Test Report

ARIMA OPTOELECTRONICS CORP.
7 TH, NO. 349, SEC. 2, RENHE ROAD, DASHI, TAOYUAN, TAIWAN,
R. O. C.

No. : CE/2007/45621A
Date : 2007/05/04

The following sample(s) was/were submitted and identified by/on behalf of the client as :

Sample Description	:	ALINGAN
Sample Receiving Date	:	2007/04/23
Testing Period	:	2007/04/23 TO 2007/04/30

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Test Result(s) : Please refer to next page(s).

Daniel Yeh, M.R. / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.

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Test Result(s)

PART NAME NO.1 : ALINGAN

Test Item (s):	Unit	Method	MDL	Result No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321, Ed.1 111/54/CDV. Determination of Cadmium by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321, Ed.1 111/54/CDV. Determination of Lead by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321, Ed.1 111/54/CDV. Determination of Mercury by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321, Ed.1 111/54/CDV. Determination of Hexavalent Chromium for non-metallic samples by UV/Vis Spectrometry.	2	n.d.
Polychlorinated Biphenyls (PCBs) (CAS NO.: 001336-36-3)	mg/kg	With reference to US EPA 8270D method. Analysis was performed by GC/MS.	0.5	n.d.
Polychlorinated Naphthalene (PCNs)	mg/kg	With reference to US EPA 8270D method. Analysis was performed by GC/MS.	5	n.d.
Chlorinated Paraffin (C10~C13) (CAS NO.: 010871-26-2)	%	With reference to US EPA 8270D method. Analysis was performed by GC/MS.	0.01	n.d.
Mirex (CAS NO.: 002385-85-5)	mg/kg	With reference to US EPA 8270D method. Analysis was performed by GC/MS.	4	n.d.
PVC (CAS NO.: 9002-86-2)	%	Analysis was performed by FTIR and Pyrolyzer-GC/MS.	1	Negative

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Test Item (s):	Unit	Method	MDL	Result No.1
Halogen	---	With reference to prEN14582 method B. Analysis was performed by IC method for F, Cl, Br, I content.	---	---
Halogen-Chlorine (Cl) (CAS NO.: 007782-50-5)	mg/kg	With reference to prEN14582 method B. Analysis was performed by IC method for Chlorine content.	50	n.d.
Halogen-Fluorine (F) (CAS NO.: 007782-41-4)	mg/kg	With reference to prEN14582 method B. Analysis was performed by IC method for Fluorine content.	50	n.d.
Halogen-Bromine (Br) (CAS NO.: 007726-95-6)	mg/kg	With reference to prEN14582 method B. Analysis was performed by IC method for Bromine content.	50	n.d.
Halogen-Iodine (I) (CAS NO.: 007553-56-2)	mg/kg	With reference to prEN14582 method B. Analysis was performed by IC method for Iodine content.	50	n.d.
Organic-tin coumpounds	---	---	---	---
Triphenyl Tin (TphT) (CAS NO.: 000668-34-8)	mg/kg	With reference to DIN 38407-13. Analysis was performed by GC/FPD.	0.03	n.d.
Tributyl Tin (TBT) (CAS NO.: 000688-73-3)	mg/kg	With reference to DIN 38407-13. Analysis was performed by GC/FPD.	0.03	n.d.
Asbestos	---	---	---	---
Amosite (CAS NO.: 012172-73-5)	%	As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative
Chrysotile (CAS NO.: 012001-29-5)	%	As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative
Crocidolite (CAS NO.: 012001-28-4)	%	As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative
Anthophyllite (CAS NO.: 017068-78-9)	%	As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative
Tremolite (CAS NO.: 014567-73-8)	%	As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative

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Test Item (s):	Unit	Method	MDL	Result No.1
Actinolite (CAS NO.: 013768-00-8)	%	As per NIOSH 9000 method. Analysis was performed by XRD.	1	Negative
AZO	---	---	---	---
1): 4-AMINODIPHENYL (CAS NO.: 92-67-1)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
2): BENZIDINE (CAS NO.: 92-87-5)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
3): 4-CHLORO-O-TOLUIDINE (CAS NO.: 95-69-2)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
4): 2-NAPHTHYLAMINE (CAS NO.: 91-59-8)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
5): O-AMINOAZOTOLUENE (CAS NO.: 97-56-3)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
6): 2-AMINO-4-NITROTOLUENE (CAS NO.: 99-55-8)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
7): P-CHLOROANILINE (CAS NO.: 106-47-8)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
8): 2,4-DIAMINOANISOLE (CAS NO.: 615-05-4)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
9): 4,4'-DIAMINODIPHENYLMETHANE (CAS NO.: 101-77-9)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
10): 3,3'-DICHLOROBENZIDINE (CAS NO.: 91-94-1)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
11): 3,3'-DIMETHOXYBENZIDINE (CAS NO.: 119-90-4)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
12): 3,3'-DIMETHYLBENZIDINE (CAS NO.: 119-93-7)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.

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Test Item (s):	Unit	Method	MDL	Result No.1
13): 3,3'-DIMETHYL-4,4'-DIAMINODIPHENYLMETHANE (CAS NO.: 838-88-0)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
14): P-CRESIDINE (2-METHOXY-5-METHYLANILINE) (CAS NO.: 120-71-8)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
15): 4,4'-METHYLENE-BIS- (2-CHLOROANILINE) (CAS NO.: 101-14-4)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
16): 4,4'-OXYDIANILINE (CAS NO.: 101-80-4)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
17): 4,4'-THIODIANILINE (CAS NO.: 139-65-1)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
18): O-TOLUIDINE (CAS NO.: 95-53-4)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
19): 2,4-TOLUYLENEDIAMINE (CAS NO.: 95-80-7)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
20): 2,4,5-TRIMETHYLANILINE (CAS NO.: 137-17-7)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
21): O-ANISIDINE (CAS NO.: 90-04-0)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
22): P-AMINOAZOBENZENE (CAS NO.: 60-09-3)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
23): 2,4-XYLIDINE (CAS NO.: 95-68-1)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.
24): 2,6-XYLIDINE (CAS NO.: 87-62-7)	mg/kg	With reference to LMBG 82.02-2. Analysis was performed by GC/MS.	3	n.d.

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Test Item (s):	Unit	Method	MDL	Result No.1
CFC's (Chlorofluorocarbons)	---	---	---	---
Group I	---	---	---	---
Chlorofluorocarbon-11 (CAS NO.: 000075-69-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-12 (CAS NO.: 000075-71-8)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-113 (CAS NO.: 000076-13-1)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-114 (CAS NO.: 000076-14-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-115 (CAS NO.: 000076-15-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Group III	---	---	---	---
Chlorofluorocarbon-13 (CAS NO.: 000075-72-9)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-111 (CAS NO.: 000354-56-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-112 (CAS NO.: 000076-12-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-211 (CAS NO.: 135401-87-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-212 (CAS NO.: 076564-99-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-213 (CAS NO.: 060285-54-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-214 (CAS NO.: 002268-46-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

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Test Item (s):	Unit	Method	MDL	Result No.1
Chlorofluorocarbon-215 (CAS NO.: 000076-17-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-216 (CAS NO.: 001652-80-8)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Chlorofluorocarbon-217 (CAS NO.: 000422-86-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Halon	---	---	---	---
Halon-1211 (CAS NO.: 000353-59-3)	mg/kg	With reference to US EPA 5021. Analysis was performed by GC/MS.	1	n.d.
Halon-1301 (CAS NO.: 000075-63-8)	mg/kg	With reference to US EPA 5021. Analysis was performed by GC/MS.	1	n.d.
Halon-2402 (CAS NO.: 000124-73-1)	mg/kg	With reference to US EPA 5021. Analysis was performed by GC/MS.	1	n.d.
HCFC's (Hydrogenated chlorofluorocarbons)	---	---	---	---
Hydrochlorofluorocarbon-21 (CAS NO.: 000075-43-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-22 (CAS NO.: 000075-45-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-31 (CAS NO.: 000593-70-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-121 (CAS NO.: 000354-14-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-122 (CAS NO.: 000354-21-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-123 (CAS NO.: 000306-83-1)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

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Test Item (s):	Unit	Method	MDL	Result
				No.1
Hydrochlorofluorocarbon-124 (CAS NO.: 002837-89-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-131 (CAS NO.: 000359-28-4)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-131b (CAS NO.: 000471-43-2)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-133a (CAS NO.: 000075-88-7)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-141b (CAS NO.: 001717-00-6)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-221	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-222 (CAS NO.: 000422-30-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-223	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-224	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-225ca (CAS NO.: 000422-56-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-225cb (CAS NO.: 000507-55-1)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-226 (CAS NO.: 000431-87-8)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-231	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

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Test Item (s):	Unit	Method	MDL	Result
				No.1
Hydrochlorofluorocarbon-232	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-233	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-234	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-235 (CAS NO.: 013838-16-9)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-241	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-242	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-243 (CAS NO.: 000338-75-0)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-244	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-251	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-252	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-253 (CAS NO.: 000354-06-1)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-261 (CAS NO.: 000420-97-3)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Hydrochlorofluorocarbon-262 (CAS NO.: 000420-99-5)	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.

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Test Item (s):	Unit	Method	MDL	Result No.1
Hydrochlorofluorocarbon-271	mg/kg	With reference to US EPA 5021 method. Analysis was performed by GC/MS.	1	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321, Ed.1 111/54/CDV. Determination of PBB and PBDE by GC/MS.	-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl			5	n.d.
Sum of PBDEs (Mono to Nona) (Note 4)			-	n.d.
Monobromobiphenyl ether			5	n.d.
Dibromobiphenyl ether			5	n.d.
Tribromobiphenyl ether			5	n.d.
Tetrabromobiphenyl ether			5	n.d.
Pentabromobiphenyl ether			5	n.d.
Hexabromobiphenyl ether			5	n.d.
Heptabromobiphenyl ether			5	n.d.
Octabromobiphenyl ether			5	n.d.
Nonabromobiphenyl ether			5	n.d.
Decabromobiphenyl ether			5	n.d.
Sum of PBDEs (Mono to Deca)			-	n.d.

Note： 1. mg/kg = ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. According to 2005/717/EC DecaBDE is exempt.
5. "---" = Not Conducted
6. " - " = Not Regulated
7. The MDL is 5ppm for the single compound of CP

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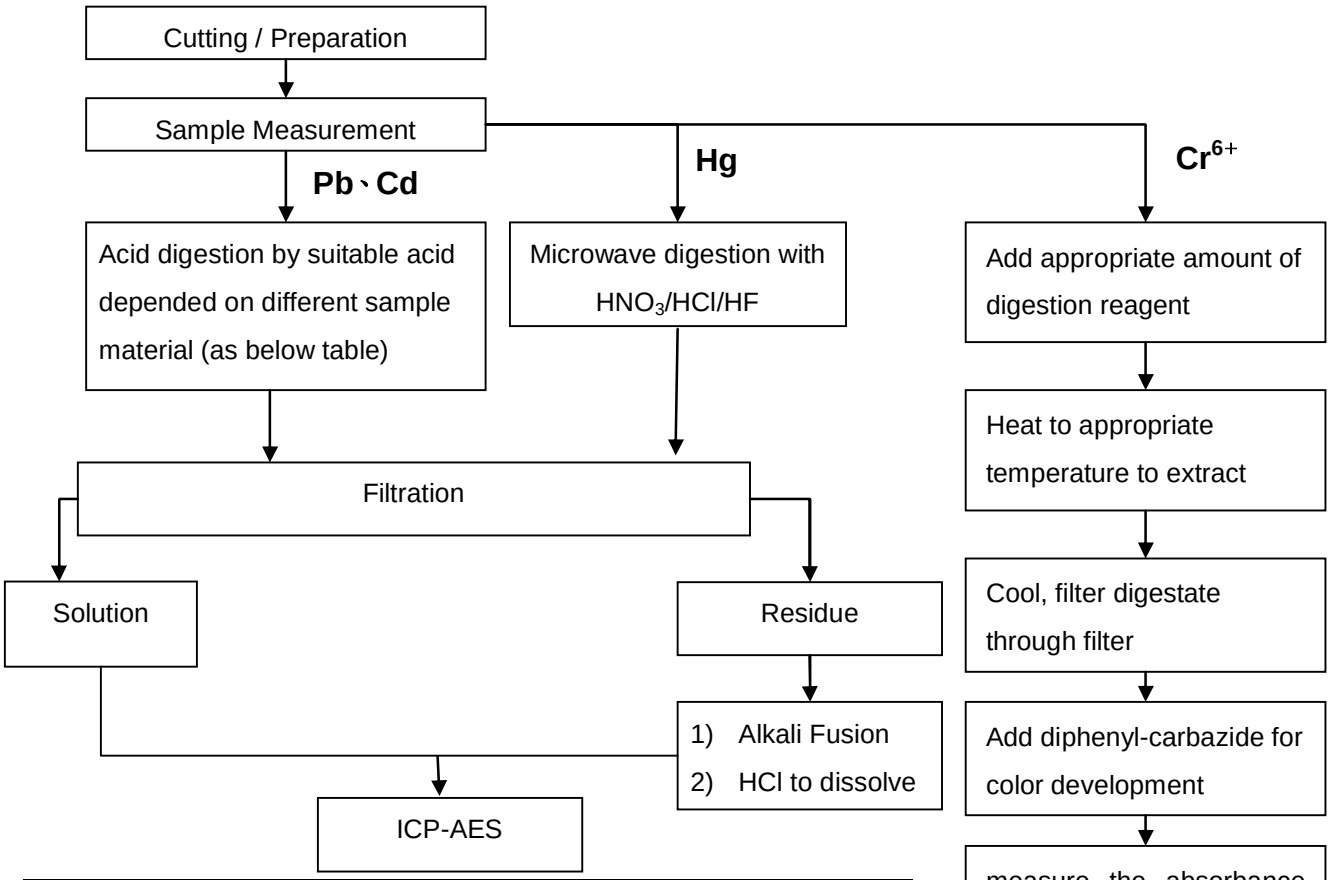
1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
（Cr6+ test method excluded）
2) Name of the person who made measurement: Troy Chang
3) Name of the person in charge of measurement: Daniel Yeh



Sample Material	Digestion Acid
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	Any acid to total digestion

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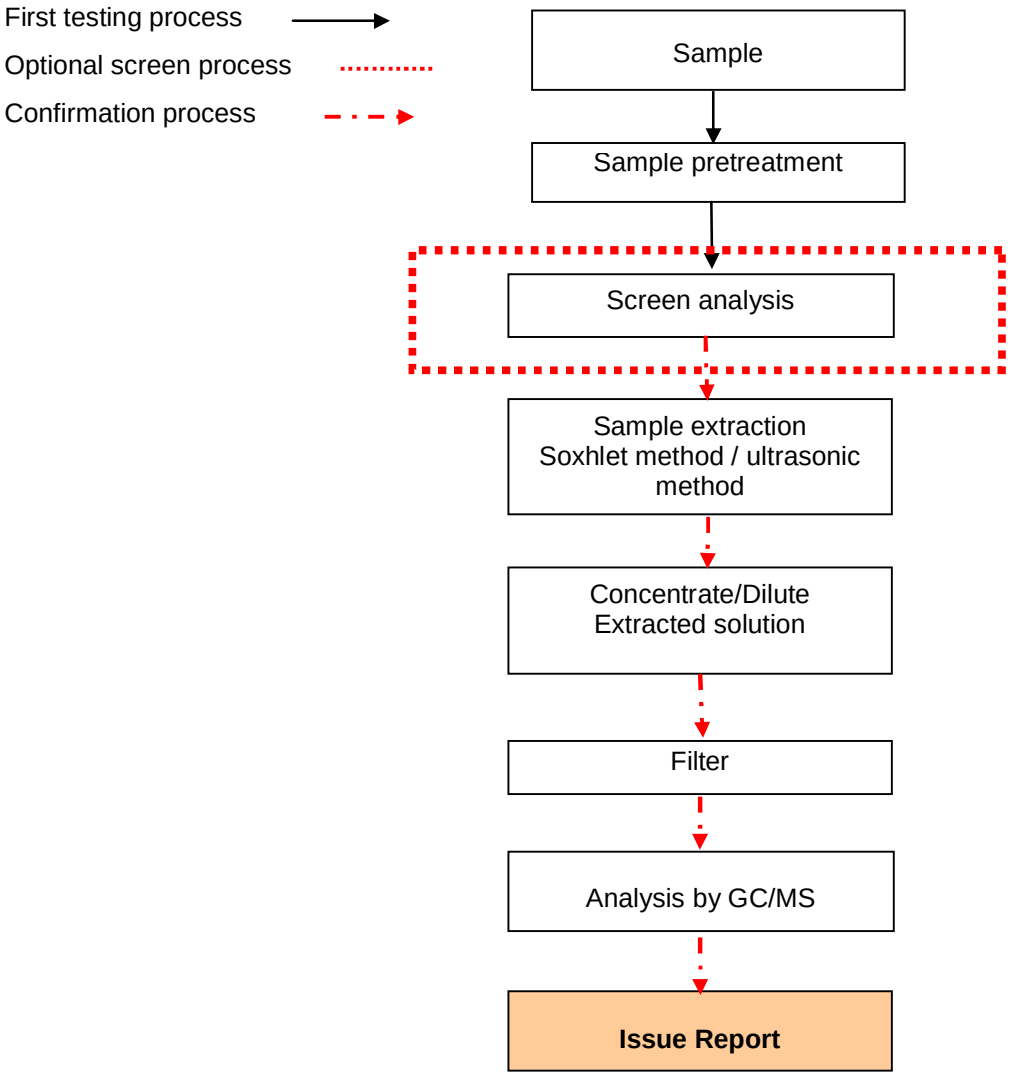
Date : 2007/05/04

PBB/PBDE analytical FLOW CHART



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