

No. : CE/2011/10593 Date : 2011/02/01

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description Style/Item No. Sample Receiving Date Testing Period : TAJ SERIES
: TANTALUM DIVISION
: 2011/01/04
: 2011/01/04 TO 2011/02/01

Test Result(s)

: Please refer to next page(s).



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

#### Test Result(s)

PART NAME No.1 : TAJ SERIES

Test Item (s):	Unit	Method	MDL	Result
rest tieff (5).	Unit	Metriod		No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Sum of PBBs		-	-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl		With reference to IEC 62321: 2008 and	5	n.d.
Pentabromobiphenyl	mg/kg	performed by GC/MS.	5	n.d.
Hexabromobiphenyl		penomied by GG/MG.	5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl			5	n.d.

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

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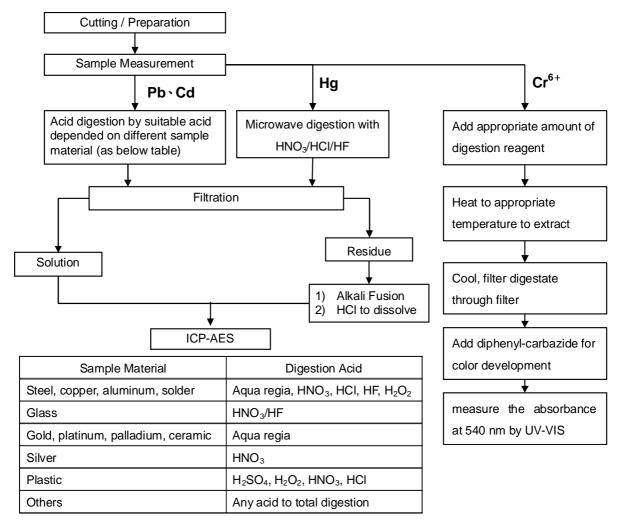


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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. ( $Cr^{6+}$  test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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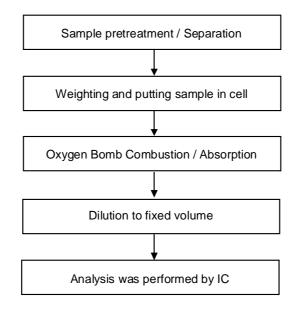


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart of halogen content

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



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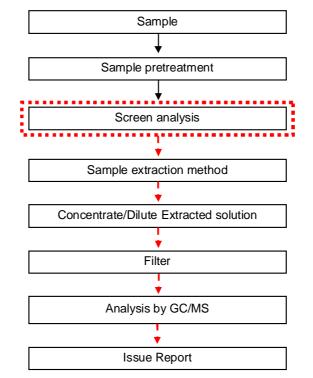
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang
  - Test Items: PBB/PBDE, TBBP-A-bis

First testing process → Optional screen process ······ Confirmation process - · ►



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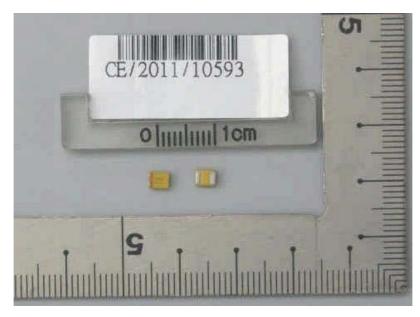
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as :

Sample Description Style/Item No. Sample Receiving Date Testing Period	::	TANTALUM POWDER I. TANTALUM DIVISION 2011/01/04 2011/01/04 TO 2011/01/10
	:	In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.
Test Method	:	With reference to IEC 62321: 2008 Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products.
		<ol> <li>Determination of Cadmium by ICP-AES.</li> <li>Determination of Lead by ICP-AES.</li> <li>Determination of Mercury by ICP-AES.</li> <li>Determination of Hexavalent Chromium by UV/Vis Spectrometry.</li> <li>Determination of PBB and PBDE by GC/MS.</li> </ol>
Test Result(s)	:	Please refer to next page(s).



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2015

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN Test results by chemical method (Unit: mg/kg)

Test Item (a):	Method	Result	MDI
Test Item (s):	(Refer to)	No.1	MDL
Cadmium (Cd)	(1)	n.d.	2
Lead (Pb)	(2)	n.d.	2
Mercury (Hg)	(3)	n.d.	2
Hexavalent Chromium Cr(VI) by alkaline	(4)	n.d.	2
extraction			
Sum of PBBs		n.d.	-
Monobromobiphenyl		n.d.	5
Dibromobiphenyl	]	n.d.	5
Tribromobiphenyl		n.d.	5
Tetrabromobiphenyl		n.d.	5
Pentabromobiphenyl		n.d.	5
Hexabromobiphenyl		n.d.	5
Heptabromobiphenyl	]	n.d.	5
Octabromobiphenyl		n.d.	5
Nonabromobiphenyl		n.d.	5
Decabromobiphenyl	(5)	n.d.	5
Sum of PBDEs	(3)	n.d.	-
Monobromodiphenyl ether		n.d.	5
Dibromodiphenyl ether		n.d.	5
Tribromodiphenyl ether		n.d.	5
Tetrabromodiphenyl ether		n.d.	5
Pentabromodiphenyl ether		n.d.	5
Hexabromodiphenyl ether	]	n.d.	5
Heptabromodiphenyl ether	]	n.d.	5
Octabromodiphenyl ether	]	n.d.	5
Nonabromodiphenyl ether	]	n.d.	5
Decabromodiphenyl ether		n.d.	5

#### **TEST PART DESCRIPTION:**

No.1: GRAY POWDER

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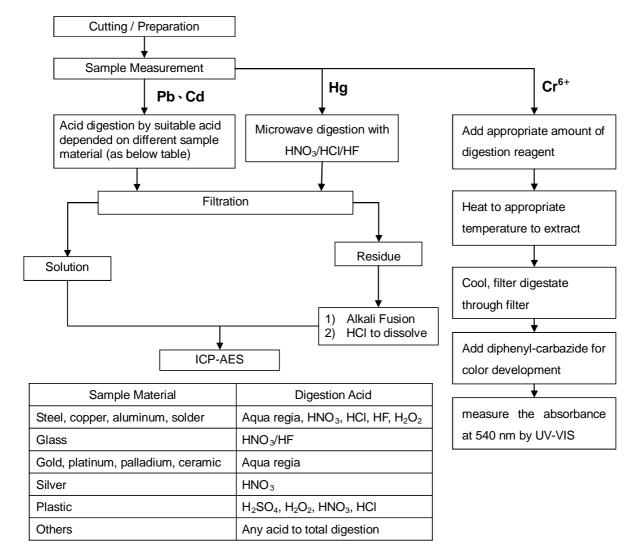
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (  $Cr^{6+}$  test method excluded )
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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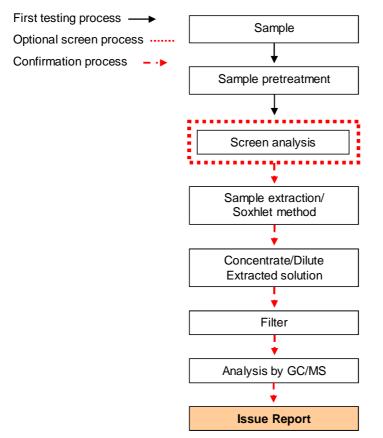


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#### **PBB/PBDE** analytical FLOW CHART

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



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### Test Report No. : CE/2011/10656 Date : 2011/01/10

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as :

Sample Description	:	TA WIRE
Style/Item No.	:	TANTALUM DIVISION
Sample Receiving Date	:	2011/01/04
Testing Period	:	2011/01/04 TO 2011/01/10

\_\_\_\_\_

Test Requested	:	In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.
Test Method	:	With reference to IEC 62321: 2008 Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products.
		<ol> <li>Determination of Cadmium by ICP-AES.</li> <li>Determination of Lead by ICP-AES.</li> <li>Determination of Mercury by ICP-AES.</li> <li>Determination of Hexavalent Chromium by boiling water extraction Method.</li> </ol>
		(5) Determination of PBB and PBDE by GC/MS.
Test Result(s)	:	Please refer to next page(s).



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

Test results by chemical method (Unit: mg/kg)

Test Hows (a)	Method	Result	MDI
Test Item (s):	(Refer to)	No.1	MDL
Cadmium (Cd)	(1)	n.d.	2
Lead (Pb)	(2)	n.d.	2
Mercury (Hg)	(3)	n.d.	2
Hexavalent Chromium Cr(VI) by boiling water extraction	(4)	Negative	See Note 4
Sum of PBBs		n.d.	-
Monobromobiphenyl		n.d.	5
Dibromobiphenyl		n.d.	5
Tribromobiphenyl	1	n.d.	5
Tetrabromobiphenyl	1	n.d.	5
Pentabromobiphenyl	1	n.d.	5
Hexabromobiphenyl	Ī	n.d.	5
Heptabromobiphenyl		n.d.	5
Octabromobiphenyl		n.d.	5
Nonabromobiphenyl		n.d.	5
Decabromobiphenyl	(5)	n.d.	5
Sum of PBDEs	(5)	n.d.	-
Monobromodiphenyl ether		n.d.	5
Dibromodiphenyl ether		n.d.	5
Tribromodiphenyl ether		n.d.	5
Tetrabromodiphenyl ether		n.d.	5
Pentabromodiphenyl ether	1	n.d.	5
Hexabromodiphenyl ether	Ī	n.d.	5
Heptabromodiphenyl ether	Ī	n.d.	5
Octabromodiphenyl ether	[	n.d.	5
Nonabromodiphenyl ether	I	n.d.	5
Decabromodiphenyl ether		n.d.	5

#### **TEST PART DESCRIPTION:**

No.1

: SILVER COLORED METAL WIRE

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- Note : 1. mg/kg = ppm; 0.1wt% = 1000ppm
  - 2. n.d. = Not Detected
  - 3. MDL = Method Detection Limit
  - 4. Boiling-water-extraction:
    - Negative = Absence of Cr(VI) coating / surface layer. Positive = Presence of Cr(VI) coating / surface layer; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm<sup>2</sup> sample surface area.

5. "-" = Not Regulated

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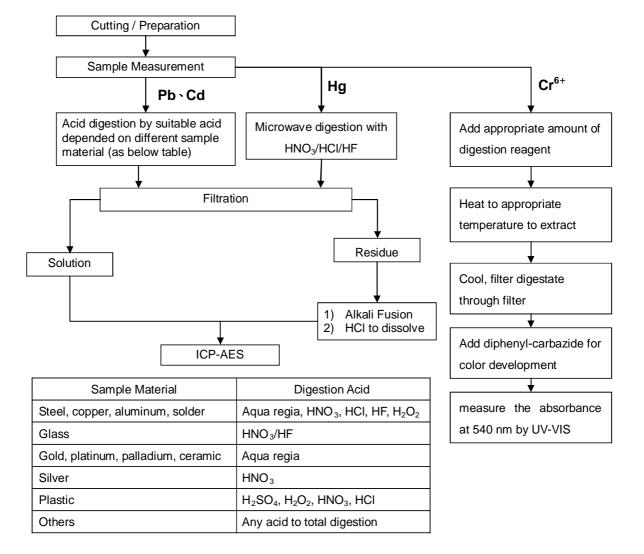
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.  $(Cr^{6+}$  test method excluded )
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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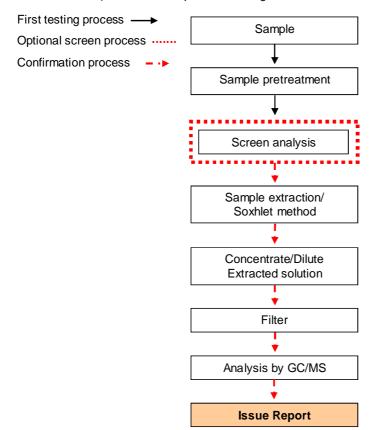
Page : 5 of 6

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

#### **PBB/PBDE** analytical FLOW CHART

1) Name of the person who made measurement: Roman Wong

2) Name of the person in charge of measurement: Troy Chang



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No. : CE/2011/10550 Date : 2011/01/10 Page : 1 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description Style/Item No. Sample Receiving Date Testing Period MANGANESE NITRATE
 TANTALUM DIVISION
 2011/01/04
 2011/01/04 TO 2011/01/10

Test Result(s)

: Please refer to next page(s).



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#### No. : CE/2011/10550 Date : 2011/01/10 Page : 2 of 7

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

#### Test Result(s)

PART NAME No.1 : PINK LIQUID AND PINK LUMP

Test Item (s):	Unit	Method	MDL	Result
rest item (s).	Unit	Method	IVIDL	No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Sum of PBBs		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	mg/kg		5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl	]		5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl			5	n.d.

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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

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

#### Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. " - " = Not Regulated

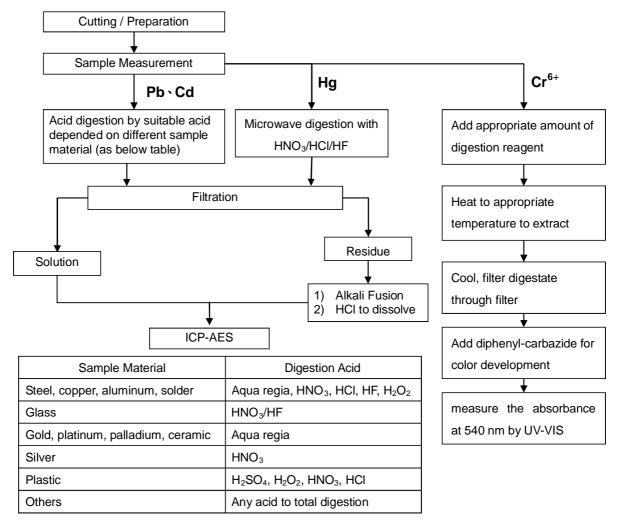
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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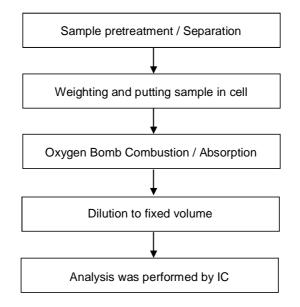


No. : CE/2011/10550 Date : 2011/01/10 Page : 5 of 7

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

#### Analytical flow chart of halogen content

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



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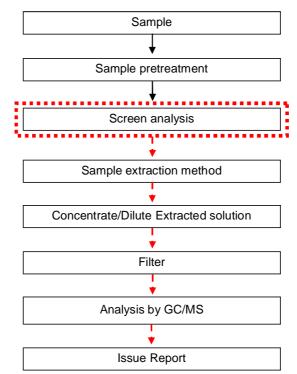
No. : CE/2011/10550 Date : 2011/01/10 Page : 6 of 7

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

#### Analytical flow chart

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang
  - Test Items: PBB/PBDE, TBBP-A-bis

First testing process — Optional screen process … Confirmation process – · >



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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. : CE/2011/10547 Date : 2011/01/10 Page : 1 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description Style/Item No. Sample Receiving Date Testing Period : GRAPHITE STD.
: TANTALUM DIVISION
: 2011/01/04
: 2011/01/04 TO 2011/01/10

Test Result(s)

: Please refer to next page(s).



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

#### Test Result(s)

PART NAME No.1 : BLACK LIQUID

Test Item (s):	Unit	Method	MDL	Result
rest item (s):	Unit	Metriod	WIDL	No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Sum of PBBs		With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl	1		5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl	1		5	n.d.
Pentabromobiphenyl	mg/kg		5	n.d.
Hexabromobiphenyl		penonneu by CO/MO.	5	n.d.
Heptabromobiphenyl	]		5	n.d.
Octabromobiphenyl	]		5	n.d.
Nonabromobiphenyl	]		5	n.d.
Decabromobiphenyl			5	n.d.

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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

Test Item (s):	Unit	Unit Method	MDL	Result
rest tielli (s).	Unit	Metriod	WIDL	No.1
Sum of PBDEs			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether		mg/kg With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether	mg/kg		5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether	1		5	n.d.
Decabromodiphenyl ether	1		5	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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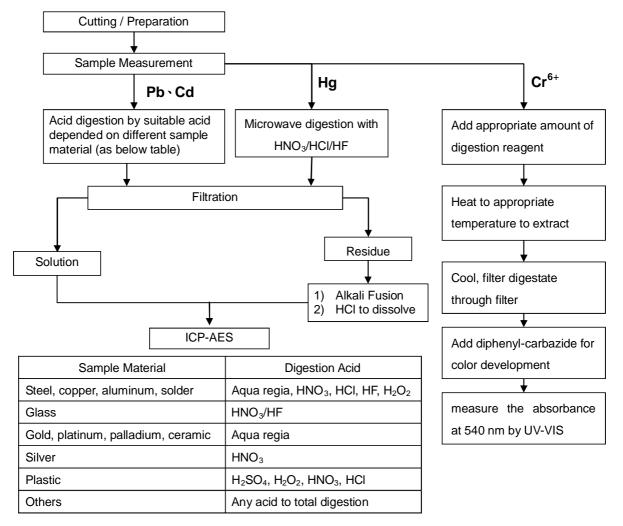


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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. (  $Cr^{6+}$  test method excluded )
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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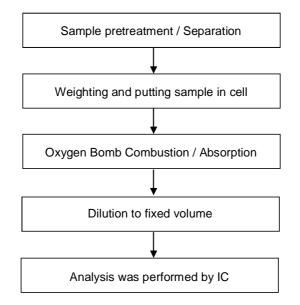


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart of halogen content

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



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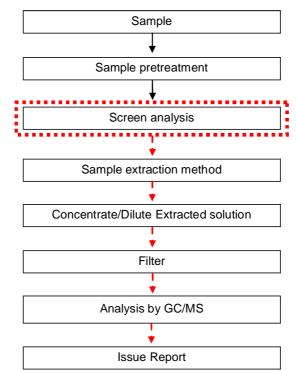
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang
  - Test Items: PBB/PBDE, TBBP-A-bis

First testing process — Optional screen process … Confirmation process – · >



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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 

\*\* End of Report \*\*

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description Style/Item No. Sample Receiving Date Testing Period : SILICONE
: TANTALUM DIVISION
: 2011/01/04
: 2011/01/04 TO 2011/01/10

Test Result(s)

: Please refer to next page(s).



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

#### Test Result(s)

PART NAME No.1 : TRANSPARENT LIQUID

Test Itom (s);	Unit	Method	MDL	Result
Test Item (s):	Unit	Method	WIDL	No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Sum of PBBs			-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl	1		5	n.d.
Tribromobiphenyl	1		5	n.d.
Tetrabromobiphenyl	1		5	n.d.
Pentabromobiphenyl	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.
Hexabromobiphenyl		penolinieu by CO/MO.	5	n.d.
Heptabromobiphenyl	]		5	n.d.
Octabromobiphenyl	]		5	n.d.
Nonabromobiphenyl	]		5	n.d.
Decabromobiphenyl			5	n.d.

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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

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

#### 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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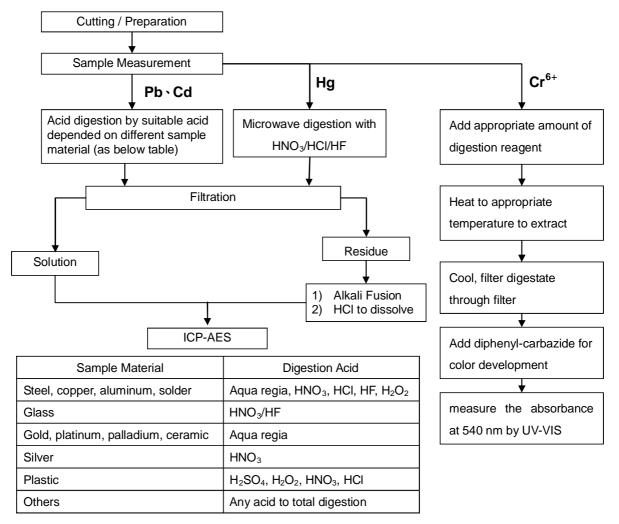
No. : CE/2011/10576 Date : 2011/01/10 Page : 4 of 7

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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. (  $Cr^{6+}$  test method excluded )
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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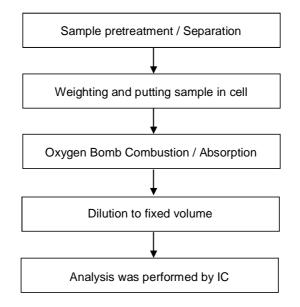


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart of halogen content

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



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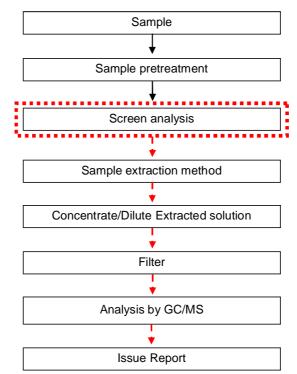
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang
  - Test Items: PBB/PBDE, TBBP-A-bis

First testing process — Optional screen process … Confirmation process – · >



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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 

\*\* End of Report \*\*

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description Style/Item No. Sample Receiving Date Testing Period : GREEN TEFLON II.
: TANTALUM DIVISION
: 2011/01/04
: 2011/01/04 TO 2011/01/10

Test Result(s)

: Please refer to next page(s).



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Company: By P2 Hat C1 MX HEED MARK H

- 台灣信箋科技股份有限公司 Chemical-Taipei 33 WuChyuan Road, Wuku Industrial Zone, New Taipei City, Taiwan /新北市五股工業區五權路33號 + 886 (02)2299 3279 f + 886 (02)2299 3237 www.sgs.com

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#### No. : CE/2011/10548 Date : 2011/01/10 Page : 2 of 7

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

#### Test Result(s)

PART NAME No.1 : GREEN LIQUID

Test Item (s):	Unit	Method	MDL	Result
Test Item (s):	Unit	in Metrioa		No.1
Cadmium (Cd)	nium (Cd) mg/kg With reference to IEC 62321: 2008 and performed by ICP-AES.		2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Sum of PBBs			-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl	1		5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl	1		5	n.d.
Pentabromobiphenyl	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.
Hexabromobiphenyl		penonneu by CO/MO.	5	n.d.
Heptabromobiphenyl	]		5	n.d.
Octabromobiphenyl	]		5	n.d.
Nonabromobiphenyl	]		5	n.d.
Decabromobiphenyl			5	n.d.

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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

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

#### 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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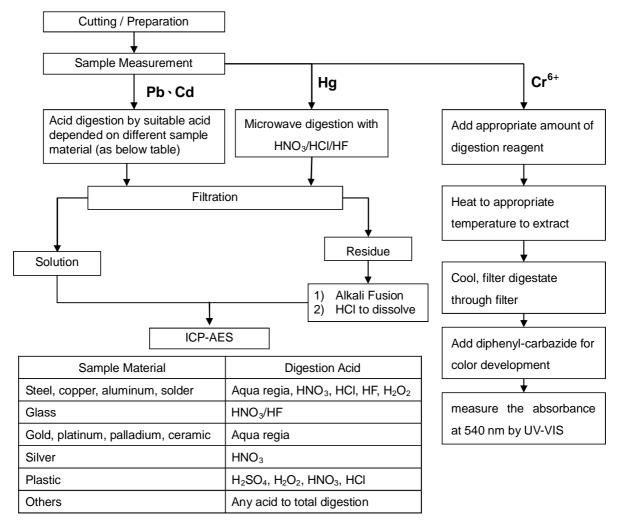


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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. (Cr<sup>6+</sup> test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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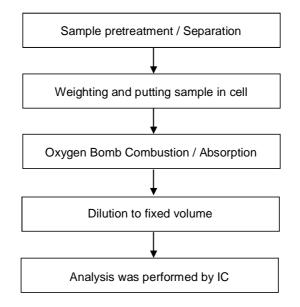


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart of halogen content

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



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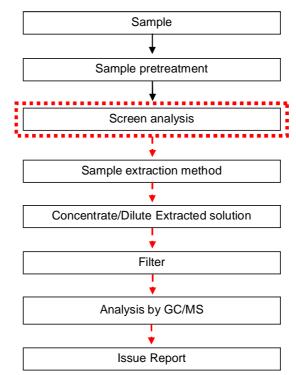
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang
  - Test Items: PBB/PBDE, TBBP-A-bis

First testing process — Optional screen process … Confirmation process – · >



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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. : CE/2011/10571 Date : 2011/01/10 Page : 1 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description Style/Item No. Sample Receiving Date Testing Period : PASTE II.
: TANTALUM DIVISION
: 2011/01/04
: 2011/01/04 TO 2011/01/10

Test Result(s)

: Please refer to next page(s).



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

#### Test Result(s)

PART NAME No.1 : GRAY LUMP

Test Item (s):	Unit	Method	MDL	Result
rest tiell (s).	Unit	Metriod	WIDL	No.1
Cadmium (Cd)	mg/kg With reference to IEC 62321: 2008 and performed by ICP-AES.		2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	mg/kg With reference to IEC 62321: 2008 and performed by UV-VIS.		n.d.
Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)	mg/kg	mg/kg With reference to BS EN 14582:2007. Analysis was performed by IC.		n.d.
Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	mg/kg With reference to BS EN 14582:2007. Analysis was performed by IC.		n.d.
Sum of PBBs			-	n.d.
Monobromobiphenyl	1		5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.
Hexabromobiphenyl		penolinieu by CO/MO.	5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl	]		5	n.d.
Nonabromobiphenyl	]		5	n.d.
Decabromobiphenyl			5	n.d.

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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

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

#### 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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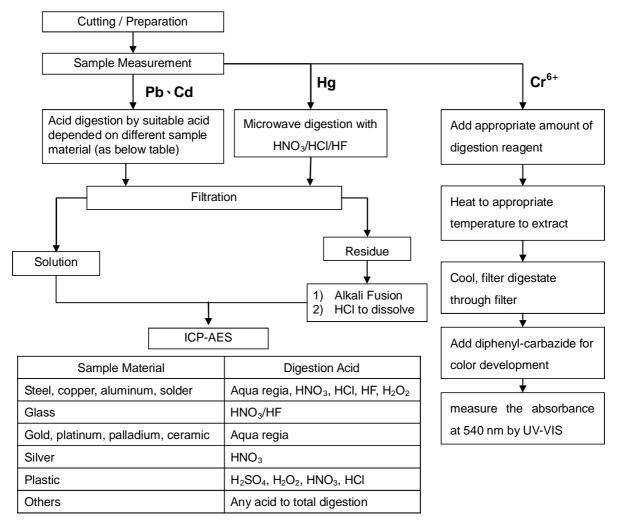
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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. (  $Cr^{6+}$  test method excluded )
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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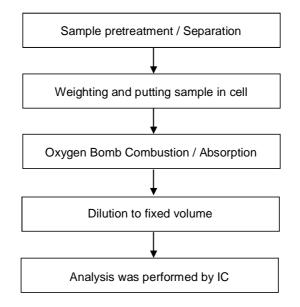


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart of halogen content

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



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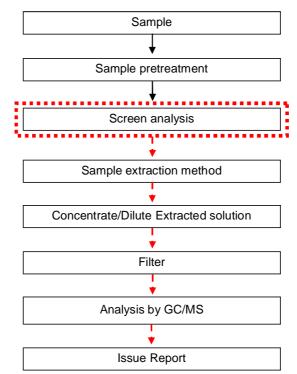
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang
  - Test Items: PBB/PBDE, TBBP-A-bis

First testing process — Optional screen process … Confirmation process – · >



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# SGS

## **Test Report**

#### No. : CE/2011/10571 Date : 2011/01/10 Page: 7 of 7

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

\*\* End of Report \*\*

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No. : CE/2011/10585 Date : 2011/01/10 Page : 1 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description Style/Item No. Sample Receiving Date Testing Period : SILVER I
: TANTALUM DIVISION
: 2011/01/04
: 2011/01/04 TO 2011/01/10

Test Result(s)

: Please refer to next page(s).



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Company: By P2 Hat C1 MX HEED MARK H



#### No. : CE/2011/10585 Date : 2011/01/10 Page : 2 of 7

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

#### Test Result(s)

PART NAME No.1 : GRAY PASTE

Test Item (s):	Unit	Method	MDL	Result
Test Item (s):	Unit	int Method		No.1
Cadmium (Cd)	um (Cd) mg/kg With reference to IEC 62321: 2008 and performed by ICP-AES.		2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg			n.d.
Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Sum of PBBs			-	n.d.
Monobromobiphenyl	1		5	n.d.
Dibromobiphenyl	1		5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl	1		5	n.d.
Pentabromobiphenyl	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.
Hexabromobiphenyl		penomieu by GC/MS.	5	n.d.
Heptabromobiphenyl	]		5	n.d.
Octabromobiphenyl	]		5	n.d.
Nonabromobiphenyl	]		5	n.d.
Decabromobiphenyl			5	n.d.

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#### No. : CE/2011/10585 Date : 2011/01/10 Page : 3 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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

	Unit	Method	MDL	Result
Test Item (s):	Unit	Metriod	WIDL	No.1
Sum of PBDEs			-	n.d.
Monobromodiphenyl ether	1		5	n.d.
Dibromodiphenyl ether		ng/kg With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether	mg/kg		5	n.d.
Hexabromodiphenyl ether	1		5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether	1		5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	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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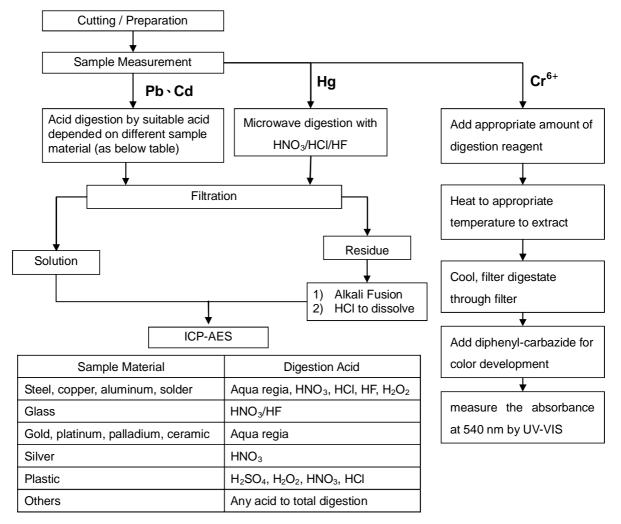


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
  - (Cr<sup>6+</sup> test method excluded)
  - 2) Name of the person who made measurement: Climbgreat Yang
  - 3) Name of the person in charge of measurement: Troy Chang



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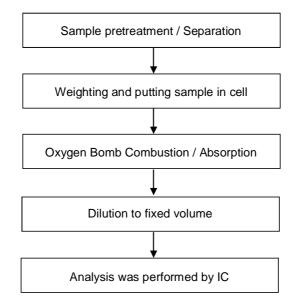


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart of halogen content

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



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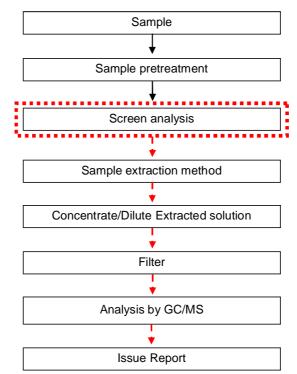
No. : CE/2011/10585 Date : 2011/01/10 Page : 6 of 7

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

#### Analytical flow chart

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang
  - Test Items: PBB/PBDE, TBBP-A-bis

First testing process — Optional screen process … Confirmation process – · >



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## **Test Report**

#### No. : CE/2011/10585 Date : 2011/01/10 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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No. : CE/2011/10557 Date : 2011/01/10 Page : 1 of 7

AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description Style/Item No. Sample Receiving Date Testing Period MOULDING GOLD GREEN
 TANTALUM DIVISION
 2011/01/04
 2011/01/04 TO 2011/01/10

Test Result(s)

: Please refer to next page(s).



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#### No. : CE/2011/10557 Date : 2011/01/10 Page : 2 of 7

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

#### Test Result(s)

PART NAME No.1 : YELLOW LUMP

Test Item (s);	Unit	Method	MDL	Result
Test Item (s):	Unit	method		No.1
Cadmium (Cd)	um (Cd) mg/kg With reference to IEC 62321: 2008 and performed by ICP-AES.		2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Halogen-Chlorine (Cl) (CAS No.: 022537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	119
Halogen-Bromine (Br) (CAS No.: 010097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Sum of PBBs			-	n.d.
Monobromobiphenyl	1		5	n.d.
Dibromobiphenyl	1		5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl	1	With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.
Pentabromobiphenyl	mg/kg		5	n.d.
Hexabromobiphenyl		penonneu by CO/MO.	5	n.d.
Heptabromobiphenyl	]		5	n.d.
Octabromobiphenyl	]		5	n.d.
Nonabromobiphenyl	]		5	n.d.
Decabromobiphenyl			5	n.d.

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH

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

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

#### 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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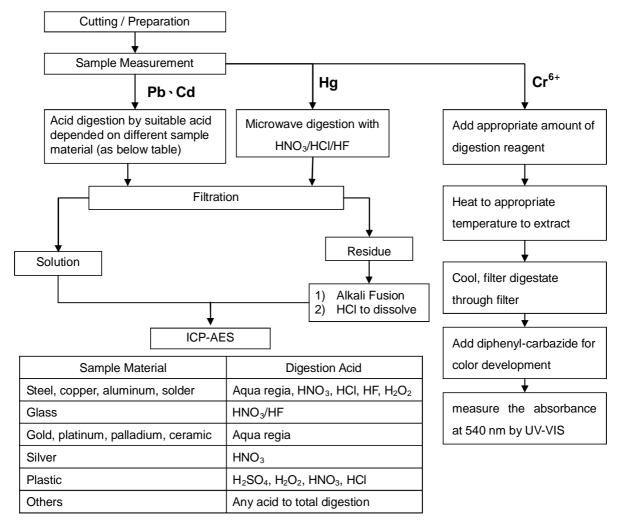


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (  $Cr^{6+}$  test method excluded )
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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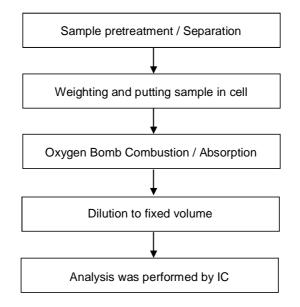


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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart of halogen content

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



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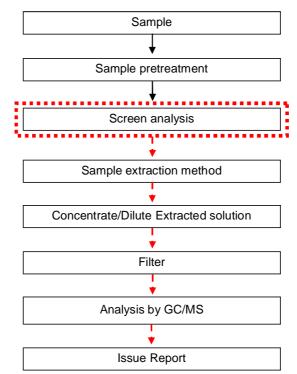
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN 

#### Analytical flow chart

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang
  - Test Items: PBB/PBDE, TBBP-A-bis

First testing process — Optional screen process … Confirmation process – · >



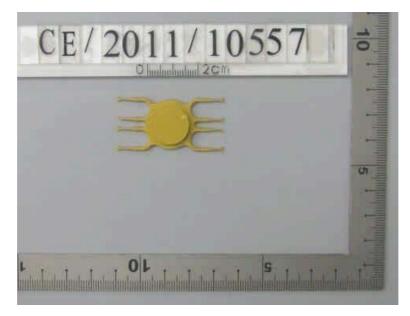
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## **Test Report**

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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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## Test Report No. : CE/2011/10660 Date : 2011/01/10

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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as :

Sample Description	: LF Cu-Sn I.A
Style/Item No.	: TANTALUM DIVISION
Sample Receiving D	ate : 2011/01/04
Testing Period	: 2011/01/04 TO 2011/01/10
Test Requested	In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.
Test Method	With reference to IEC 62321: 2008 Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products.
	<ol> <li>Application of modified digestion by surface etching, determination of Cadmium by ICP-AES.</li> </ol>
	(2) Determination of Cadmium by ICP-AES.
	(3) Application of modified digestion by surface etching, determination of Lead by ICP-AES.
	(4) Determination of Lead by ICP-AES.
	(5) Application of modified digestion by surface etching, determination of Mercury by ICP-AES.
	(6) Determination of Mercury by ICP-AES.
	(7) Determination of Hexavalent Chromium by boiling water extraction Method.
	(8) Determination of PBB and PBDE by GC/MS.
Test Result(s) :	Please refer to next page(s).
Chenyu Kung / Ope Signed for and on a SGS TAIWAN LTD. Chemical Laborator	ecan was

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

Test results by chemical method (Unit: mg/kg)

	Method	Re	Result		
Test Item (s):	(Refer to)	No.1	No.2	MDL	
Cadmium (Cd)	(1)	n.d.		2	
	(2)		n.d.	2	
Lead (Pb)	(3)	106		2	
	(4)		18	2	
Mercury (Hg)	(5)	n.d.		2	
	(6)		n.d.	2	
Hexavalent Chromium Cr(VI) by boiling water extraction	(7)	Negative	Negative	See Note 4	
Sum of PBBs			n.d.	-	
Monobromobiphenyl	1		n.d.	5	
Dibromobiphenyl			n.d.	5	
Tribromobiphenyl			n.d.	5	
Tetrabromobiphenyl			n.d.	5	
Pentabromobiphenyl			n.d.	5	
Hexabromobiphenyl			n.d.	5	
Heptabromobiphenyl			n.d.	5	
Octabromobiphenyl			n.d.	5	
Nonabromobiphenyl			n.d.	5	
Decabromobiphenyl	(0)		n.d.	5	
Sum of PBDEs	(8)		n.d.	-	
Monobromodiphenyl ether			n.d.	5	
Dibromodiphenyl ether			n.d.	5	
Tribromodiphenyl ether			n.d.	5	
Tetrabromodiphenyl ether			n.d.	5	
Pentabromodiphenyl ether	7		n.d.	5	
Hexabromodiphenyl ether			n.d.	5	
Heptabromodiphenyl ether	7		n.d.	5	
Octabromodiphenyl ether			n.d.	5	
Nonabromodiphenyl ether	7		n.d.	5	
Decabromodiphenyl ether	7		n.d.	5	

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

#### **TEST PART DESCRIPTION:**

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

#### Note :

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

Negative = Absence of Cr(VI) coating / surface layer. Positive = Presence of Cr(VI) coating / surface layer; The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm<sup>2</sup> sample surface area.

5. "-" = Not Regulated

6. "---" = Not Conducted

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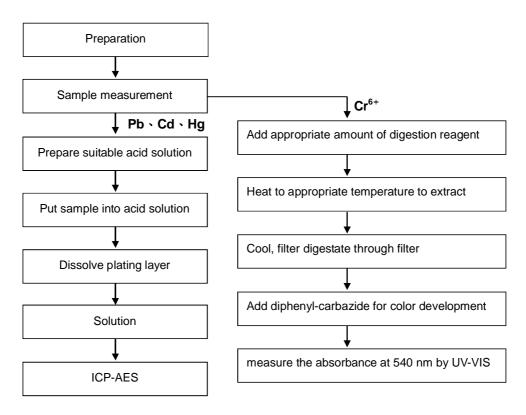
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN

No.1

- These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

#### Flow Chart of Stripping method for metal analysis



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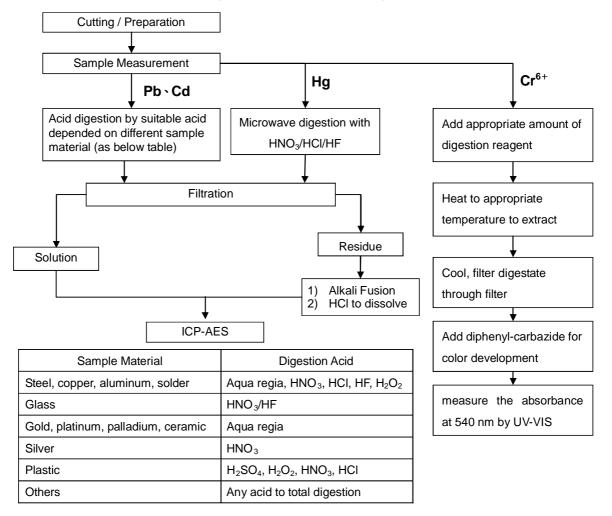
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No.2

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (  $Cr^{6+}$  test method excluded )
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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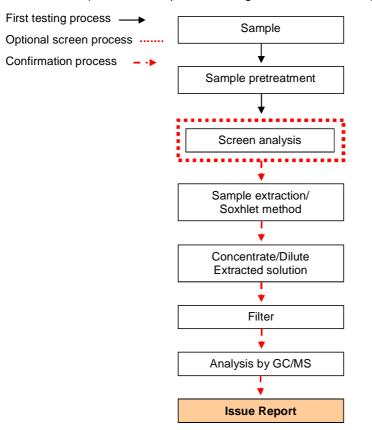
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#### **PBB/PBDE** analytical FLOW CHART

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



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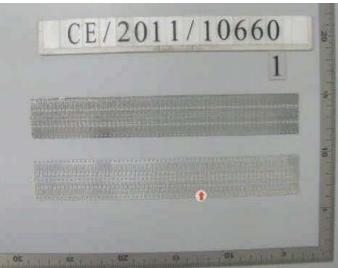
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AVX / KYOCERA HONG KONG LTD. TAIWAN BRANCH 7F-1, NO. 56, LANE 258, RUIGUANG ROAD, 11491 NEIHU, TAIPEI, TAIWAN The following sample(s) was/were submitted and identified by/on behalf of the client as :

Sample Description	: LF NILO-Sn I.					
Style/Item No.	: TANTALUM DIVISION					
Sample Receiving Date	e : 2011/01/04					
Testing Period	: 2011/01/04 TO 2011/01/10					
Test Requested :	In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.					
Test Method :	With reference to IEC 62321: 2008 Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products.					
	<ol> <li>Application of modified digestion by surface etching, determination of Cadmium by ICP-AES.</li> </ol>					
	(2) Determination of Cadmium by ICP-AES.					
	(3) Application of modified digestion by surface etching, determination of Lead by ICP-AES.					
	(4) Determination of Lead by ICP-AES.					
	(5) Application of modified digestion by surface etching, determination of Mercury by ICP-AES.					
	(6) Determination of Mercury by ICP-AES.					
	(7) Determination of Hexavalent Chromium by boiling water extraction Method.					
	(8) Determination of PBB and PBDE by GC/MS.					
Test Result(s) :	Please refer to next page(s).					
Chenyu Kung Aperation Manager Signed for and on perint on Manager SGS TAIWAN LTD. Chemical Laboratory – Taipei						

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

Test results by chemical method (Unit: mg/kg)

	Method (Refer to)	Result		
Test Item (s):		No.1	No.2	MDL
Cadmium (Cd)	(1)	n.d.		2
	(2)		n.d.	2
Lead (Pb)	(3)	66		2
	(4)		n.d.	2
Mercury (Hg)	(5)	n.d.		2
	(6)		n.d.	2
Hexavalent Chromium Cr(VI) by boiling water extraction	(7)	Negative	Negative	See Note 4
Sum of PBBs			n.d.	-
Monobromobiphenyl			n.d.	5
Dibromobiphenyl			n.d.	5
Tribromobiphenyl			n.d.	5
Tetrabromobiphenyl			n.d.	5
Pentabromobiphenyl			n.d.	5
Hexabromobiphenyl			n.d.	5
Heptabromobiphenyl	1		n.d.	5
Octabromobiphenyl			n.d.	5
Nonabromobiphenyl	(0)		n.d.	5
Decabromobiphenyl			n.d.	5
Sum of PBDEs	(8)		n.d.	-
Monobromodiphenyl ether			n.d.	5
Dibromodiphenyl ether			n.d.	5
Tribromodiphenyl ether			n.d.	5
Tetrabromodiphenyl ether			n.d.	5
Pentabromodiphenyl ether	1		n.d.	5
Hexabromodiphenyl ether	-		n.d.	5
Heptabromodiphenyl ether			n.d.	5
Octabromodiphenyl ether			n.d.	5
Nonabromodiphenyl ether			n.d.	5
Decabromodiphenyl ether	7		n.d.	5

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

#### **TEST PART DESCRIPTION:**

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

#### Note :

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

Negative = Absence of Cr(VI) coating / surface layer. Positive = Presence of Cr(VI) coating / surface layer; The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm<sup>2</sup> sample surface area.

5. "-" = Not Regulated

6. "---" = Not Conducted

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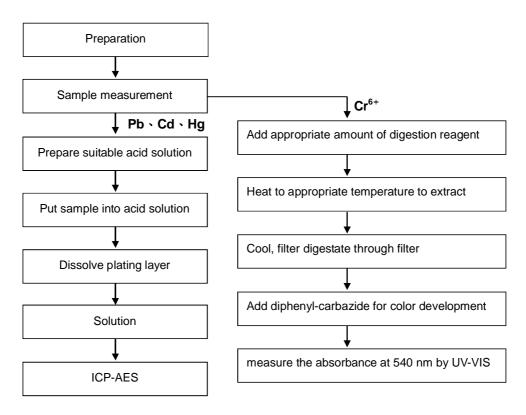
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No.1

- These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

#### Flow Chart of Stripping method for metal analysis



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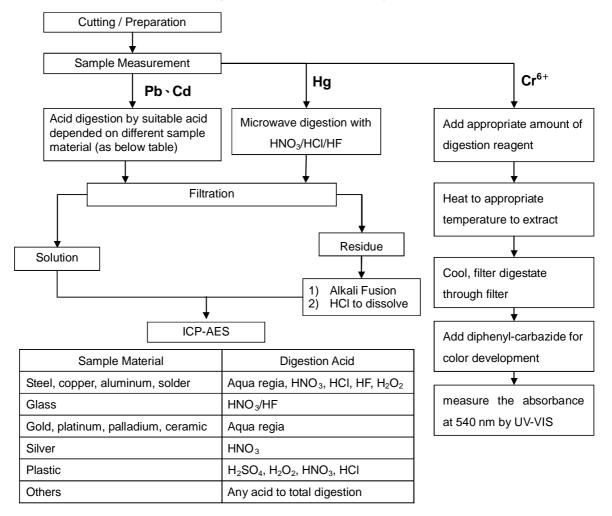
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No.2

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (  $Cr^{6+}$  test method excluded )
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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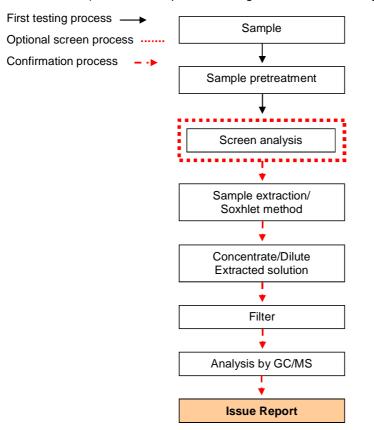
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#### **PBB/PBDE** analytical FLOW CHART

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



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\*\* End of Report \*\*

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