

# 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)

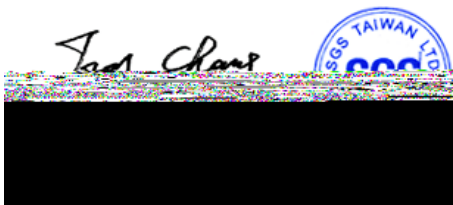
BASIC INFORMATION	
Type of Product	IRM
Supplier Company Name	EVERLIGHT
Address	NO.6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN
Tel / Fax / Email	TEL:886-2685-6688
	FAX:886-2685-6699
	E-MAIL: allenchiang@everlight.com
Contact Person	Allen
EVERLIGHT REPORT NO	EVERLIGHT-IRM-Hxxx / Vxxx SERIES(L/F) Sampling Product : IRM-V838J15-SGS-15-Jun-2023
PRODUCT INFORMATION	
Product/component Sample description	Receiver
Quantity (numbers or weight)	0.0855 g
EVERLIGHT P/N	IRM-Hxxx / Vxxx SERIES(L/F) Sampling Product : IRM-V838J15
Product Lot No	Y230429V8090AF15
Country of Origin	CHINA
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) : 02-Jun-2023

(Testing Period) : 02-Jun-2023 to 15-Jun-2023

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



PIN CODE: F600CC44

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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 sample(s).)

(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 : (BODY)
- No.2 : (PLATING LAYER OF SILVER COLORED METAL PIN)
- No.3 : (BASE MATERIAL OF SILVER COLORED METAL PIN)
- No.4 : ( ) (SILVER COLORED METAL PIN (INCLUDING THE PLATING LAYER))

(Test Results)

(Test Items)	(Method)	(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
(Cd) (Cadmium (Cd))	IEC 62321-5: 2013 (With reference to IEC	mg/kg	2	n.d.	---	---	100
(Pb) (Lead (Pb))	62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	---	---	1000

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(Test Items)	(Method)	(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
(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.	---	---	1000
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.	---	---	1000
(Cd) (Cadmium (Cd))	IEC 62321-5: 2013 (IEC 62321-5: 2013 application of modified digestion by surface etching, analysis was performed by ICP-OES.)	mg/kg	2	---	n.d.	---	100
(Pb) (Lead (Pb))		mg/kg	2	---	24.2	---	1000
(Hg) (Mercury (Hg))	IEC 62321-4: 2013+ AMD1: 2017 (IEC 62321-4: 2013+ AMD1: 2017 application of modified digestion by surface etching, analysis was performed by ICP-OES.)	mg/kg	2	---	n.d.	---	1000
(Cd) (Cadmium (Cd))	IEC 62321-5: 2013 (With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	---	---	n.d.	100
(Pb) (Lead (Pb))		mg/kg	2	---	---	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.	1000

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	(Method)	(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
(Hexavalent Chromium) Cr(VI) (CAS No.: 18540-29-9) (#2)	IEC 62321-7-1: 2015 (With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)	- µg/cm <sup>2</sup>	0.1	---	n.d.	n.d.	-
(Dibromobiphenyl)		mg/kg	5	n.d.	---	---	-
(Tribromobiphenyl)		mg/kg	5	n.d.	---	---	-
(Tetrabromobiphenyl)		mg/kg	5	n.d.	---	---	-
(Pentabromobiphenyl)		mg/kg	5	n.d.	---	---	-
(Hexabromobiphenyl)		mg/kg	5	n.d.	---	---	-
(Heptabromobiphenyl)		mg/kg	5	n.d.	---	---	-
(Octabromobiphenyl)		mg/kg	5	n.d.	---	---	-
(Nonabromobiphenyl)		mg/kg	5	n.d.	---	---	-
(Decabromobiphenyl)		mg/kg	5	n.d.	---	---	-
(Sum of PBBs)	IEC 62321-6: 2015 (With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	/ mg/kg	-	n.d.	---	---	1000
(Tetrabromodiphenyl ether)		mg/kg	5	n.d.	---	---	-
(Pentabromodiphenyl ether)		mg/kg	5	n.d.	---	---	-
(Hexabromodiphenyl ether)		mg/kg	5	n.d.	---	---	-
(Heptabromodiphenyl ether)		mg/kg	5	n.d.	---	---	-
(Octabromodiphenyl ether)		mg/kg	5	n.d.	---	---	-
(Nonabromodiphenyl ether)		mg/kg	5	n.d.	---	---	-
(Decabromodiphenyl ether)		mg/kg	5	n.d.	---	---	-
(Sum of PBDEs)		mg/kg	-	n.d.	---	---	1000

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(Test Items)	(Method)	(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- ) (DEHP) (Di-(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) (Diisobutyl phthalate (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) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-40-0, 68515-49-1)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	---	---	-
(DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12-0, 68515-48-0)	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- ) (DMEP) (Bis(2-methoxyethyl) phthalate (DMEP)) (CAS No.: 117-82-8)	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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(Test Items)	(Method)	(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
(DIOP) (Diisooctyl phthalate (DIOP)) (CAS No.: 27554-26-3)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	---	---	-
(DNNP) (Di-n-nonyl phthalate (DNNP)) (CAS No.: 84-76-4)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	---	---	-
(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.	---	---	-
(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	630	---	---	-
(Cl) (Chlorine (Cl)) (CAS No.: 22537-15-1)		mg/kg	50	74.9	---	---	-
(Br) (Bromine (Br)) (CAS No.: 10097-32-2)		mg/kg	50	n.d.	---	---	-
(I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.	---	---	-
(PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	CEN/TS 15968: 2010 (With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.	---	---	-
(PFOA and its salts) (CAS No.: 335-67-1 and its salts)	CEN/TS 15968: 2010 (With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	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.	---	---	-



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(Test Items)	(Method)	(Unit)	MDL	(Result)	(Limit)
				No.4	
(Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	US EPA 3050B: 1996 (With reference to US EPA 3050B: 1996, analysis was performed by ICP-OES.)	mg/kg	2	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. "---" = Not Conducted ( )
6. (PFOS and its salts including) :  
CAS No.: 1763-23-1, 2795-39-3, 29457-72-5, 29081-56-9, 70225-14-8, 56773-42-3, 251099-16-8, 307-35-7, 91036-71-4, 4021-47-0 and others.
7. (PFOA and its salts including) :  
CAS No.: 335-67-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0, 3825-26-1 and others.
8. (#2) =
  - a. 0.13 µg/cm<sup>2</sup> . / The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 µg/cm<sup>2</sup>. The sample coating is considered to contain Cr(VI).
  - b. n.d. ( 0.10 µg/cm<sup>2</sup>) . / The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered a non-Cr(VI) based coating
  - c. 0.10 0.13 µg/cm<sup>2</sup> . / The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> is considered to be inconclusive - unavoidable coating variations may influence the determination.
9. 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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Remark

(A fPS): GS PAHs

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

(Parameter)	1 (Category 1)	2 (Category 2)		3 (Category 3)	
	( $< 30$ ) 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))
		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	$< 0.2$	$< 0.2$	$< 0.5$	$< 0.5$	$< 1$
Benzo[a]pyrene	$< 0.2$	$< 0.2$	$< 0.5$	$< 0.5$	$< 1$
Benzo[e]pyrene	$< 0.2$	$< 0.2$	$< 0.5$	$< 0.5$	$< 1$
Indeno[1,2,3-c,d] pyrene	$< 0.2$	$< 0.2$	$< 0.5$	$< 0.5$	$< 1$
Dibenzo[a,h]anthracene	$< 0.2$	$< 0.2$	$< 0.5$	$< 0.5$	$< 1$
Benzo[g,h,i]perylene	$< 0.2$	$< 0.2$	$< 0.5$	$< 0.5$	$< 1$
15 PAH (Sum of 15 PAH)	$< 1$	$< 5$	$< 10$	$< 20$	$< 50$

(Unit) mg/kg

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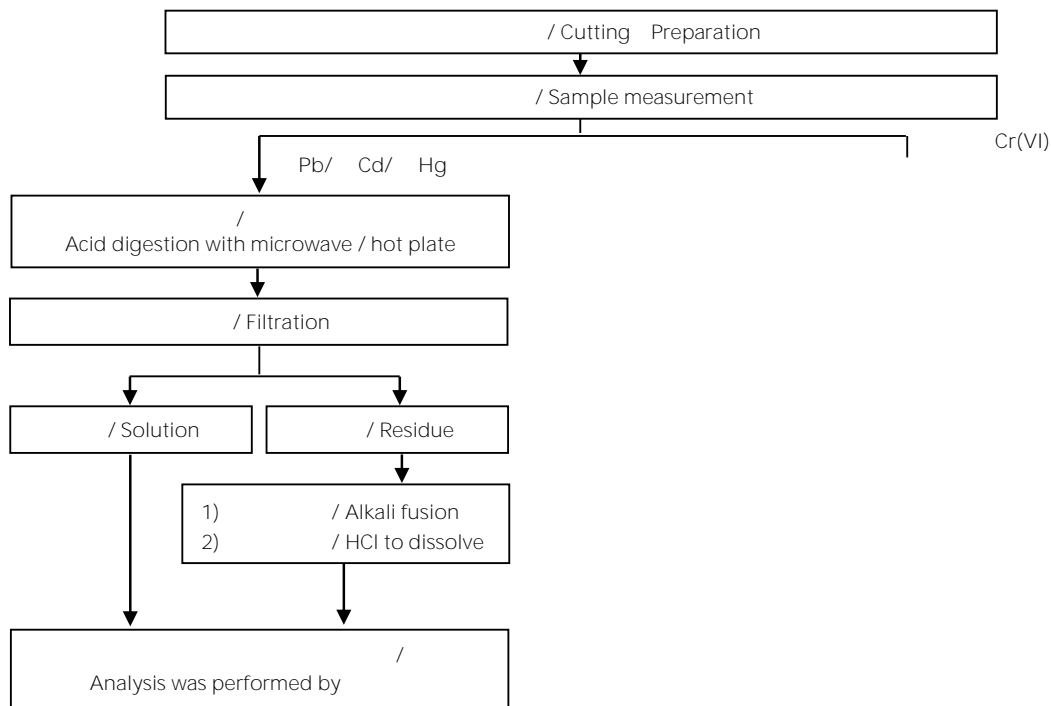
(EVERLIGHT ELECTRONICS CO., LTD.)

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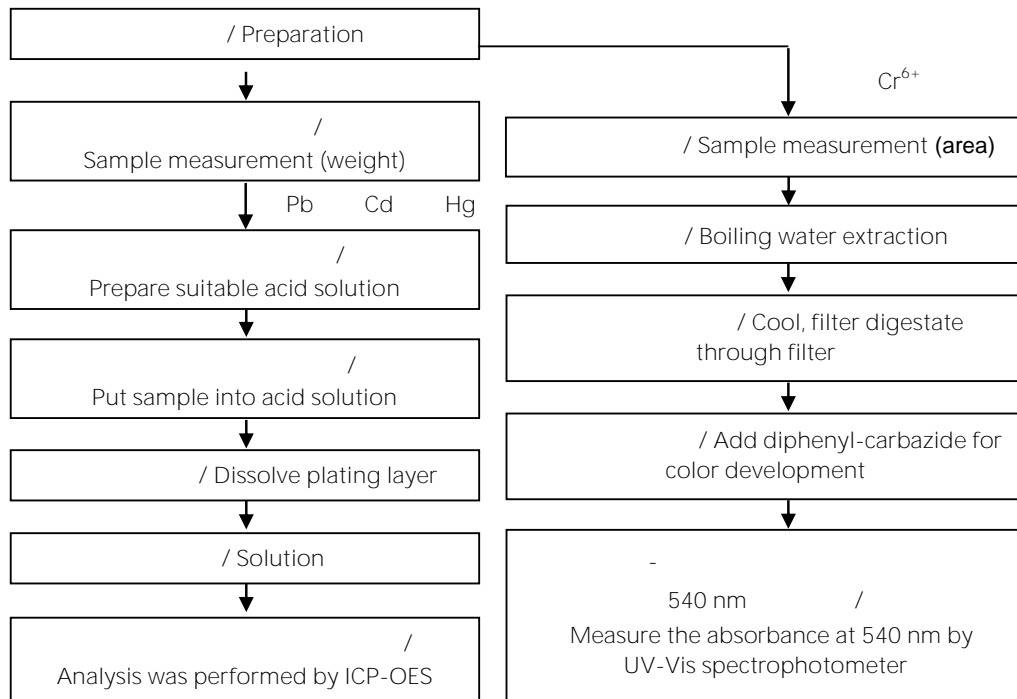
6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

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

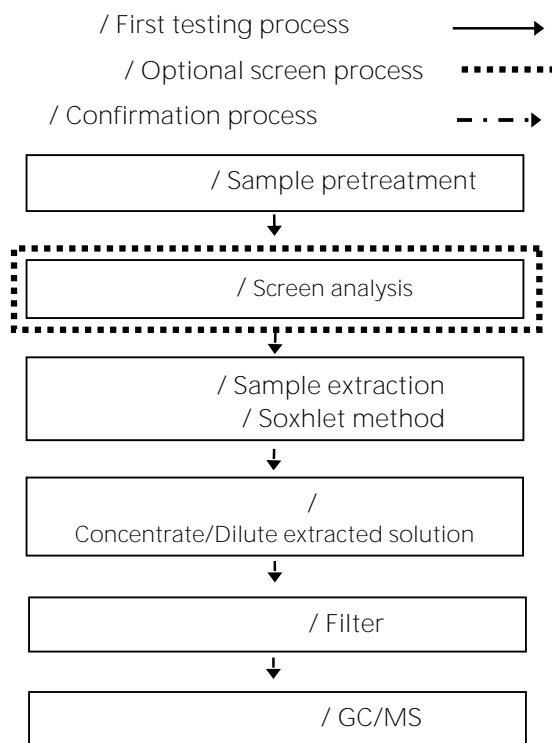


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/ Analytical flow chart - PBBs/PBDEs

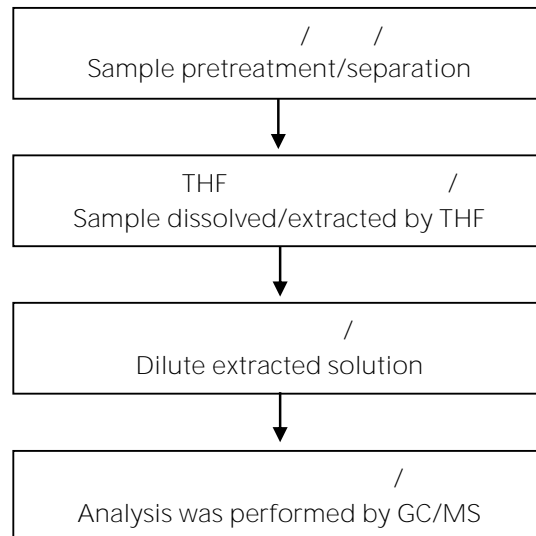


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/ Analytical flow chart - Phthalate

/Test method: IEC 62321-8

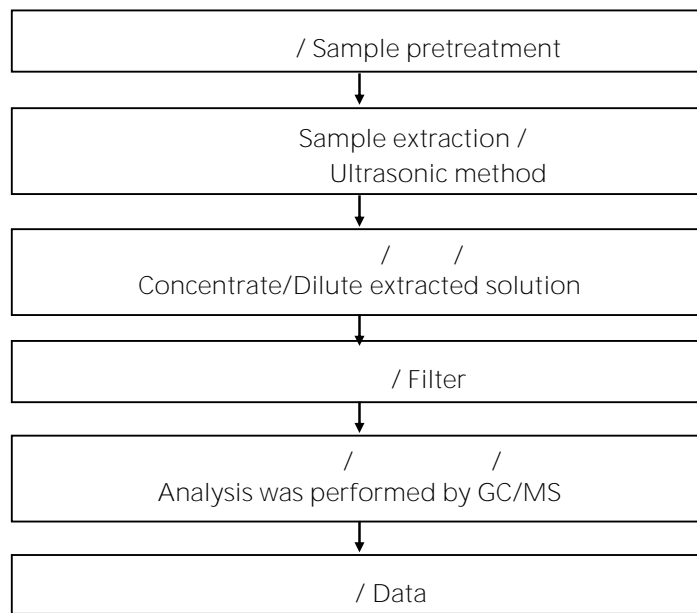


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/ Analytical flow chart - HBCDD

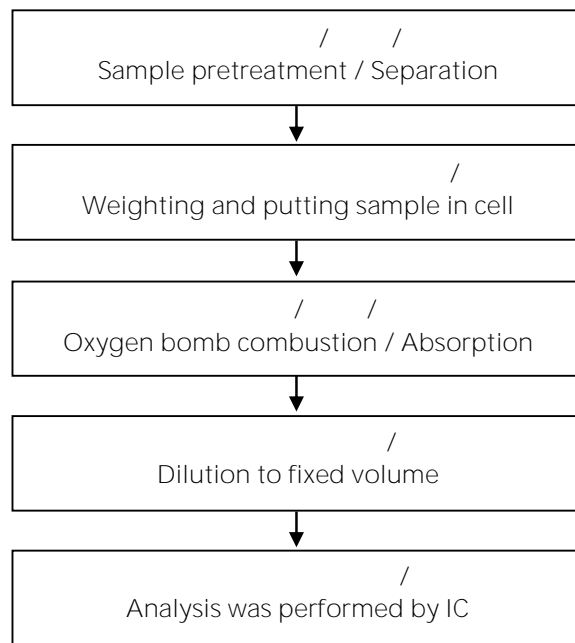


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/ Analytical flow chart - Halogen

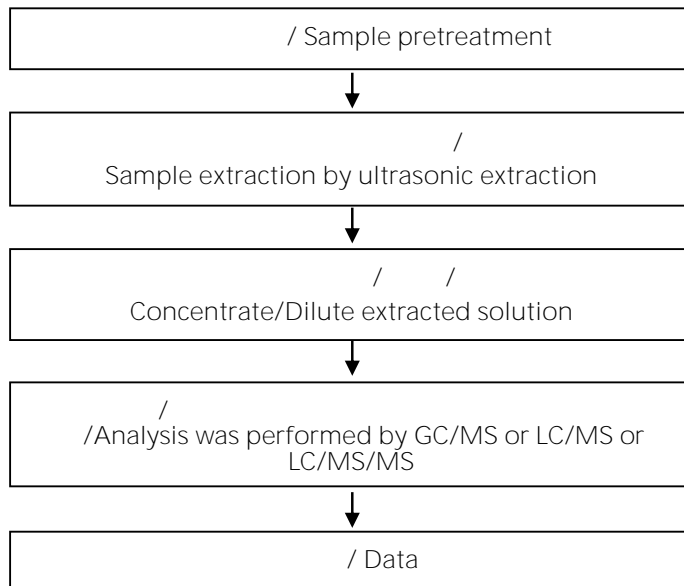


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( / / ) / Analytical flow chart - PFAS (including PFOA/PFOS/its related compound, etc.)

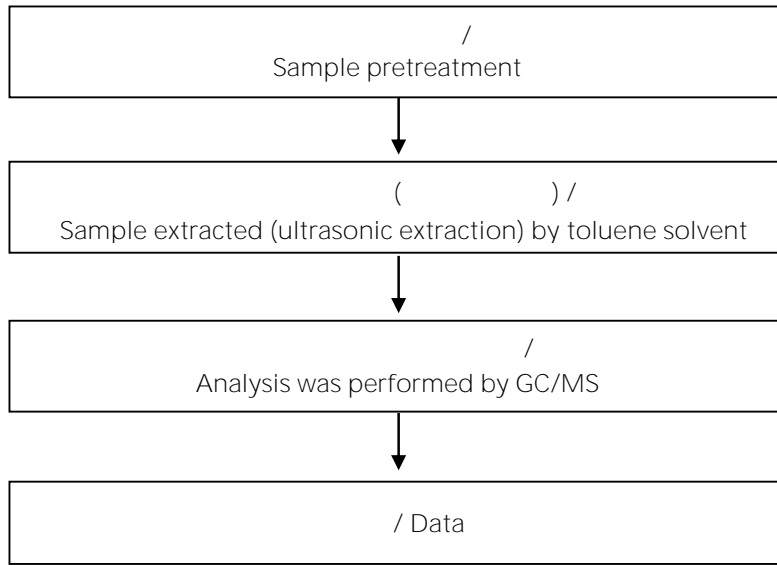




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/  
Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)



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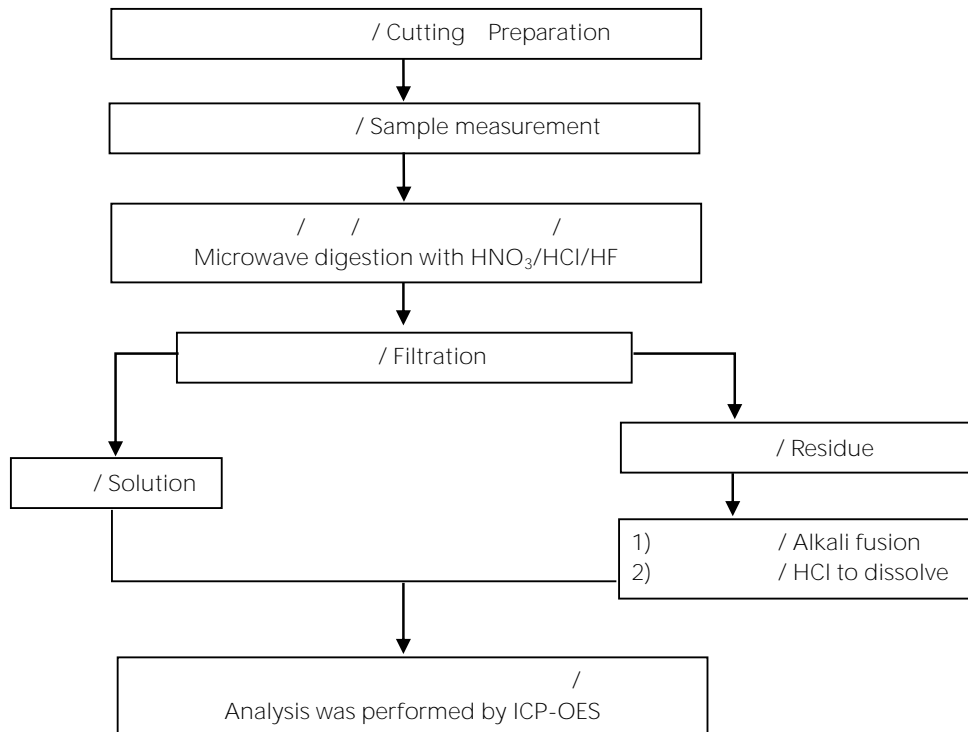
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( ) / Analytical flow chart of elements (Heavy metal included)

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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\* / \*

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

**ETR23600248 NO 2**



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

