

Test Report

No. : CE/2012/C5377 Date : 2013/01/03 Page : 1 of 9

TECSTAR TECHNOLOGY CO., LTD.
NO. 7, ALLEY 22, LANE 813, KOUSHIN RD., YANGMEI TAOYUAN, TAIWAN



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

Sample Description : MULTILAYER FERRITE CHIP BEAD
Style/Item No. : BEAD SERIES
Sample Receiving Date : 2012/12/27
Testing Period : 2012/12/27 TO 2013/01/03

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



Chenyu Kung / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

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Test Report

No. : CE/2012/C5377 Date : 2013/01/03 Page : 2 of 9

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Test Result(s)

PART NAME No.1 : MULTILAYER FERRITE CHIP BEAD

Test Item(s)	Unit	Method	MDL	Result
				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)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Hexabromocyclododecane (HBCDD) (CAS No.: 25637-99-4)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.
BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
Halogen				
Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
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.
Halogen-Iodine (I) (CAS No.: 14362-44-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.

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Test Report

No. : CE/2012/C5377 Date : 2013/01/03 Page : 3 of 9

TECSTAR TECHNOLOGY CO., LTD.

NO. 7, ALLEY 22, LANE 813, KOUSHIN RD., YANGMEI TAOYUAN, TAIWAN



Test Item(s)	Unit	Method	MDL	Result
				No.1
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.

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

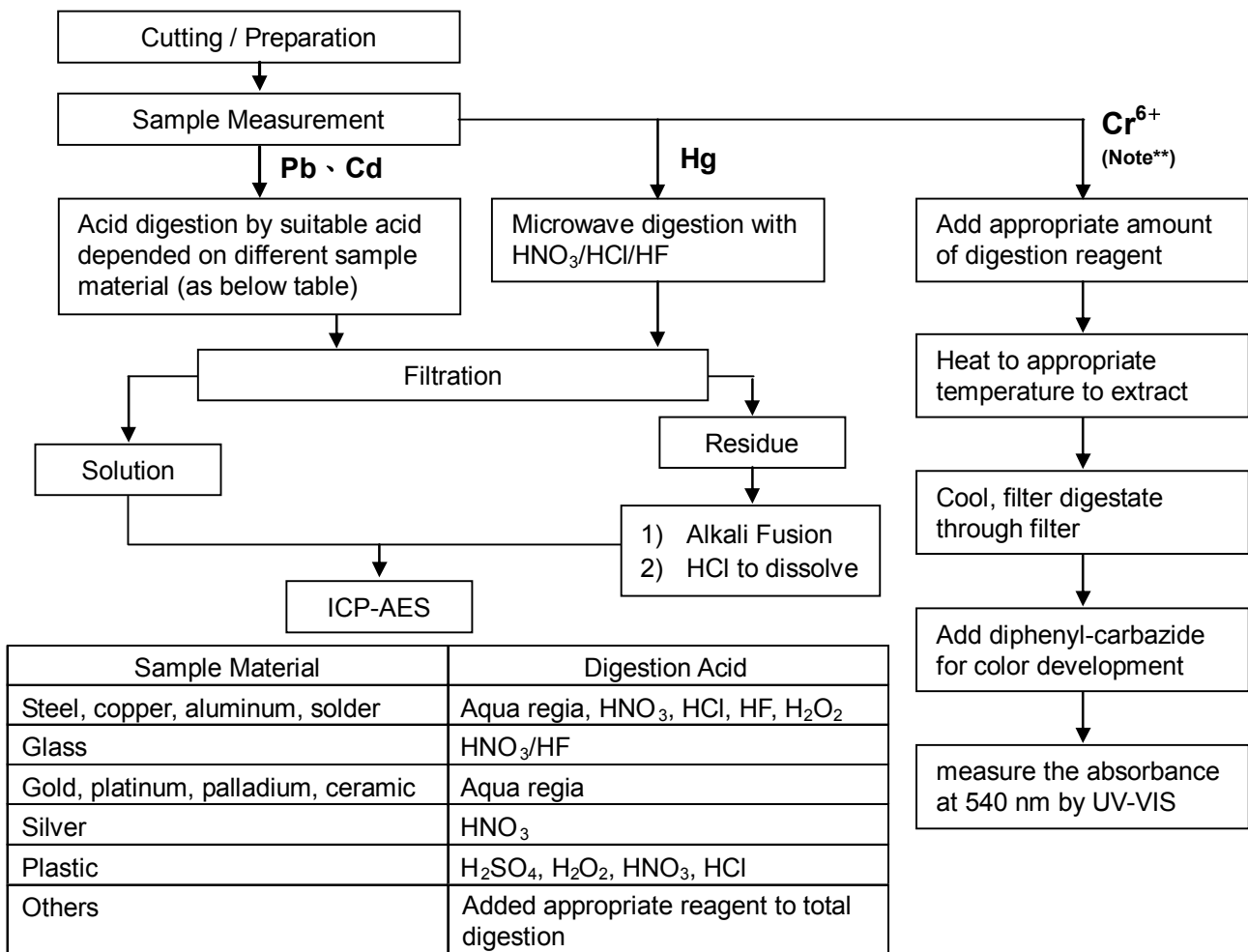
No. : CE/2012/C5377 Date : 2013/01/03 Page : 4 of 9

TECSTAR TECHNOLOGY CO., LTD.

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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

No. : CE/2012/C5377 Date : 2013/01/03 Page : 5 of 9

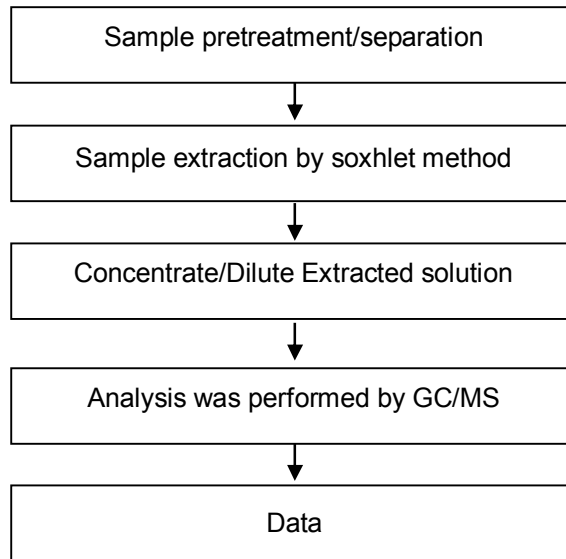
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NO. 7, ALLEY 22, LANE 813, KOUSHIN RD., YANGMEI TAOYUAN, TAIWAN



HBCDD 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/2012/C5377 Date : 2013/01/03 Page : 6 of 9

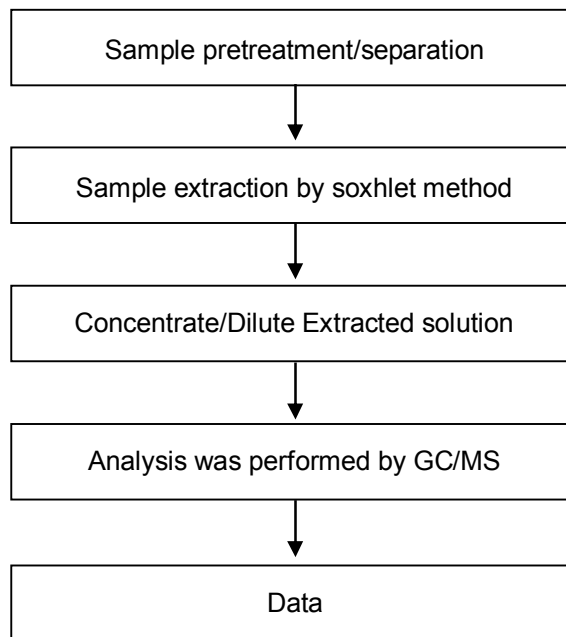
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NO. 7, ALLEY 22, LANE 813, KOUSHIN RD., YANGMEI TAOYUAN, TAIWAN



Analytical flow chart of phthalate content

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

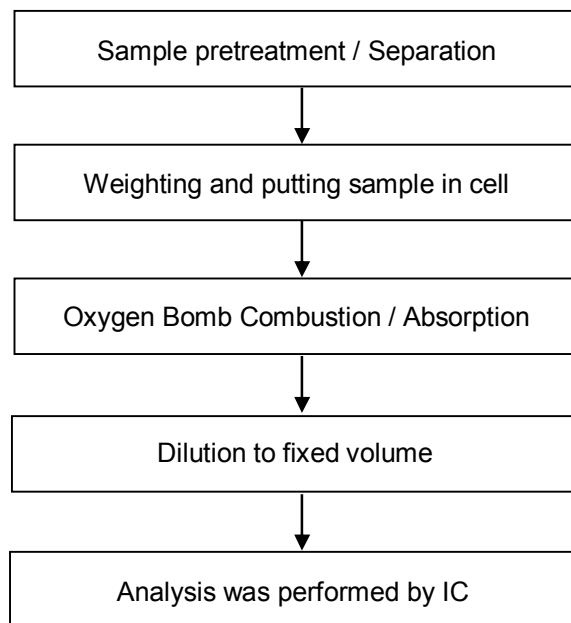


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Analytical flow chart of halogen content

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

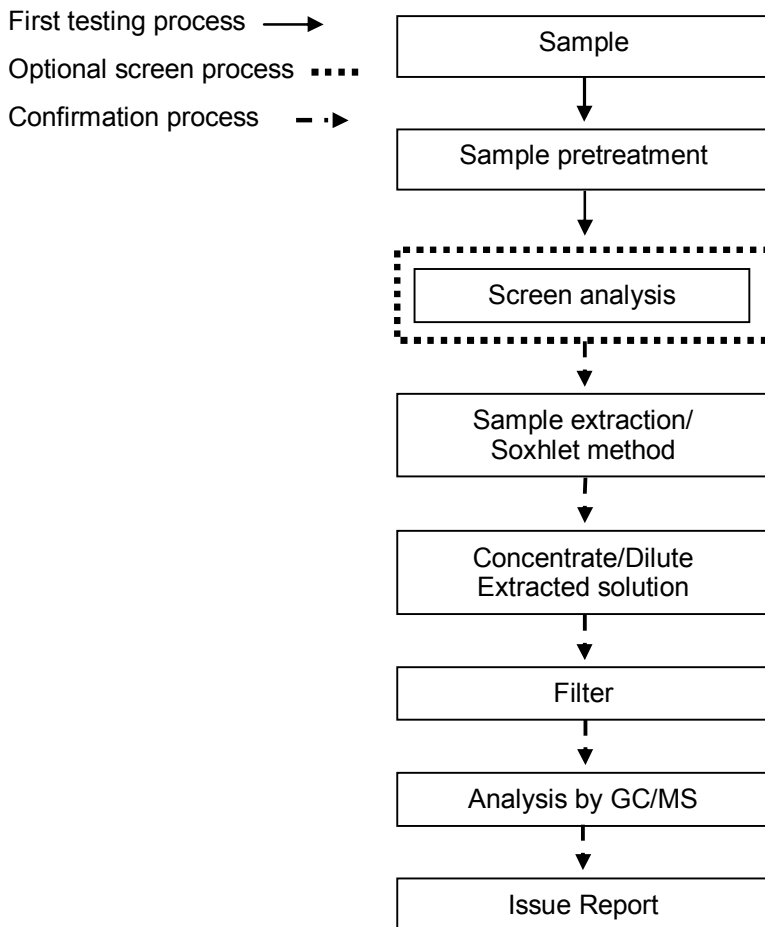


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PBB/PBDE analytical FLOW CHART

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



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No. : CE/2012/C5377 Date : 2013/01/03 Page : 9 of 9

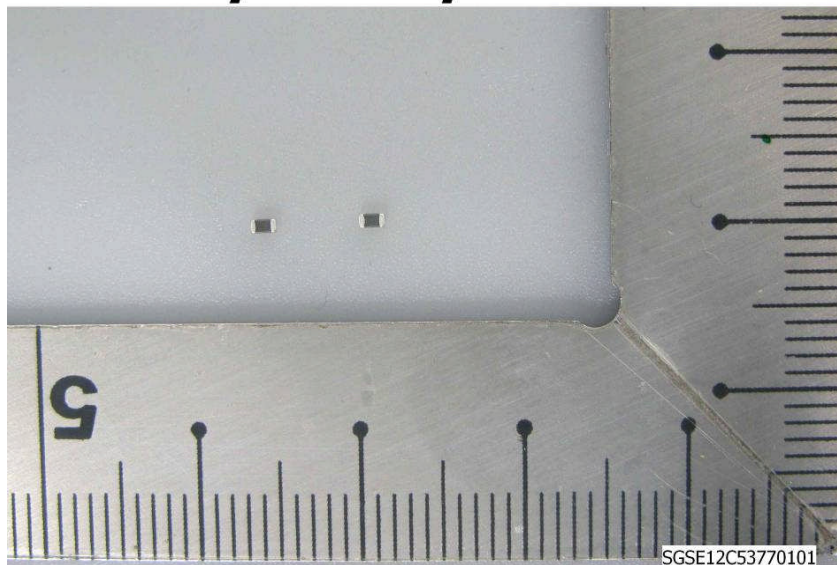
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* The tested sample / part is marked by an arrow if it's shown on the photo. *

CE/2012/C5377



** End of Report **

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