



Test Report

No. : CE/2014/13460

Date : 2014/01/21

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Result(s)

PART NAME No.1 : MIXED ALL PARTS

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed 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			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

[illegible]

WKW\$emf er\$ph2台灣檢驗科技股份有限公司

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x/ <<: \$46-66== \$76:== \$98/ <<: \$46-66== \$767: \$988/ { { 2kw2d

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Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated
5. The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.

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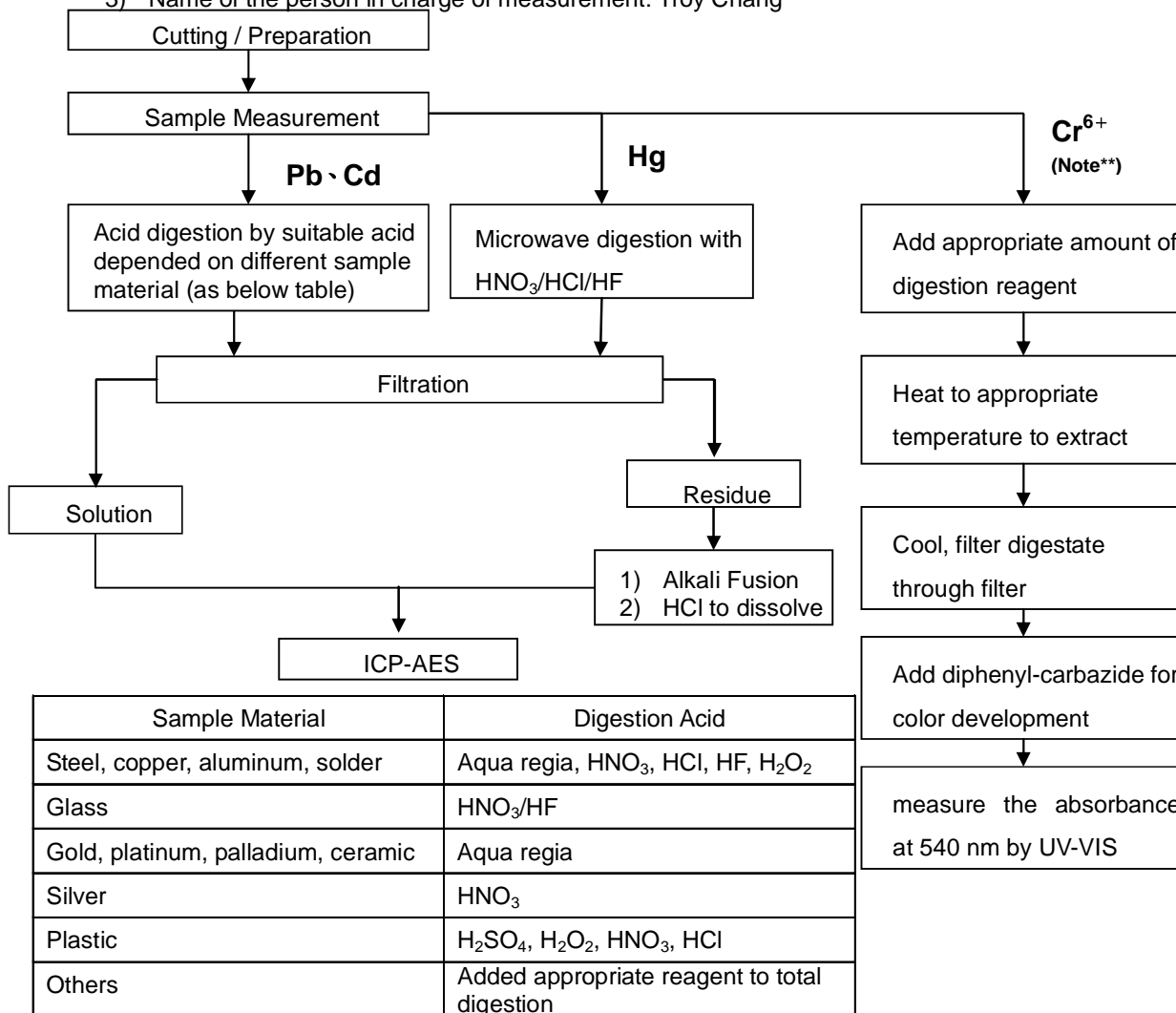
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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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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: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95℃.
(2) For metallic material, add pure water and heat to boiling.

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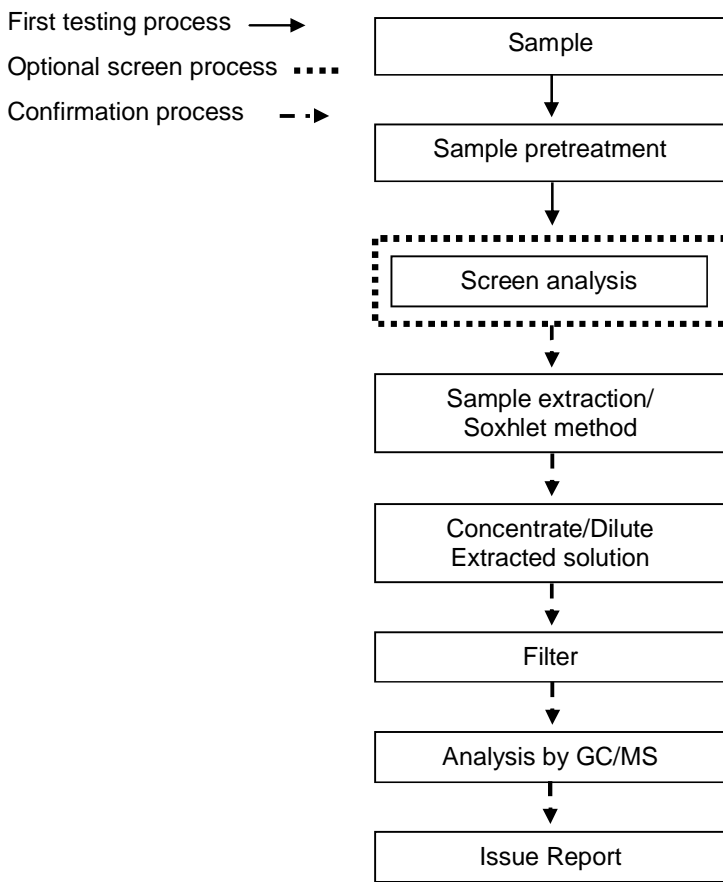
AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[illegible]

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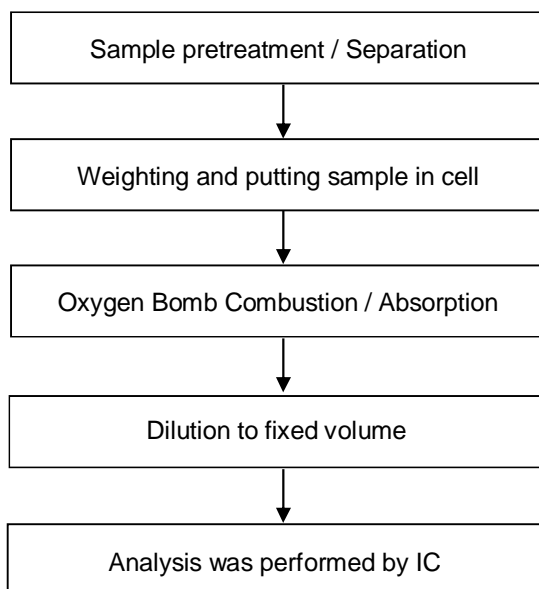
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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang



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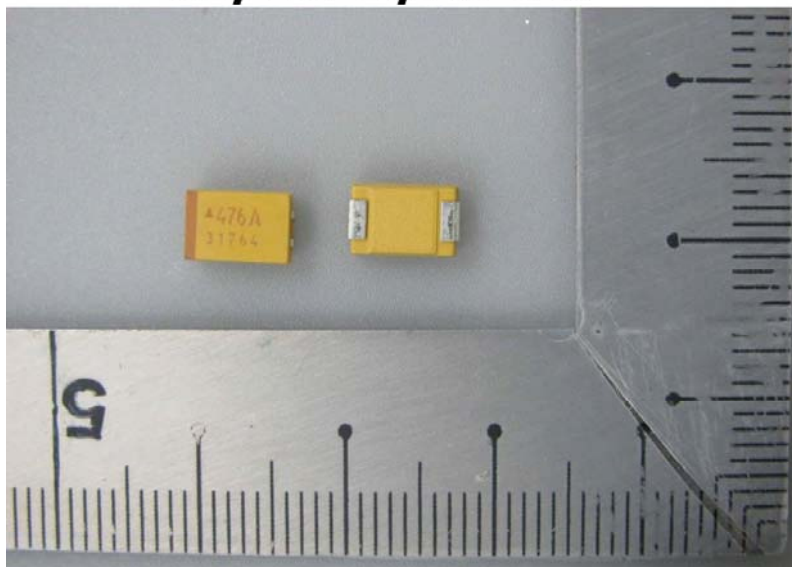
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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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

CE/2014/13460



** End of Report **

[illegible]

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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

Sample Submitted By : AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
Sample Description : TANTALUM POWDER I.
Style/Item No. : TANTALUM DIVISION
Sample Receiving Date : 2014/01/15
Testing Period : 2014/01/15 TO 2014/01/21

Test Requested : (1) As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.
(2) As specified by client, to test Halogen-Chlorine, Bromine contents in the submitted sample.

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

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



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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Result(s)

PART NAME No.1 : BLACK POWDER

Test Item(s)	Unit	Method	MDL	Result No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed 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			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

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Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

[illegible]

WKW\$emf er\$ph2台灣檢驗科技股份有限公司

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x/ <<: \$46-66== \$76:== \$98/ <<: \$46-66== \$767: \$988/ { { 2kw2d

P hp ehur#kh#VJ V#J urxs#

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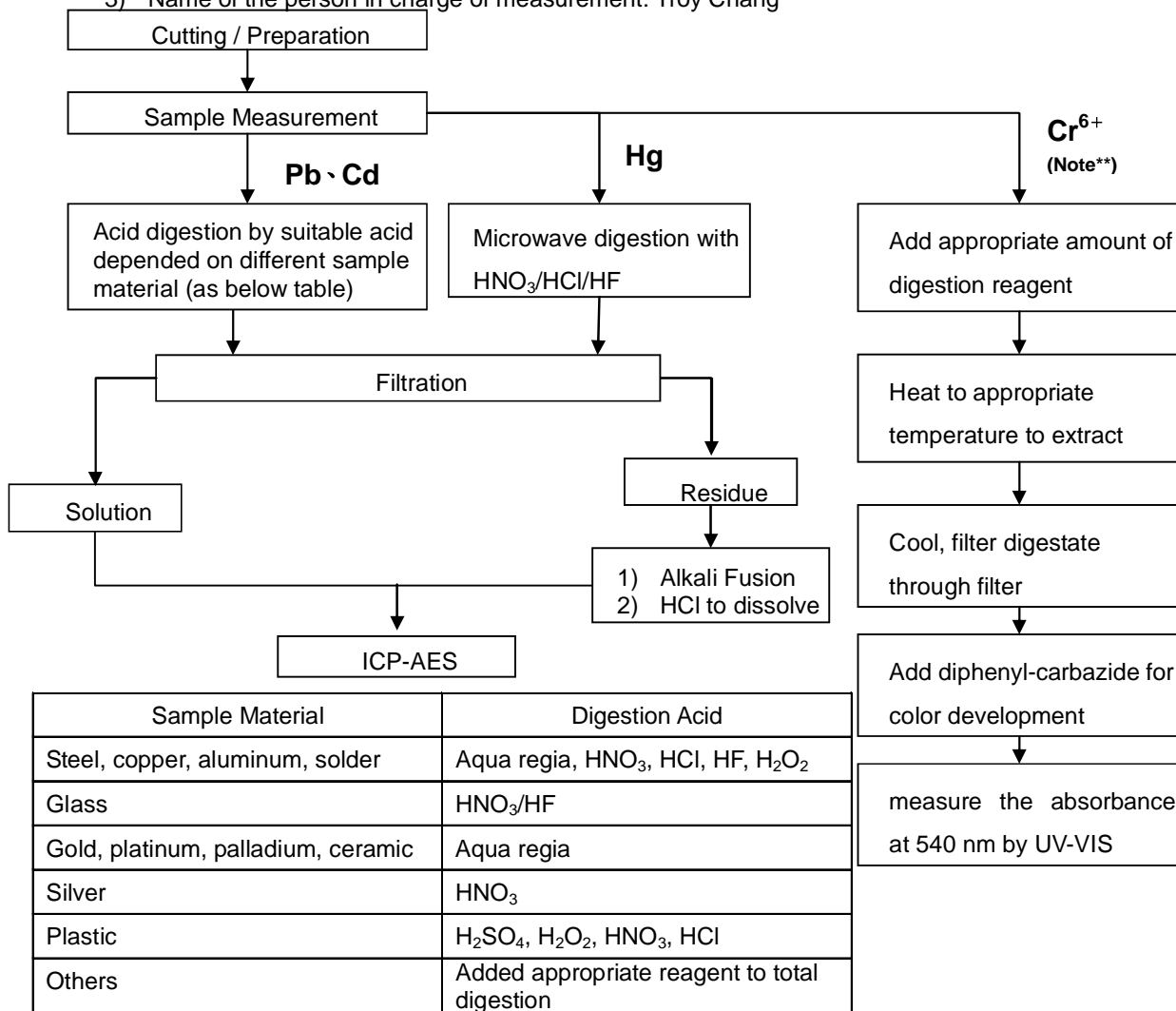
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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

- 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: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95°C.
(2) For metallic material, add pure water and heat to boiling.

[illegible]

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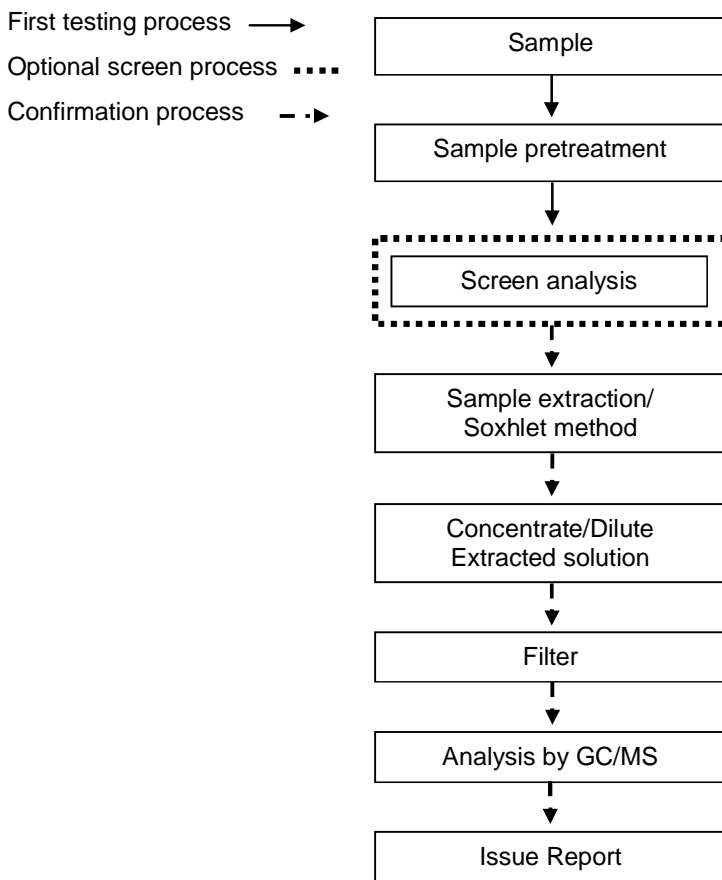
AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[illegible]

WKW\$emf er\$ph2台灣檢驗科技股份有限公司

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Test Report

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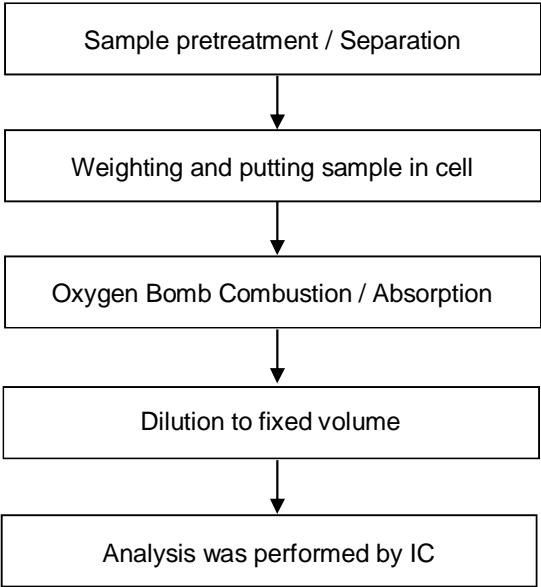
AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang

[illegible]

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

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** End of Report **

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

Sample Submitted By : AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
Sample Description : Ta WIRE
Style/Item No. : TANTALUM DIVISION
Sample Receiving Date : 2014/01/15
Testing Period : 2014/01/15 TO 2014/01/21

Test Requested : (1) As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.
(2) As specified by client, to test Halogen-Chlorine, Bromine contents in the submitted sample.

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

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



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WKW\$en(er\$ph2台灣檢驗科技股份有限公司

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Test Result(s)

PART NAME No.1 : SILVER COLORED METAL WIRE

Test Item(s)	Unit	Method	MDL	Result No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	**	With reference to IEC 62321: 2008 and performed by Boiling water extraction Method.#	#	Negative
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed 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			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated
5. ** = Qualitative analysis (No Unit)
6. # =
 - a. Positive means the presence of CrVI on the tested areas
 - b. Negative means the absence of CrVI on the tested areas

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² tested areas.

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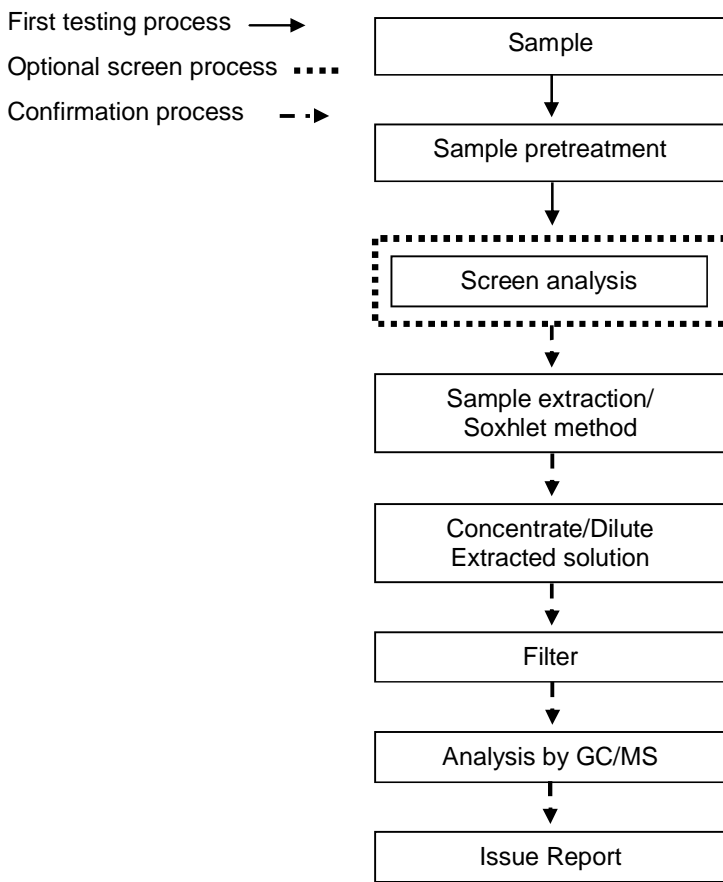
AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[illegible]

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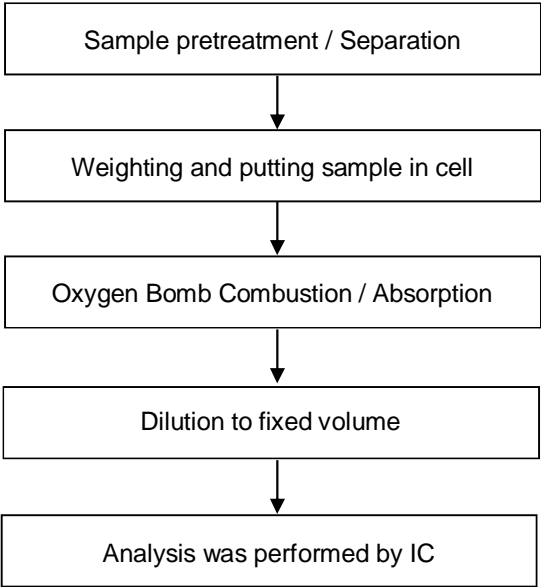
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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang

[illegible]

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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

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**** End of Report ****

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Test Report

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Result(s)

PART NAME No.1 : ORANGE LIQUID

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed 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			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

[illegible]

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

[illegible]

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Test Report

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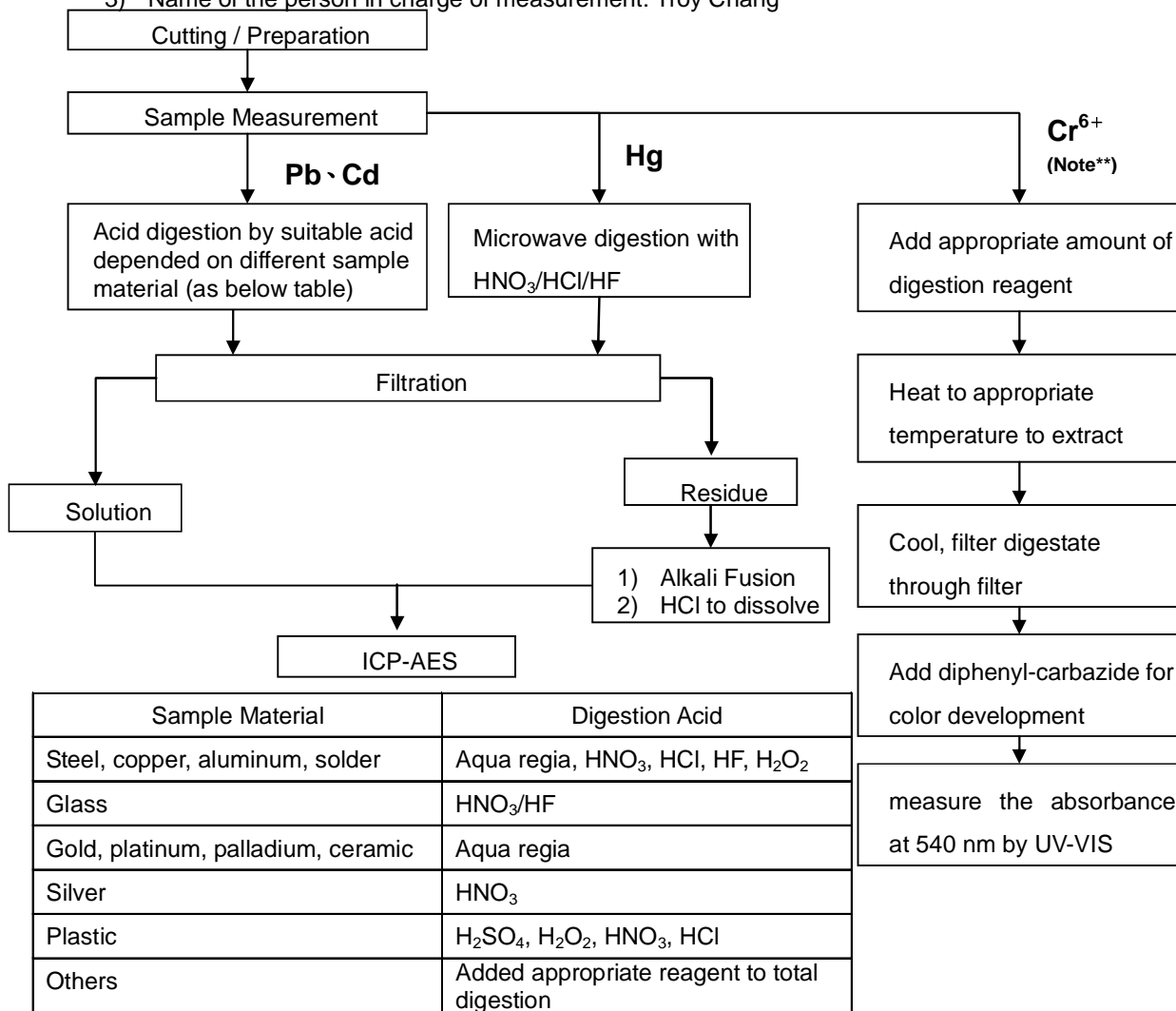
Date : 2014/01/21

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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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: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95°C.
(2) For metallic material, add pure water and heat to boiling.

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Test Report

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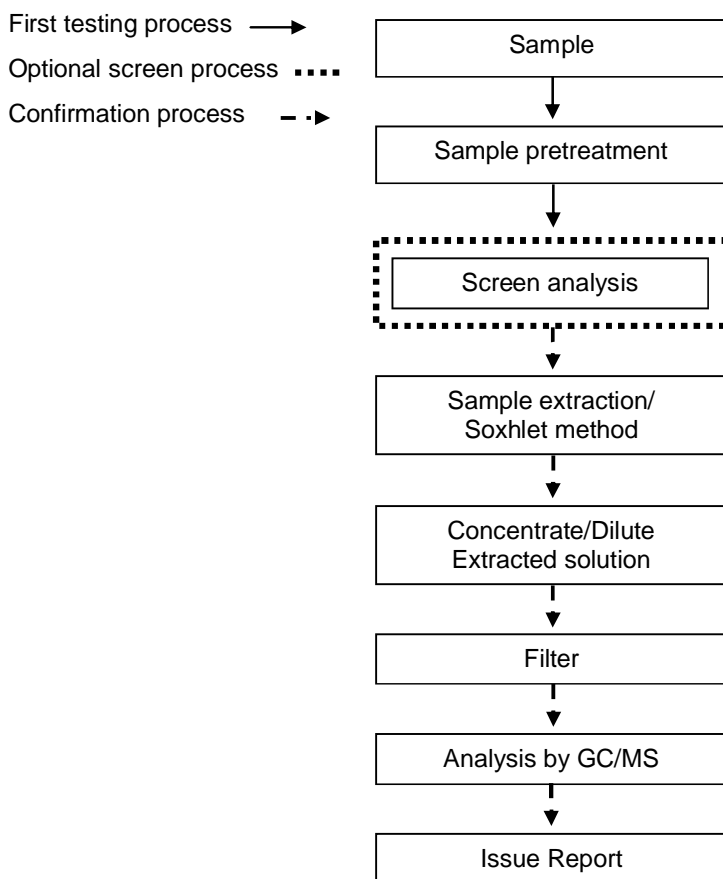
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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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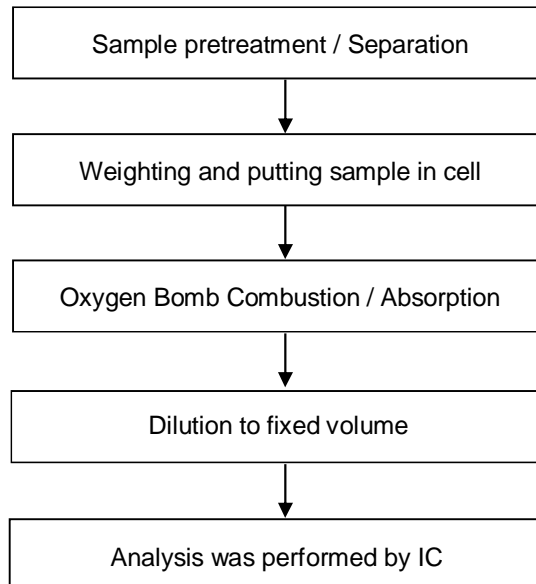
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Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang

[illegible]

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

CE/2014/13403



** End of Report **

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

Sample Submitted By	: AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
Sample Description	: GRAPHITE STD.
Style/Item No.	: TANTALUM DIVISION
Sample Receiving Date	: 2014/01/15
Testing Period	: 2014/01/15 TO 2014/01/21

Test Requested : (1) As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.

(2) As specified by client, to test Halogen-Chlorine, Bromine contents in the submitted sample.

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

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

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Test Result(s)

PART NAME No.1 : BLACK PASTE

Test Item(s)	Unit	Method	MDL	Result No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed 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			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

Xlwshsgyg irxwshyihf) d i s s q t e r) \$ y f r i g p e s h w i r i v e s s r h m e r w s j i v i z m i s v n d h s z i v i e j o z e n e f d s r d u y i w s v e g g i w m f p s e s l o t x 3 l { { 2 k w 2 s q 3 r 3 i v g w e r h i s r h m e r w e w t l s e r h o s j s v i p g u e n g s j s v g e x h s g y g i r w o y f r i g p e s s i v g w e r h i s s r h m e r w s j s v i p g u e n g s h s g y g i r w o s e s l o t x 3 l { { 2 k w 2 s q 3 r 3 i v g w e r h i s s r h m e r w 3 i v g w i h s g y g i r d e w t 2 E x d r e r s w s h v e (r s e d i s q m e x e r s j e f f m d) o r h i q n g g e x e r s e r h y v n h g e r s w w i w h i j r i h d i v m 2 E r) s l e p h i v s j d m w s h g y g i r d m e h z w i h d e x t r j s v g e x e r s g e r m i h s l i v s r d i p g e d i s s q t e r) w s j a h m k w e d i s q i s j s w o d v i z m e r s e r j s e r h s (n d m d i s q m a s e j e m r x w i w o y g e r o j s e r) 2 K l i s s q t e r) w s e p s d w t s r w f m d) s w s e s w s g m i r s e r h d m w s h g y g i r d s i w s e s l s r i v e d s e v d w s x e s s e r w e g e r s j s q s l i v g m a k s e g d i m s k l w s e r h s f a k e x e r w s r h i v d i s e r w e g e r s h s g y g i r w 2 K l m w s h g y g i r d e r r s x f i d i t e h y g i h o s l g i t x e s t y m s (n d s y s t m s s v n e d r e t t v s e s j d i s G s q t e r) 2 E r) s r e y d s v m i h s p d v e x e r o s j e k i v) s e v j e p n g e x e r s j d i s s r o d r s v e t t i e v e r g i s j d m w s h g y g i r d w s y n e (j y s e r h s j j i r h i w s e j s e i s t e w i g y d h s e s d i s t y m w o s l x i r s e j d i s e 2 Y r p w s e d i v m i s w e x h d i s d w y p w s l s r s e r d m s d w s d t s v d i j v s e r j s e s d i s w e g t p w e d w o d h 2



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Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	168
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

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Test Report

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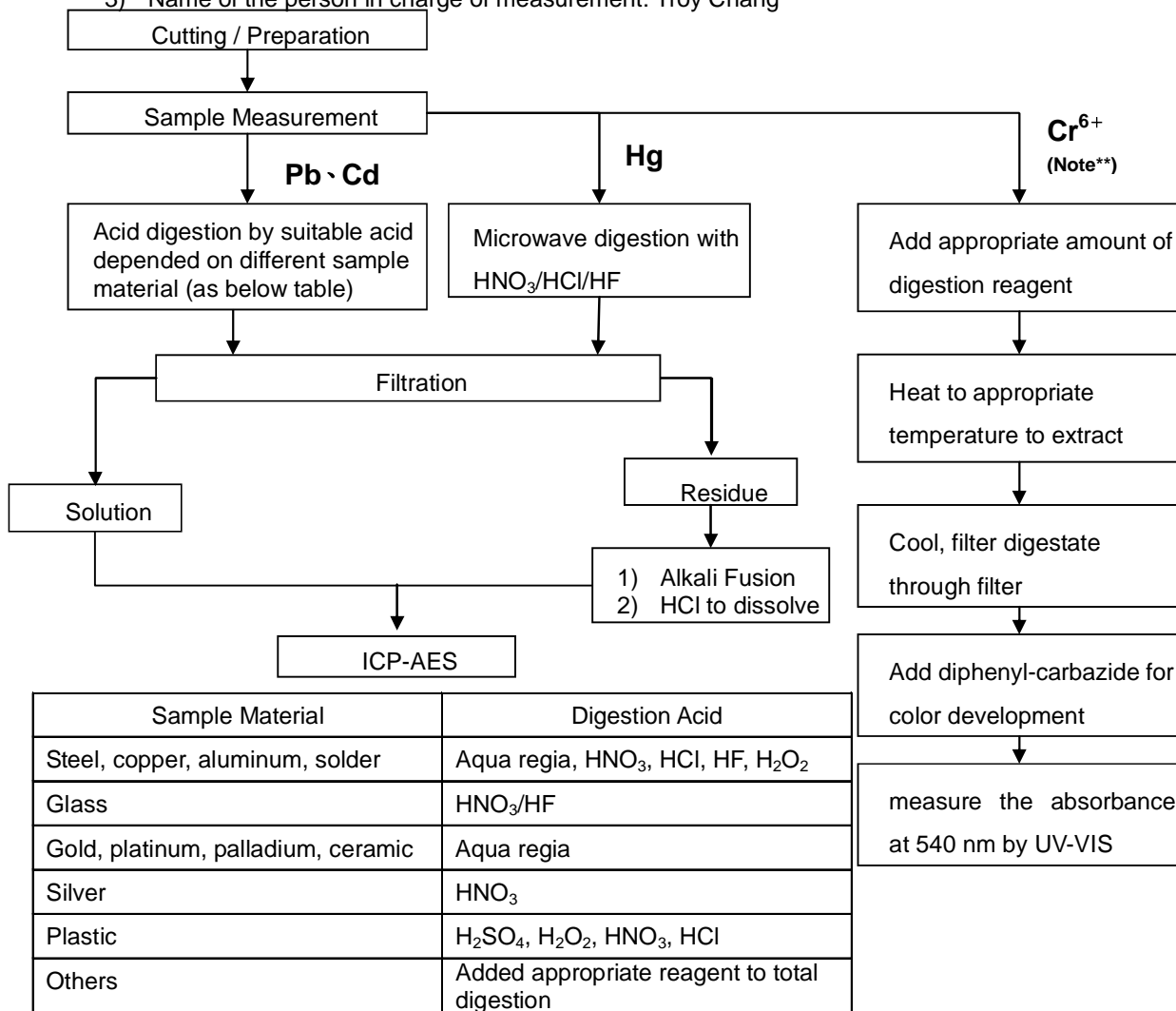
Date : 2014/01/21

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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: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95°C.
(2) For metallic material, add pure water and heat to boiling.

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Test Report

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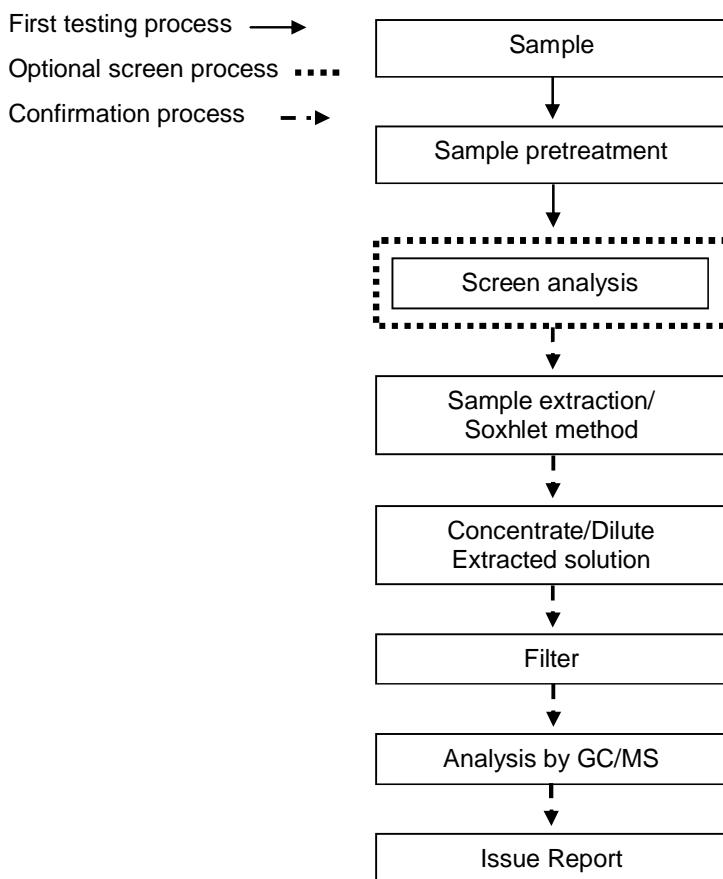
AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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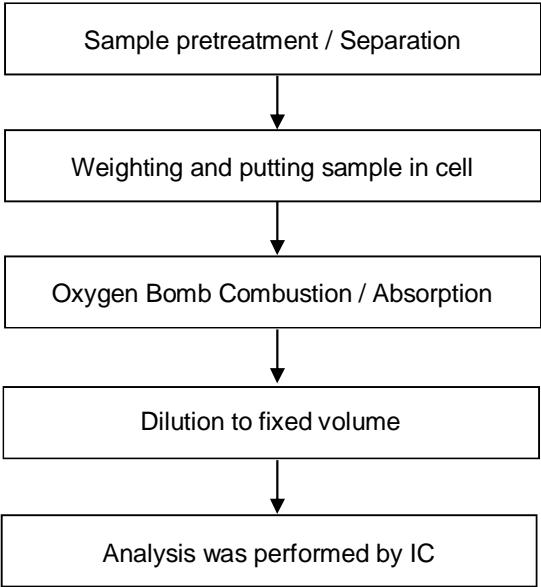
AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang

[illegible]

WKW\$Xen[er\$Ph2台灣檢驗科技股份有限公司

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G& (L?>AL>@A>@G

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

CE/2014/13413



** End of Report **

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Date : 2014/01/21

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Test Result(s)

PART NAME No.1 : TRANSPARENT LIQUID

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed 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			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

[illegible]

WKW\$KerP\$Xh2台灣檢驗科技股份有限公司

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Test Report

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Date : 2014/01/21

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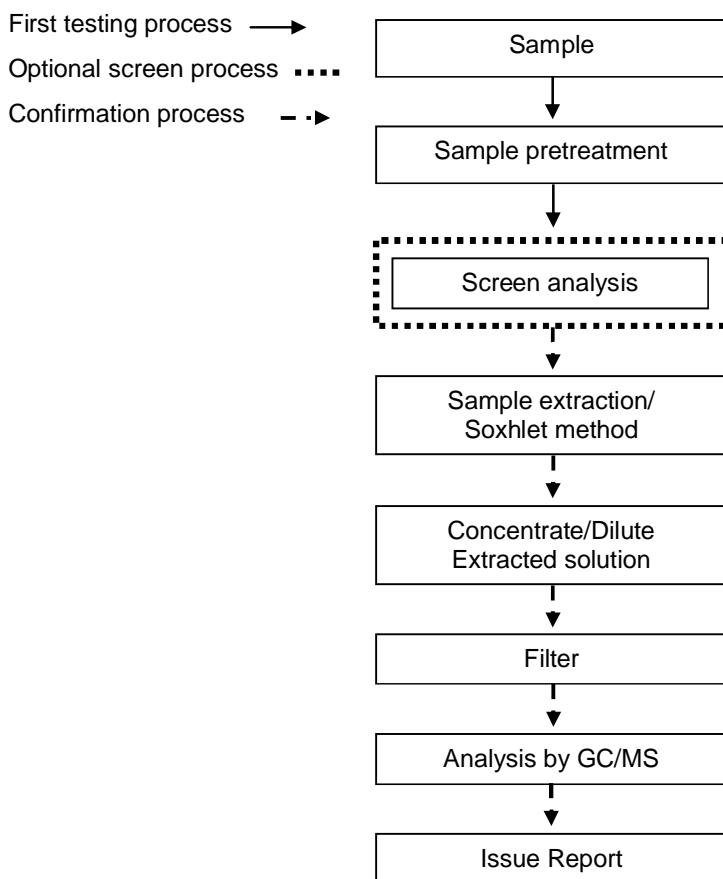
AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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Test Report

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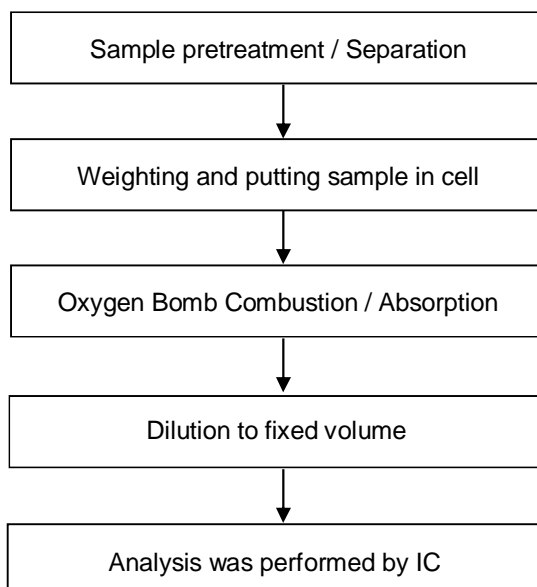
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Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang



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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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

CE/2014/13415



** End of Report **

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Test Report

No. : CE/2014/13406

Date : 2014/01/21

Page: 1 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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

Sample Submitted By : AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
Sample Description : GREEN TEFLON I.
Style/Item No. : TANTALUM DIVISION
Sample Receiving Date : 2014/01/15
Testing Period : 2014/01/15 TO 2014/01/21

Test Requested : (1) As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.
(2) As specified by client, to test Halogen-Chlorine, Bromine contents in the submitted sample.

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

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



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Test Report

No. : CE/2014/13406

Date : 2014/01/21

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Result(s)

PART NAME No.1 : GREEN LIQUID

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	3
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed 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			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

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Test Report

No. : CE/2014/13406

Date : 2014/01/21

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

XlnWshsgyg inxwshwylhf\$dlisq ter\$yfyngidsgwv irvsgsrhmrwv\$niwvgt vmdhshzviebzefp\$rdaiuyiwsgvggiwmpf\$sgxtzsf ((zkwzsqg 3rkxiq werhGsrhmrwzwt\$
erhf\$fyngidsgwvsgy exshsgy inwvfyngidsgxiq werhGsrhmrwzwt\$fyngidsgxiq y inwvsg\$Xlnxsf ((zkwzsqg 3rkxiq werhGsrhmrwxiq wHsggy inxwz\$Zsg xzmr\$Zsg
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jrhmrwz\$gdldg is\$z\$wvmdz\$zmr\$erhf\$rdm\$rdldg mvs\$z\$z\$wvmdz\$erhf\$ZKlissq ter\$wvsg\$z\$z\$wvmdz\$zmr\$erhf\$rdm\$rdldg inxwz\$Zsg xzmr\$Zsg
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Test Report

No. : CE/2014/13406

Date : 2014/01/21

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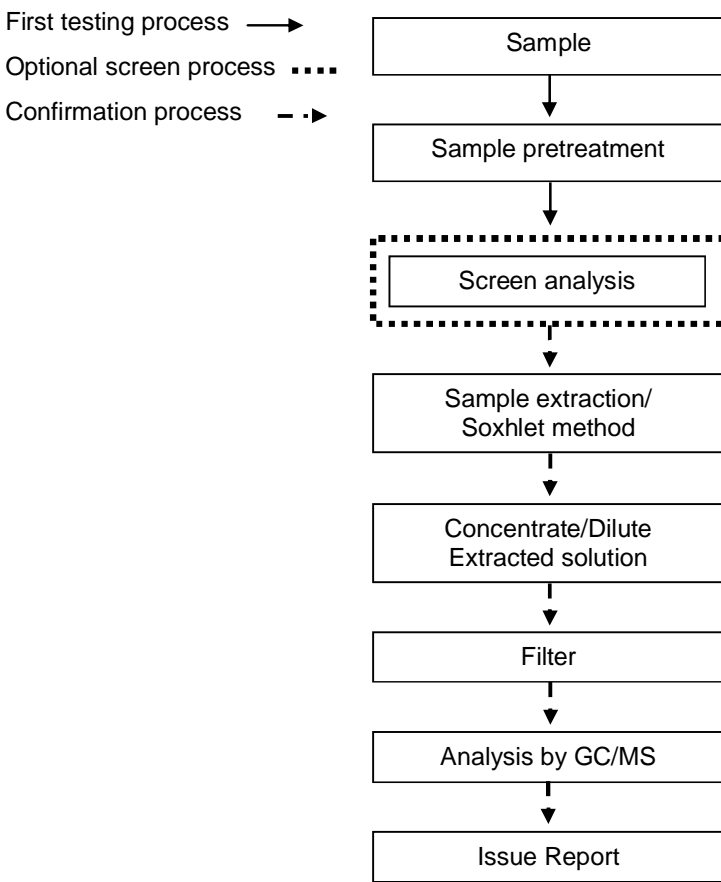
AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

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Test Report

No. : CE/2014/13406

Date : 2014/01/21

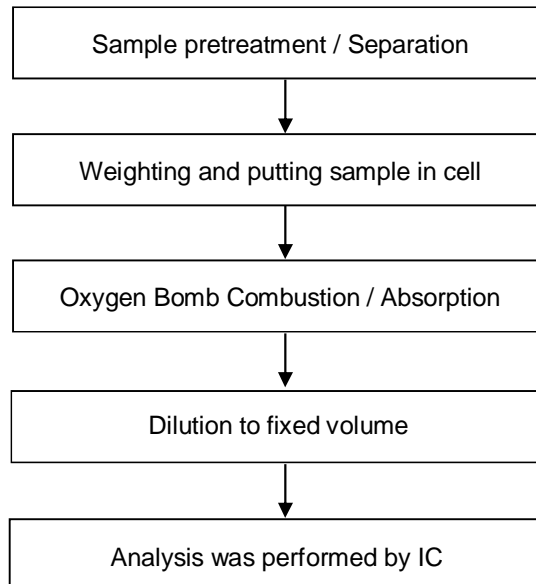
Page: 6 of 7

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Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang

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Test Report

No. : CE/2014/13406

Date : 2014/01/21

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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

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** End of Report **

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Test Report

No. : CE/2014/13423

Date : 2014/01/21

Page: 1 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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

Sample Submitted By : AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
Sample Description : PASTE II.
Style/Item No. : TANTALUM DIVISION
Sample Receiving Date : 2014/01/15
Testing Period : 2014/01/15 TO 2014/01/21

Test Requested : (1) As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.

(2) As specified by client, to test Halogen-Chlorine, Bromine contents in the submitted sample.

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

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

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Test Report

No. : CE/2014/13423

Date : 2014/01/21

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Result(s)

PART NAME No.1 : GRAY PASTE

Test Item(s)	Unit	Method	MDL	Result No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed 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			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

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Test Report

No. : CE/2014/13423

Date : 2014/01/21

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

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Test Report

No. : CE/2014/13423

Date : 2014/01/21

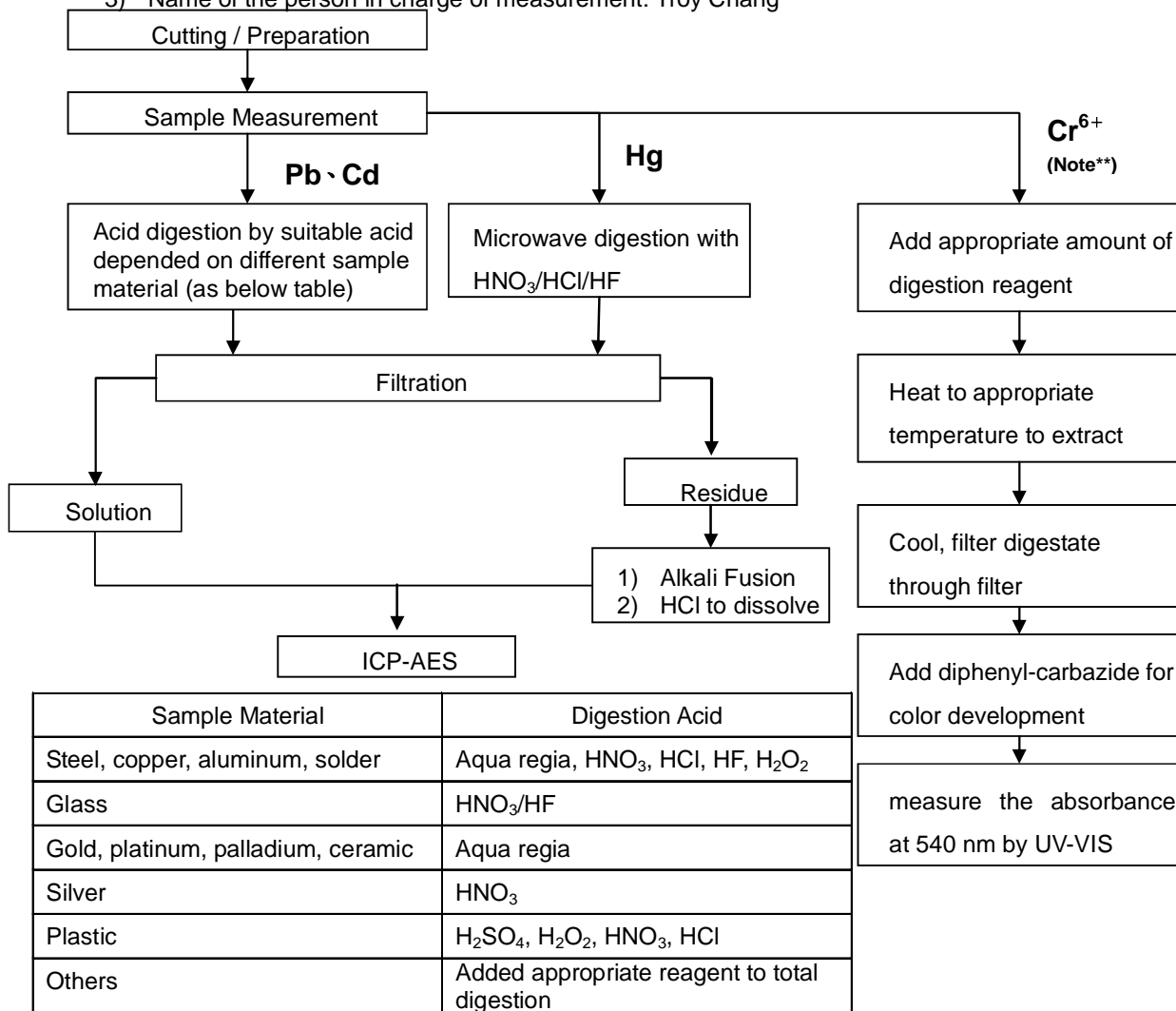
Page: 4 of 7

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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: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95°C.
(2) For metallic material, add pure water and heat to boiling.

[illegible]

Test Report

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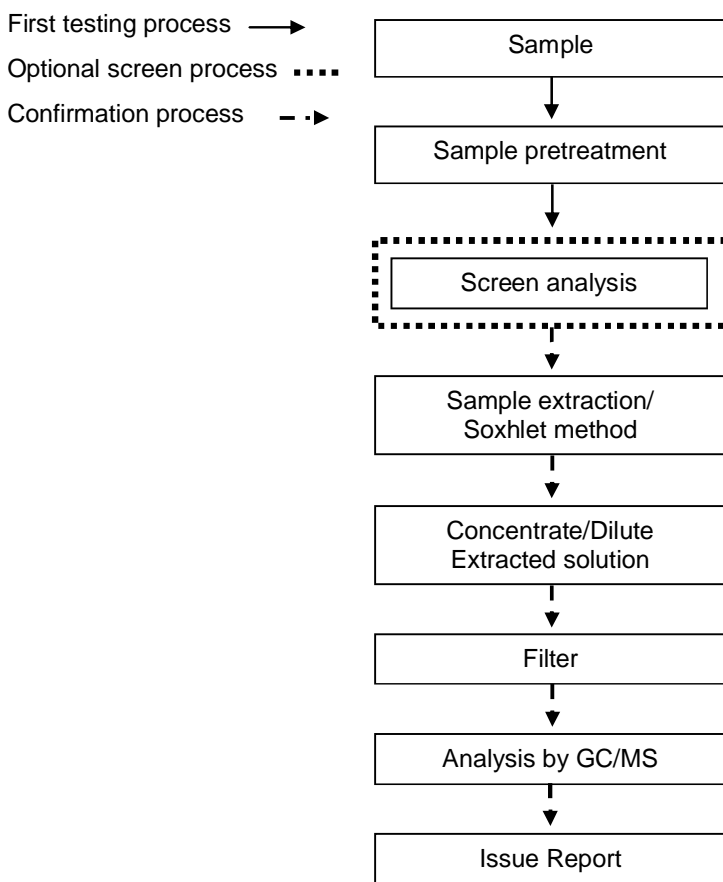
Page: 5 of 7

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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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Test Report

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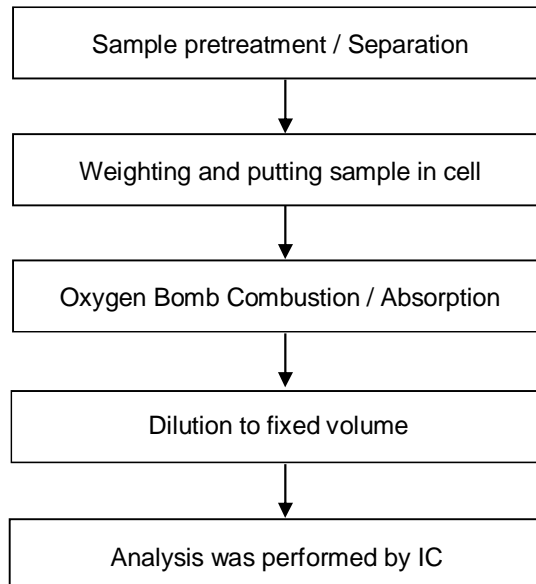
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Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang

[illegible]

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

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** End of Report **

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

Sample Submitted By : AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
Sample Description : SILVER I.
Style/Item No. : TANTALUM DIVISION
Sample Receiving Date : 2014/01/15
Testing Period : 2014/01/15 TO 2014/01/21

Test Requested : (1) As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.

(2) As specified by client, to test Halogen-Chlorine, Bromine contents in the submitted sample.

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

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

[illegible]

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Test Result(s)

PART NAME No.1 : GRAY PASTE

Test Item(s)	Unit	Method	MDL	Result No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed 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			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

Xlwshsgyg irxwshyihf) d i s s q t e r) \$ y f r i g p e s h w i r i v e s s r h m e r w s \$ j i v i z m i s v n d h s z i v i e j o z e n e f d . s r d u y i w s v e g g i w m f p . s e s l o t . s s ({ { 2 k w 2 s q 3 r 3 i n g w e r h i s r h m e r w e w t i s e r h o s j s v i p g u e n g s j s v e x h s g y g i r w o y f r i g p e s s i n g w e r h i s s r h m e r w s j s v i p g u e n g s h s g y g i r w o s e s l o t . s s ({ { 2 k w 2 s q 3 r 3 i n g w e r h i s s r h m e r w 3 i n g w i h s g y g i r d e w t . 2 E x o d r e s s w s h v e (r s e s d i s s q m e x e r s j e f i m d) o r h i q n g g e x e r s e r h s y v n h g o s r s w w i w h i j r i h d i v m 2 E r) s l e p h i v s j d m s h s g y g i r d m s h z w i h d e x t r j s v e x e r s g e r m e i h s l i v s r d i p g e d i s s q t e r) w s j a h m k w e d i s s q i s j s w o d v i z m e r s e r d s e r h s (n d m d i s s q m a s e j e m r x w s h w o y g e r o s j e r) 2 E l i s s q t e r) w s e p s d w s e r w m d) s w s e s s w s g m r x e r h d m s h s g y g i r d s i w s e s s l i v e d s e v d w s x e s s e r w e g e r s j s q s l i v g m a k s e s s d i m s h k l w e r h s f i k e x e r w s r h i v d i s e r w e g e r s h s g y g i r w 2 X l w s h s g y g i r d e r r s x f i d i t e h y g i h o s i g i t x e s s y m s (n d s y s t m s s v n e d r e t t v s e s j d i s s q t e r) 2 E r) s r e y d s v m i h s p d v e x e r o s j e k i v) s e s j e p n g e x e r s j d i s s r o d r s e v e t t i e v e r g i s j d m s h s g y g i r d w s y n e (j y s e r h s j j i r h i w s e j s e i s t e w i g y d h s e s d i s s y m w o s i x r s e j d i s s e Y r p w s e d i v m i s e x h d i s s w y p w s l s r s e r d m s d w s d t s v s d i j v e r j s e s d i s s e q t p . w e d w o d h 2



Test Report

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Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

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Test Report

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Date : 2014/01/21

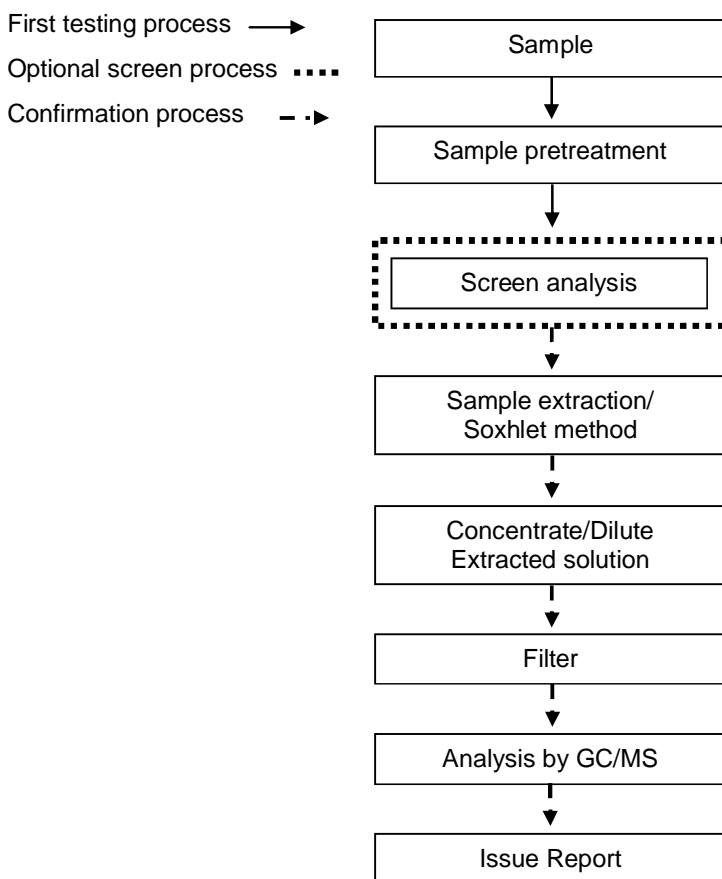
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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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Test Report

No. : CE/2014/13417

Date : 2014/01/21

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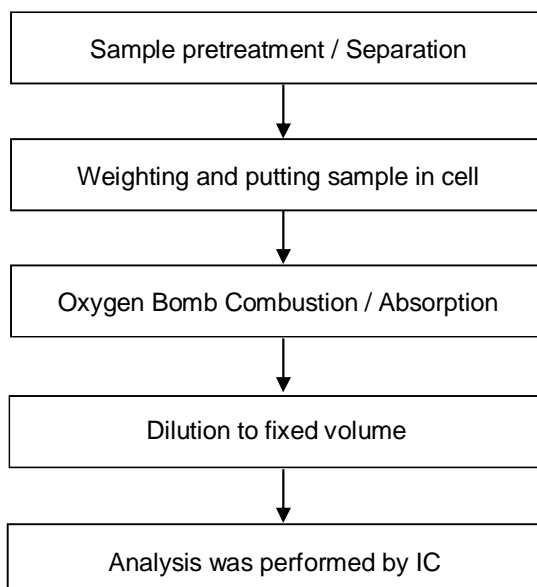
AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang

[illegible]

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Test Report

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

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** End of Report **

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Test Report

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Date : 2014/01/21

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

Sample Submitted By : AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
Sample Description : MOULDING GOLD GREEN I.
Style/Item No. : TANTALUM DIVISION
Sample Receiving Date : 2014/01/15
Testing Period : 2014/01/15 TO 2014/01/21

Test Requested : (1) As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.
(2) As specified by client, to test Halogen-Chlorine, Bromine contents in the submitted sample.

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

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



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Test Report

No. : CE/2014/13438

Date : 2014/01/21

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Test Result(s)

PART NAME No.1 : YELLOW LUMP

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed 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			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

Xlwshsgyg irxwshyihf) d i s s q t e r) \$ y f r i g p e s \$ w k i r i v e s s r h m e r w s \$ j i v z m i s v m d h s z i v i e j o z e n e f d . s r d u y i w s v e g g i w m f d . s e s l o t . s s ({ { 2 k w 2 s q 3 r 3 i n g w e r h i s r h m e r w e w t i s e r h o s j s v i p g u e n g s j s v e x h s g y g i r w o y f r i g p e s s i n g w e r h i s s r h m e r w s j s v i p g u e n g s h s g y g i r w o s e s l o t . s s ({ { 2 k w 2 s q 3 r 3 i n g w e r h i s s r h m e r w 3 i n g w i h s g y g i r d e w t . 2 E x d r e r s w s h v e (r s e s d i s s q m e x e r s j e f i m d) o r h i q n g g e x e r s e r h s y v n h g o s r s w w i w h i j r i h d i v m 2 E r) s l e p h i v s j d m s h s g y g i r d m s h z w i h d e x t r j s v e x e r s g e r m i h s l i v s r d i p g e d i s s q t e r) w s j a h m k w s e d i s s q i s j s w o d v i z m e r s e r d s e r h s (n d m d i s s q m a s e j e m r x w s h w o y g e r o r s e r) 2 K l i s s q t e r) w s e p s d w t s e r w f i m d) s w s e s w s g m i r s e r h d m s h s g y g i r d s i w s e s s l i v e d s e v d w s x e s s e r w e g e r s j s q s l i v g m a k s e s d i m s h k l w s e r h s f a k e x e r w s r h i v d i s e r w e g e r s h s g y g i r w 2 K l m s h s g y g i r d e r r s x f i d i t e h y g i h o s l g i t x e s t y m s (n d s y s t m s s v n e d r e t t v s e s j d i s s q t e r) 2 E r) s r e y d s v m i h s p d v e x e r o s j e k i v) s e s j e p n g e x e r s j d i s s r o d r s v e t t i e v e r g i s j d m s h s g y g i r d w s y n e (j y s e r h s j j i r h i w s e j s e i s t e w i g y d h s e s d i s t y m w o s l x i r s e j d i s s e Y r p w s e d i v m i s e x h d i s s w y p w s l s r s e r d m s d w s d t s v s d i j v s e r j s e s d i s s e q t p i w s d w o d h 2



Test Report

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Test Item(s)	Unit	Method	MDL	Result
				No.1
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	142
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

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Test Report

No. : CE/2014/13438

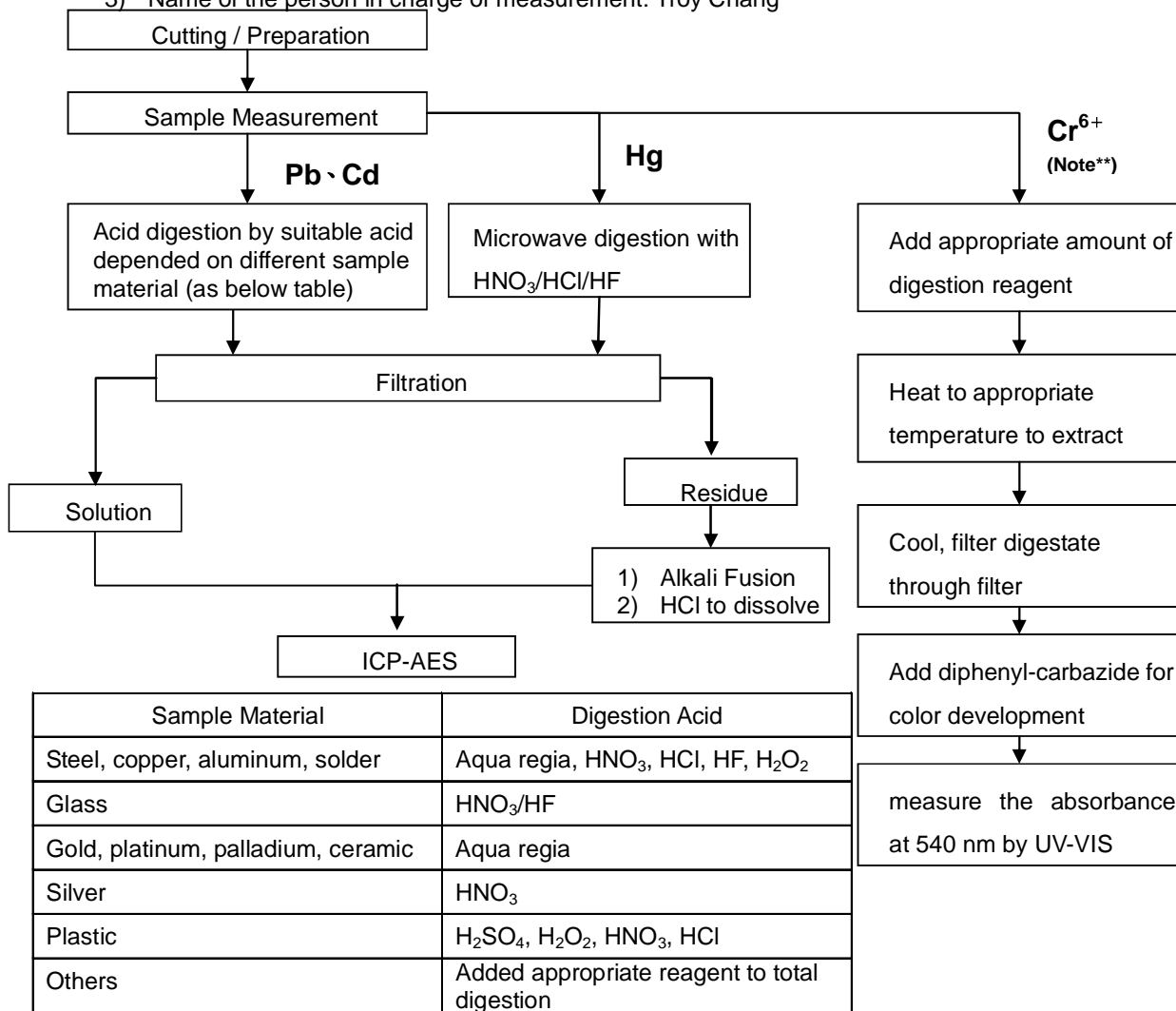
Date : 2014/01/21

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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: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95°C.
(2) For metallic material, add pure water and heat to boiling.

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Test Report

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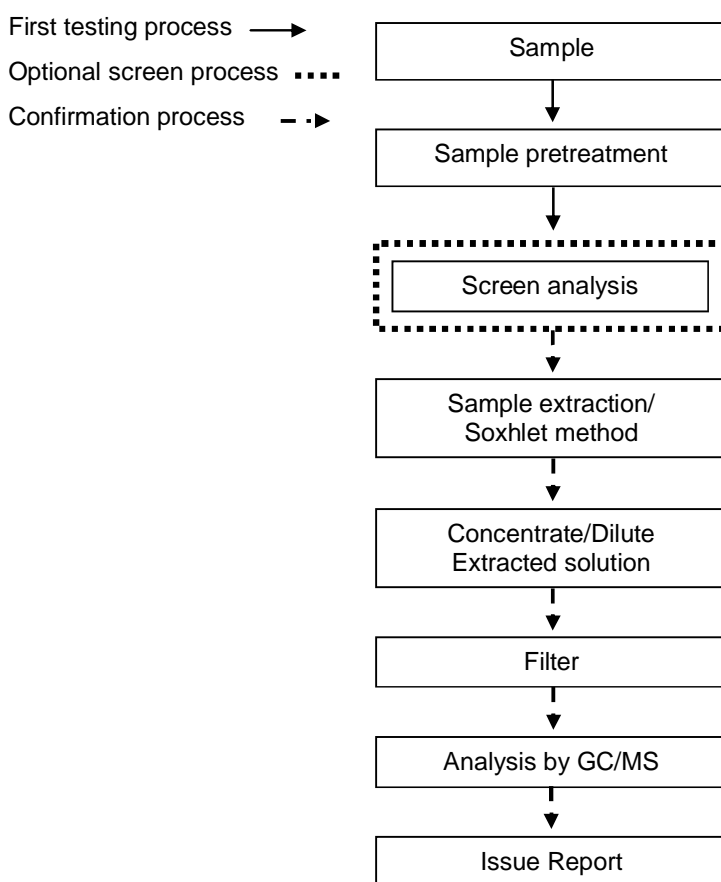
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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[illegible]

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Test Report

No. : CE/2014/13438

Date : 2014/01/21

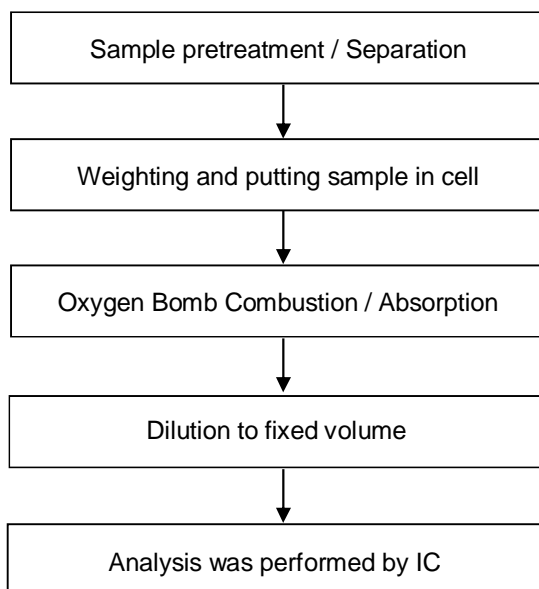
Page: 6 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang



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Test Report

No. : CE/2014/13438

Date : 2014/01/21

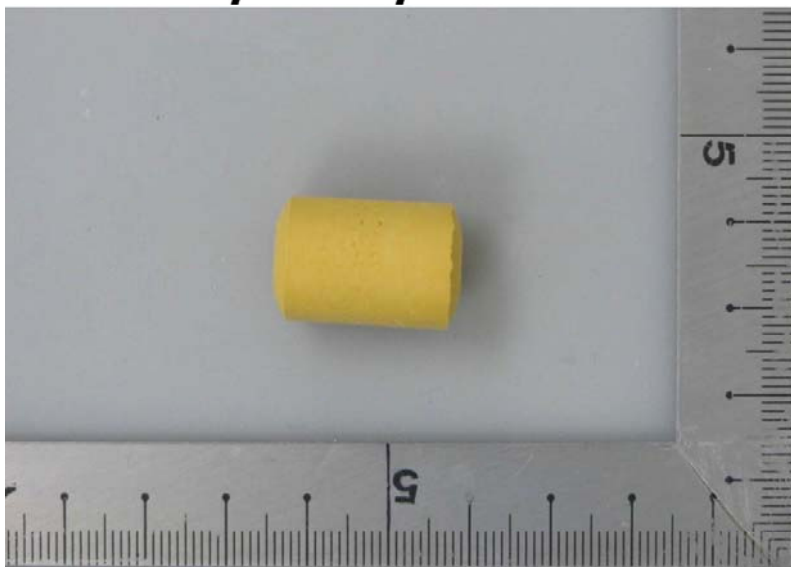
Page: 7 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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

CE/2014/13438



** End of Report **

[illegible]

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Test Report

No. : CE/2014/13552 Date : 2014/01/21 Page : 1 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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

Sample Submitted By : AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
Sample Description : LF Cu-Sn I.a
Style/Item No. : TANTALUM DIVISION
Sample Receiving Date : 2014/01/15
Testing Period : 2014/01/15 TO 2014/01/21

Test Requested : As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.

Test Method : Please refer to next pages.

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

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Test Report

No. : CE/2014/13552 Date : 2014/01/21 Page : 2 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Result(s)

PART NAME No.1	:	PLATING LAYER OF SILVER COLORED METAL
PART NAME No.2	:	BASE MATERIAL OF SILVER COLORED METAL

Test Item(s)	Unit	Method	MDL	Result	
				No.1	No.2
Cadmium (Cd)	mg/kg	IEC 62321-5: 2013 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.	---
	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	---	n.d.
Lead (Pb)	mg/kg	IEC 62321-5: 2013 application of modified digestion by surface etching and performed by ICP-AES.	2	61	---
	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	---	24
Mercury (Hg)	mg/kg	IEC 62321-4: 2013 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.	---
	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	---	n.d.
Hexavalent Chromium Cr(VI)	**	With reference to IEC 62321: 2008 and performed by Boiling water extraction Method.#	#	Negative	Negative
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	---	n.d.
Monobromobiphenyl	mg/kg		5	---	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.

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Test Report

No. : CE/2014/13552 Date : 2014/01/21 Page : 3 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Item(s)	Unit	Method	MDL	Result	
				No.1	No.2
Sum of PBDEs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	---	n.d.
Monobromodiphenyl ether	mg/kg		5	---	n.d.
Dibromodiphenyl ether	mg/kg		5	---	n.d.
Tribromodiphenyl ether	mg/kg		5	---	n.d.
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.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated
5. "---" = Not Conducted
6. ** = Qualitative analysis (No Unit)
7. # = a. Positive means the presence of CrVI on the tested areas
b. Negative means the absence of CrVI on the tested areas

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² tested areas.

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Test Report

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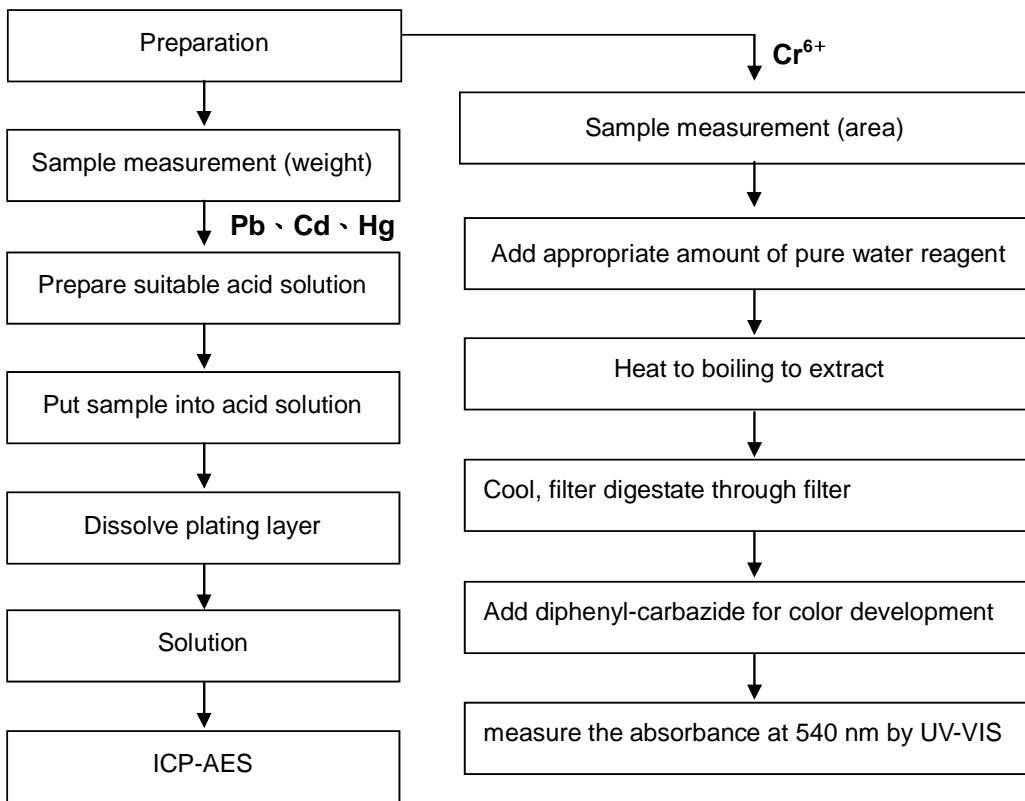
AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH
7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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No.1 The plating layer of samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)

- Name of the person who made measurement: Climbgreat Yang
- Name of the person in charge of measurement: Troy Chang

Flow Chart of Stripping method for metal analysis

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Test Report

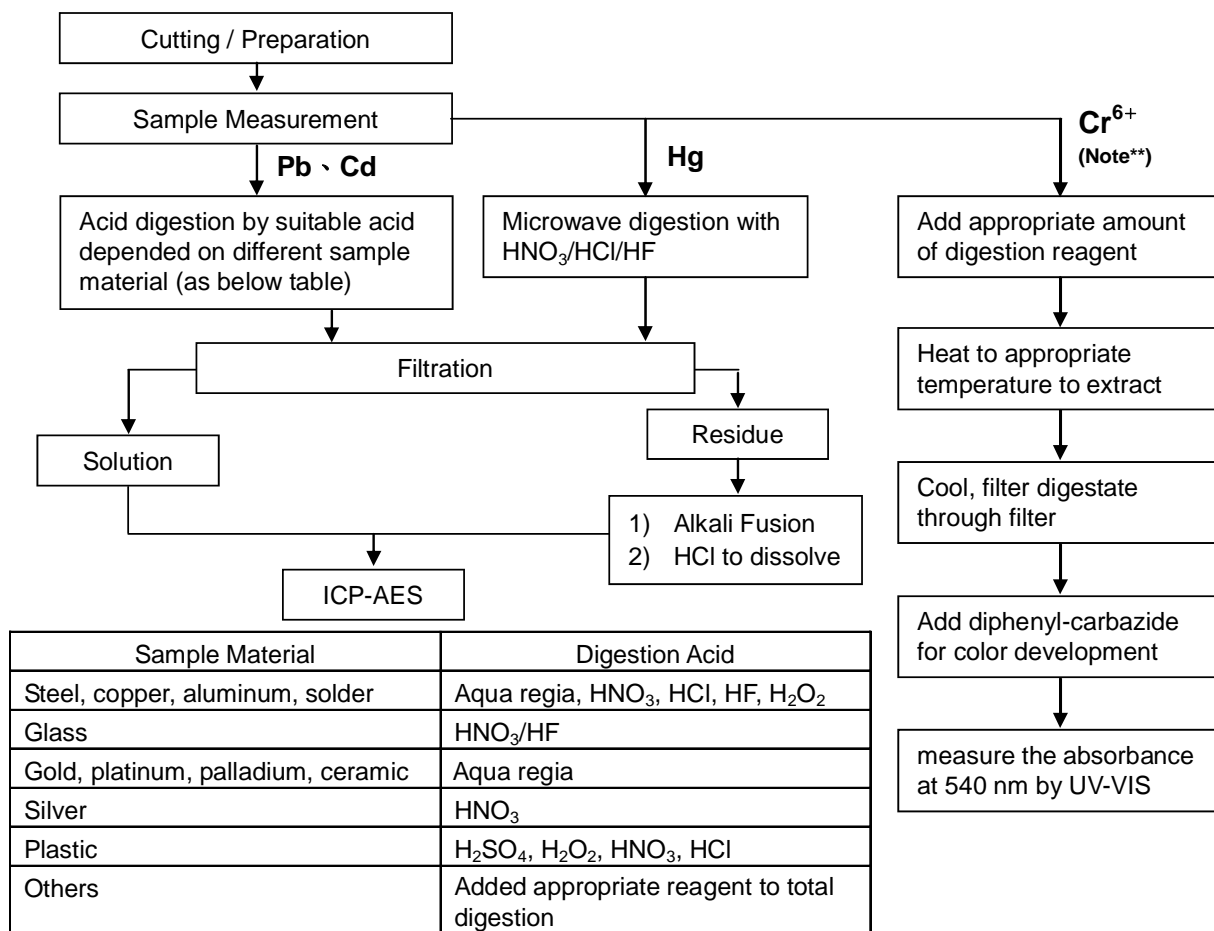
No. : CE/2014/13552 Date : 2014/01/21 Page : 5 of 7

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No.2

- 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: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note (For IEC 62321)**

- (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95 °C.
- (2) For metallic material, add pure water and heat to boiling.



Test Report

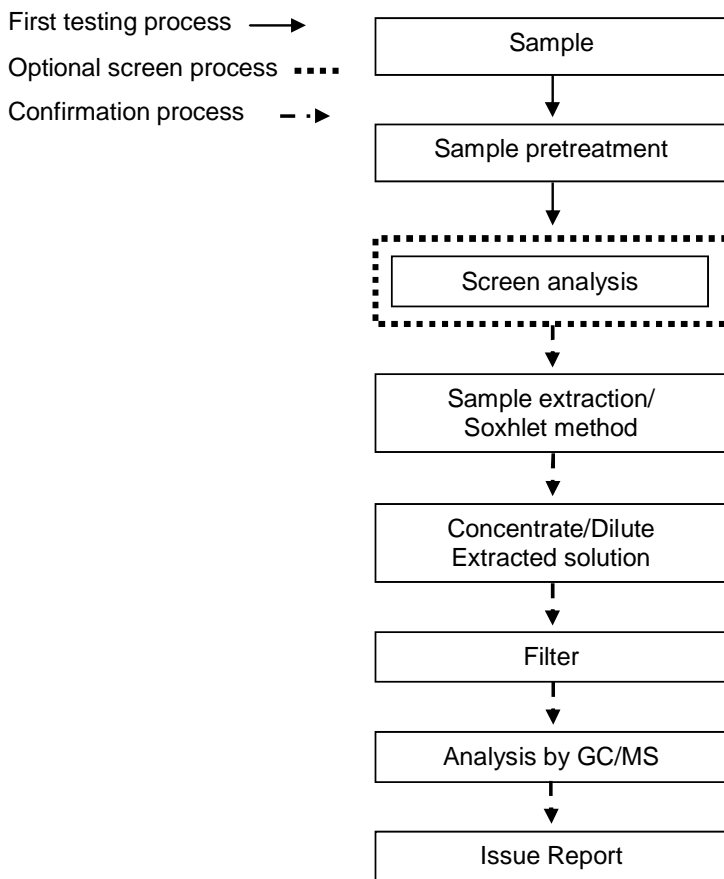
No. : CE/2014/13552 Date : 2014/01/21 Page : 6 of 7

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

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Test Report

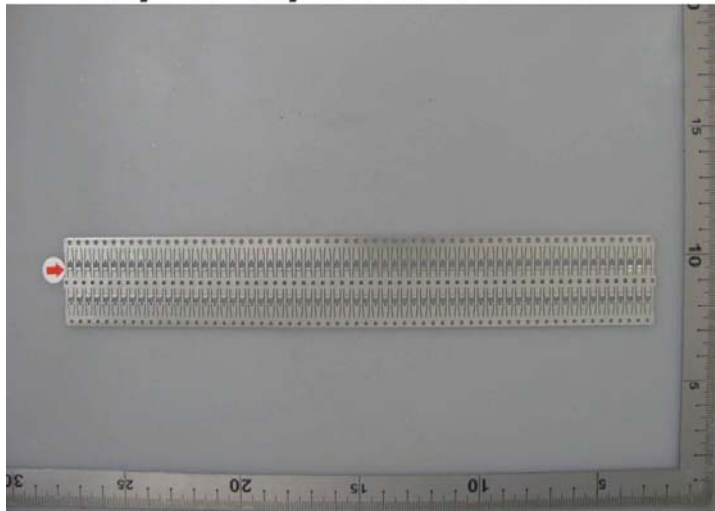
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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

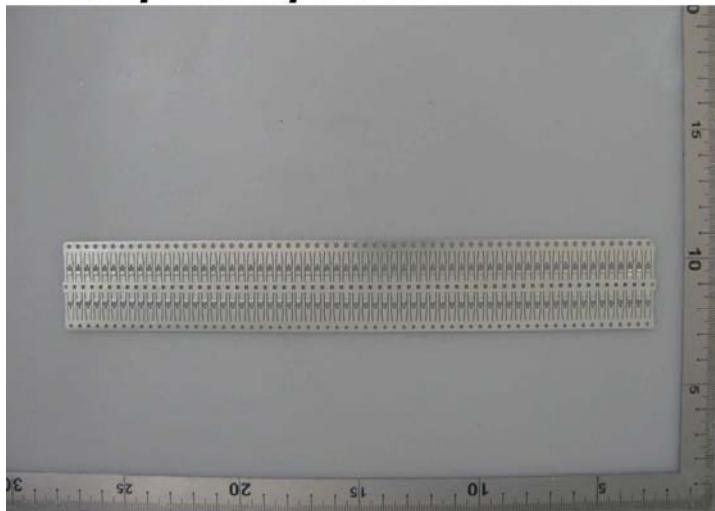
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* The tested sample / part is marked by an arrow if it's shown on the photo. *

CE/2014/13552 NO.1



CE/2014/13552 NO.2



** End of Report **

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Test Report

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Result(s)

PART NAME No.1	:	PLATING LAYER OF SILVER COLORED METAL
PART NAME No.2	:	BASE MATERIAL OF SILVER COLORED METAL

Test Item(s)	Unit	Method	MDL	Result	
				No.1	No.2
Cadmium (Cd)	mg/kg	IEC 62321-5: 2013 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.	---
	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	---	n.d.
Lead (Pb)	mg/kg	IEC 62321-5: 2013 application of modified digestion by surface etching and performed by ICP-AES.	2	43	---
	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	---	n.d.
Mercury (Hg)	mg/kg	IEC 62321-4: 2013 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.	---
	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	---	n.d.
Hexavalent Chromium Cr(VI)	**	With reference to IEC 62321: 2008 and performed by Boiling water extraction Method.#	#	Negative	Negative
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	---	n.d.
Monobromobiphenyl	mg/kg		5	---	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.

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Test Report

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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Test Item(s)	Unit	Method	MDL	Result	
				No.1	No.2
Sum of PBDEs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	---	n.d.
Monobromodiphenyl ether	mg/kg		5	---	n.d.
Dibromodiphenyl ether	mg/kg		5	---	n.d.
Tribromodiphenyl ether	mg/kg		5	---	n.d.
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.

Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated
5. "---" = Not Conducted
6. ** = Qualitative analysis (No Unit)
7. # =
 - a. Positive means the presence of CrVI on the tested areas
 - b. Negative means the absence of CrVI on the tested areas

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² tested areas.

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Test Report

No. : CE/2014/13554 Date : 2014/01/21 Page : 4 of 7

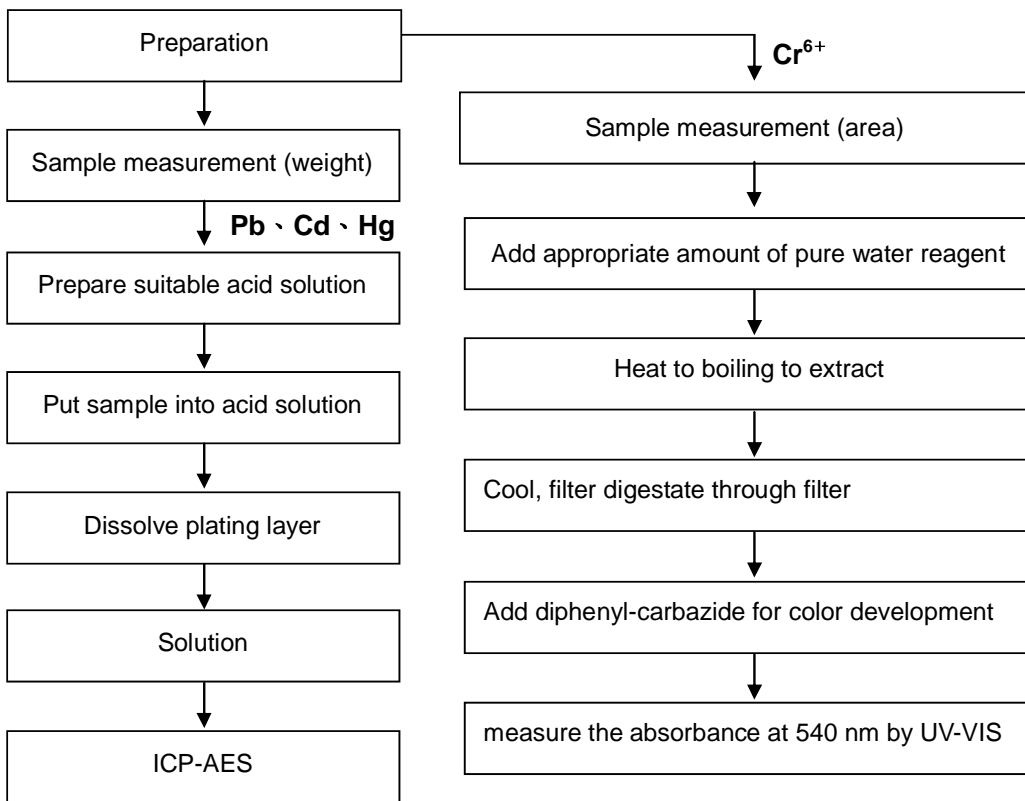
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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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No.1 The plating layer of samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)

- Name of the person who made measurement: Climbgreat Yang
- Name of the person in charge of measurement: Troy Chang

Flow Chart of Stripping method for metal analysis

[illegible]

Test Report

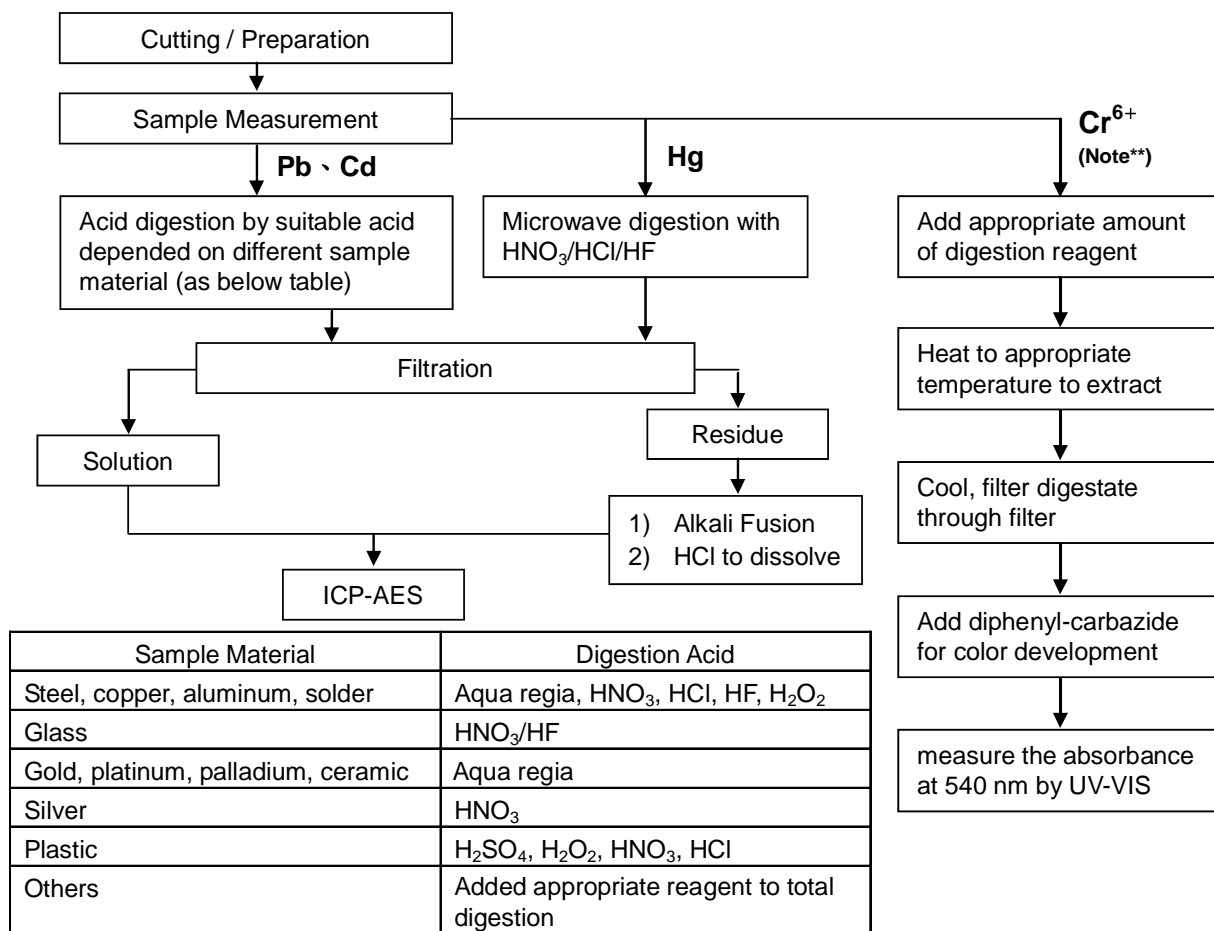
No. : CE/2014/13554 Date : 2014/01/21 Page : 5 of 7

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No.2

- 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: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note (For IEC 62321)**

- (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95 °C.
- (2) For metallic material, add pure water and heat to boiling.



Test Report

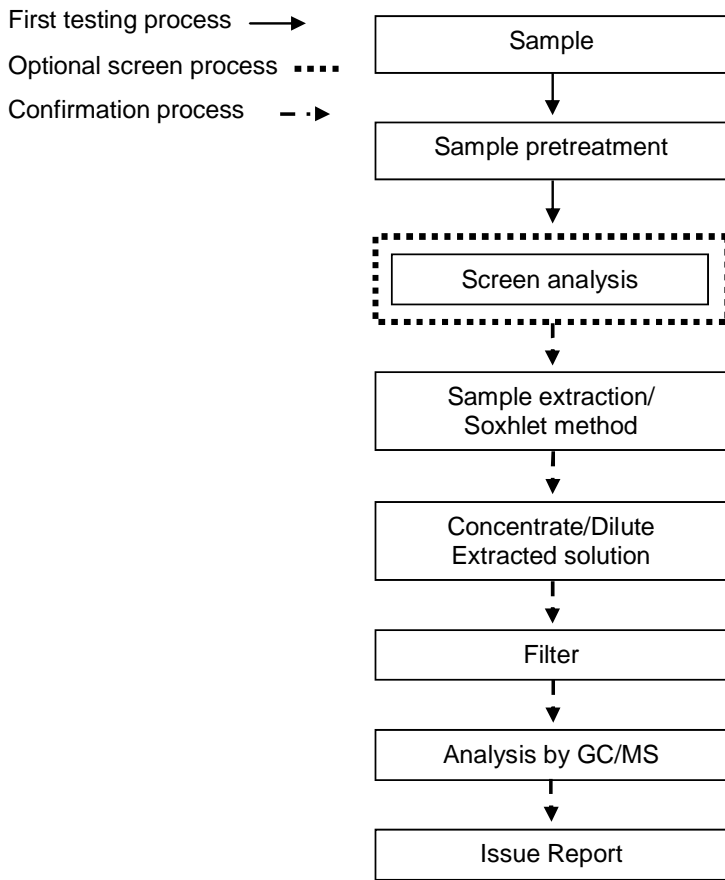
No. : CE/2014/13554 Date : 2014/01/21 Page : 6 of 7

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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

[illegible]

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Test Report

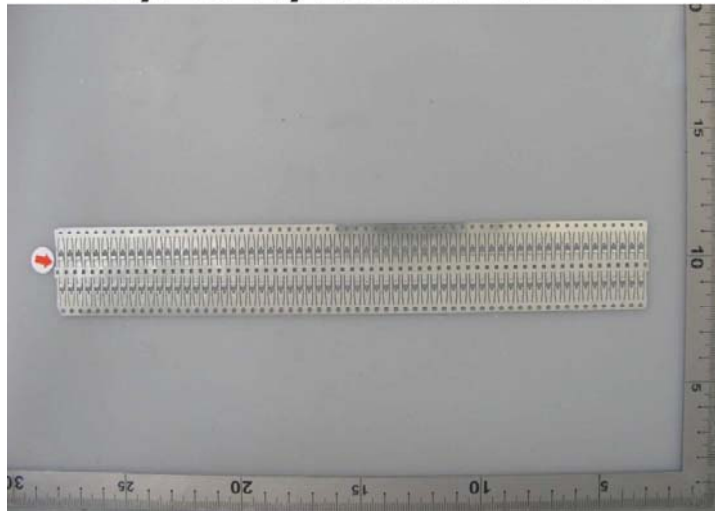
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7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

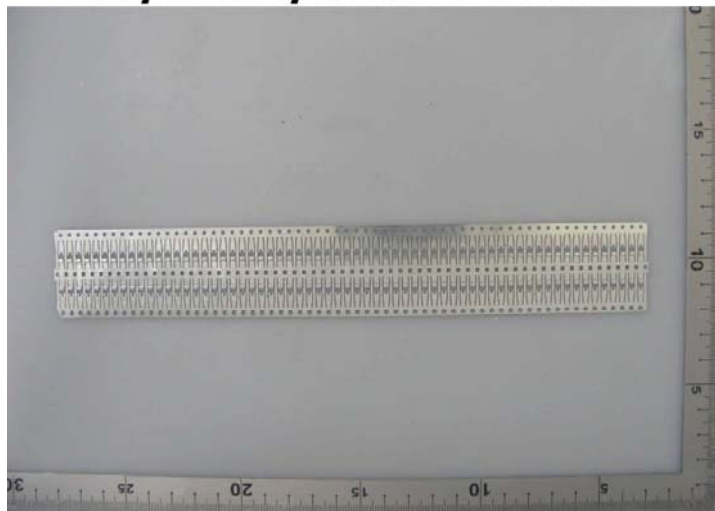
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* The tested sample / part is marked by an arrow if it's shown on the photo. *

CE/2014/13554 NO.1



CE/2014/13554 NO.2



** End of Report **

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