed by GC/MS

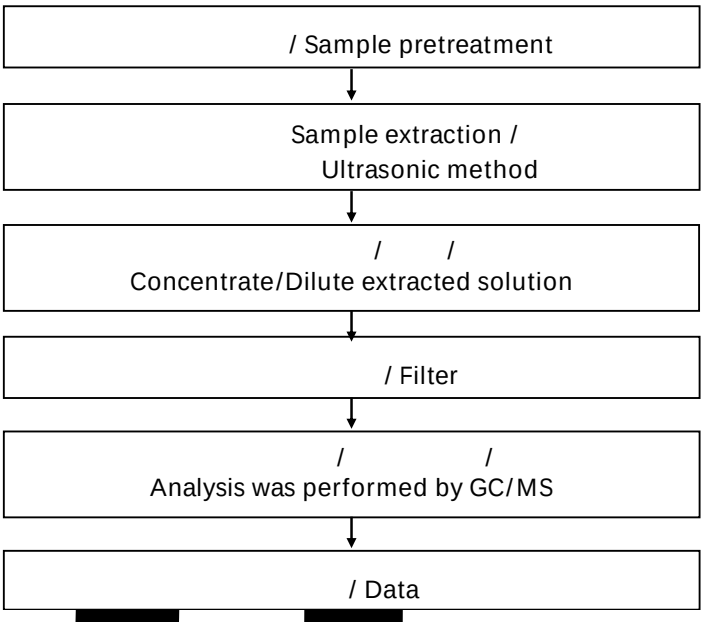
[redacted]

Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
[illegible]O. 6-8, ZHONGHUA RD., SHULIN DIST., [illegible]TAIPEI CITY 23860, TAIWAN)

[illegible]

/ Analytical flow chart - HBCDD



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(EVERLIGHT ELECTRONICS CO., LTD.)
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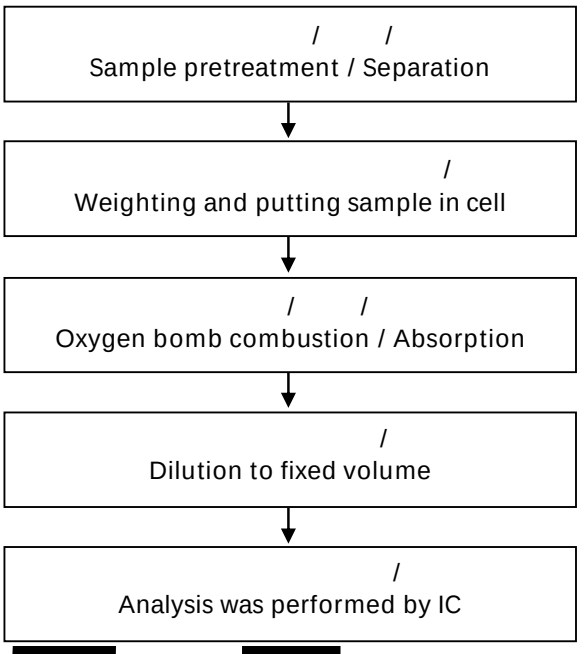
/ Analytical flow chart - Halogen



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

/ Sample pretreatment

↓

/
Sample extraction by ultrasonic extraction

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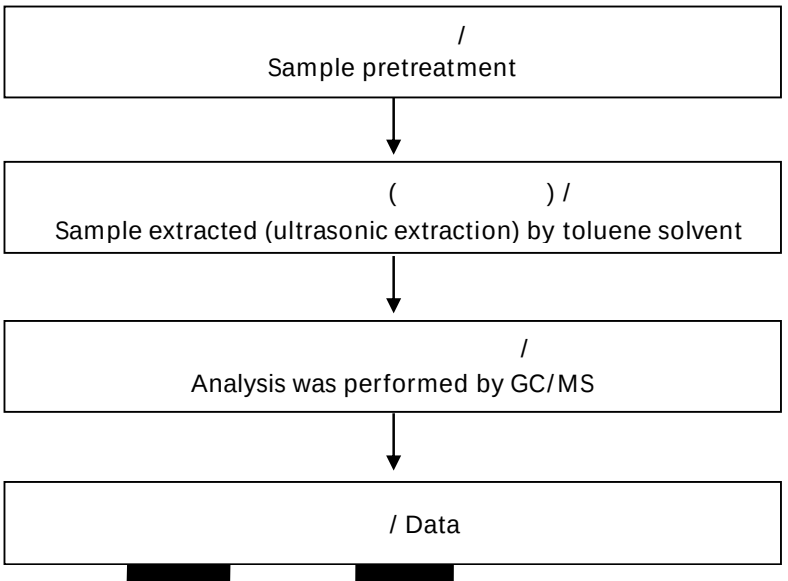
/

Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)



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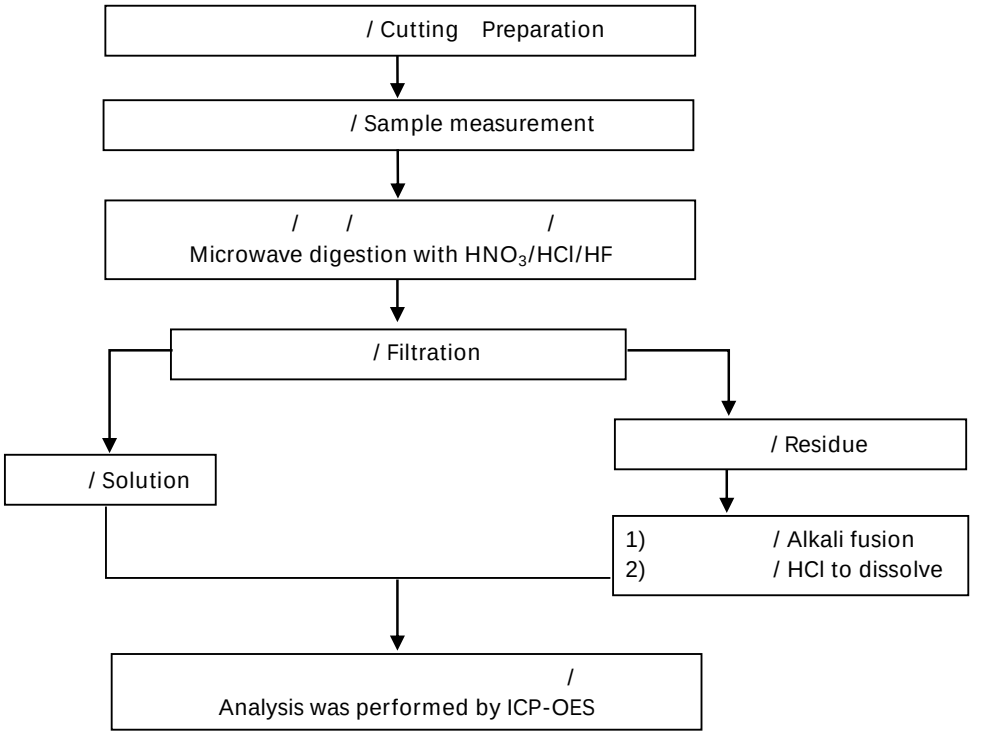
( ) / Analytical flow chart of elements (Heavy metal included)

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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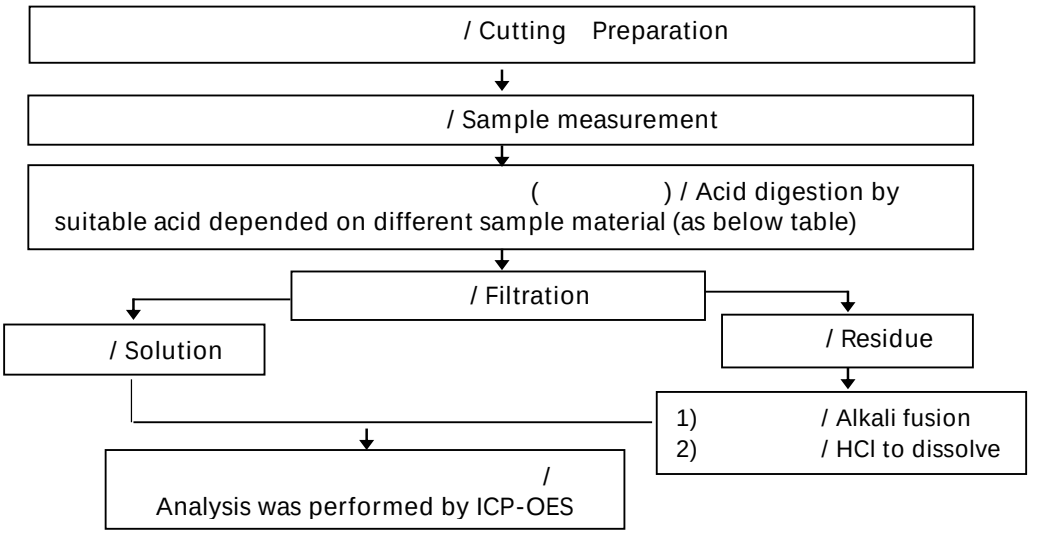
ICP-OES

(Flow chart of digestion for the elements analysis performed by ICP-OES)

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



, , , / Steel, copper, aluminum, solder	, , , , / Aqua regia, HNO_3, HCl, HF, H_2O_2
/ Glass	, / HNO_3,HF
, , , / Gold, platinum, palladium, ceramic	/ Aqua regia
/ Silver	/ HNO_3
/ Plastic	, , , / H_2SO_4, H_2O_2, HNO_3, HCl
/ Others	/ Added appropriate reagent to total digestion

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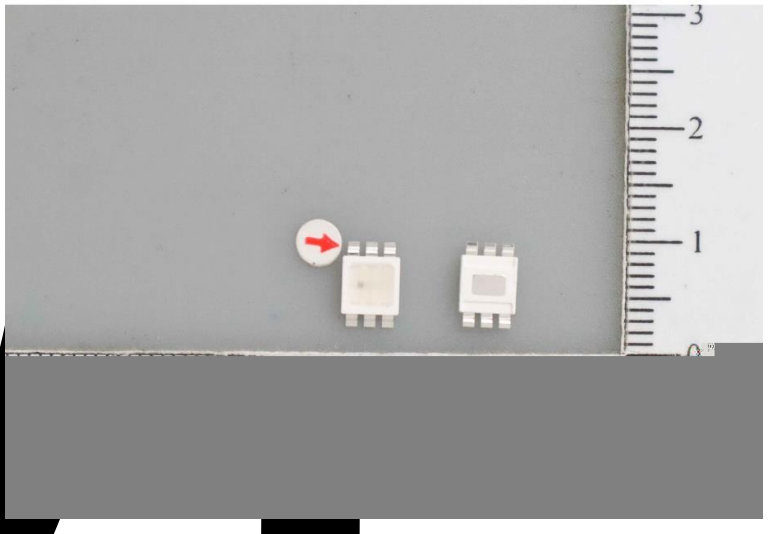
(EVERLIGHT ELECTRONICS CO., LTD.)
[redacted]

[redacted]

[redacted]

ETR23900021 NO.2



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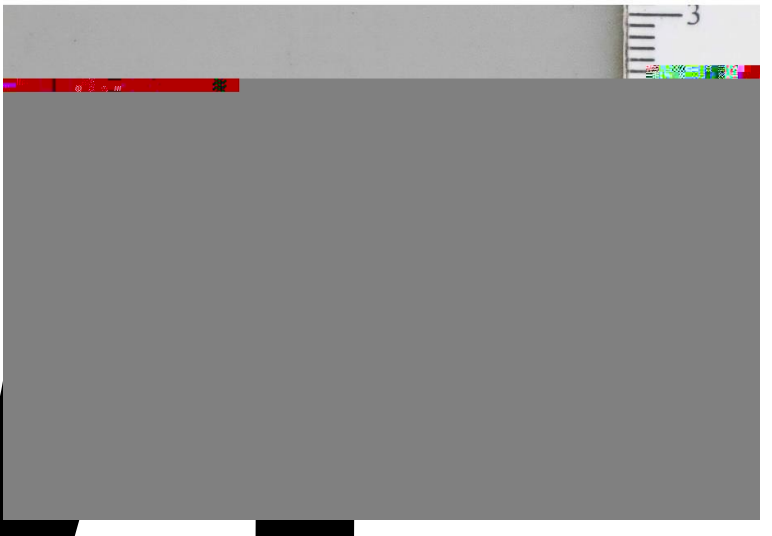
ETR23900021 NO.4



** (End of Report) **