



Test Report

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TMTEC CO., LTD.

NO.248-3, SHI-SHENG RD., CIAN-JHEN DIST KAOHSIUNG TAIWAN, 806 R.O.C.

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

Sample Description : THICK FILM CHIP RESISTORS
Style/Item No. : CN/CR/CS SERIES
Color : WHITE/BLACK/SILVER CHIP RESISTOR
Sample Receiving Date : 2008/03/11
Testing Period : 2008/03/11 TO 2008/3/17

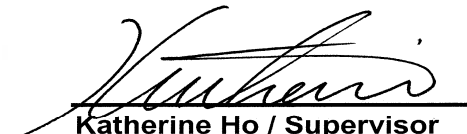
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Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

Test Method : With reference to IEC 62321/2nd CDV (111/95/CDV)
Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products

: (1) Determination of Cadmium by ICP-AES.
(2) Determination of Lead by ICP-AES.
(3) Determination of Mercury by ICP-AES.
(4) Determination of Hexavalent Chromium for non-metallic samples by UV/Vis Spectrometry.
(5) Determination of PBB and PBDE by GC/MS.

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


Katherine Ho / Supervisor
Signed for and on behalf of
SGS Taiwan Limited

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

Test Item (s):	Method (Refer to)	Result	MDL
		No.1	
Cadmium (Cd)	(1)	n.d.	2
Lead (Pb)	(2)	506	2
Mercury (Hg)	(3)	n.d.	2
Hexavalent Chromium Cr(VI) by alkaline extraction	(4)	n.d.	2
Sum of PBBs	(5)	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		n.d.	5
Sum of PBDEs (Mono to Nona)(Note 4)		n.d.	-
Monobromobiphenyl ether		n.d.	5
Dibromobiphenyl ether		n.d.	5
Tribromobiphenyl ether		n.d.	5
Tetrabromobiphenyl ether		n.d.	5
Pentabromobiphenyl ether		n.d.	5
Hexabromobiphenyl ether		n.d.	5
Heptabromobiphenyl ether		n.d.	5
Octabromobiphenyl ether		n.d.	5
Nonabromobiphenyl ether		n.d.	5
Decabromobiphenyl ether		n.d.	5
Sum of PBDEs (Mono to Deca)		n.d.	-

TEST PART DESCRIPTION:

NO.1 : CHIP RESISTORS



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- Note :
1. mg/kg = ppm
 2. n.d. = Not Detected
 3. MDL = Method Detection Limit
 4. According to 2005/717/EC DecaBDE is exempt.
 5. " - " = Not Regulated

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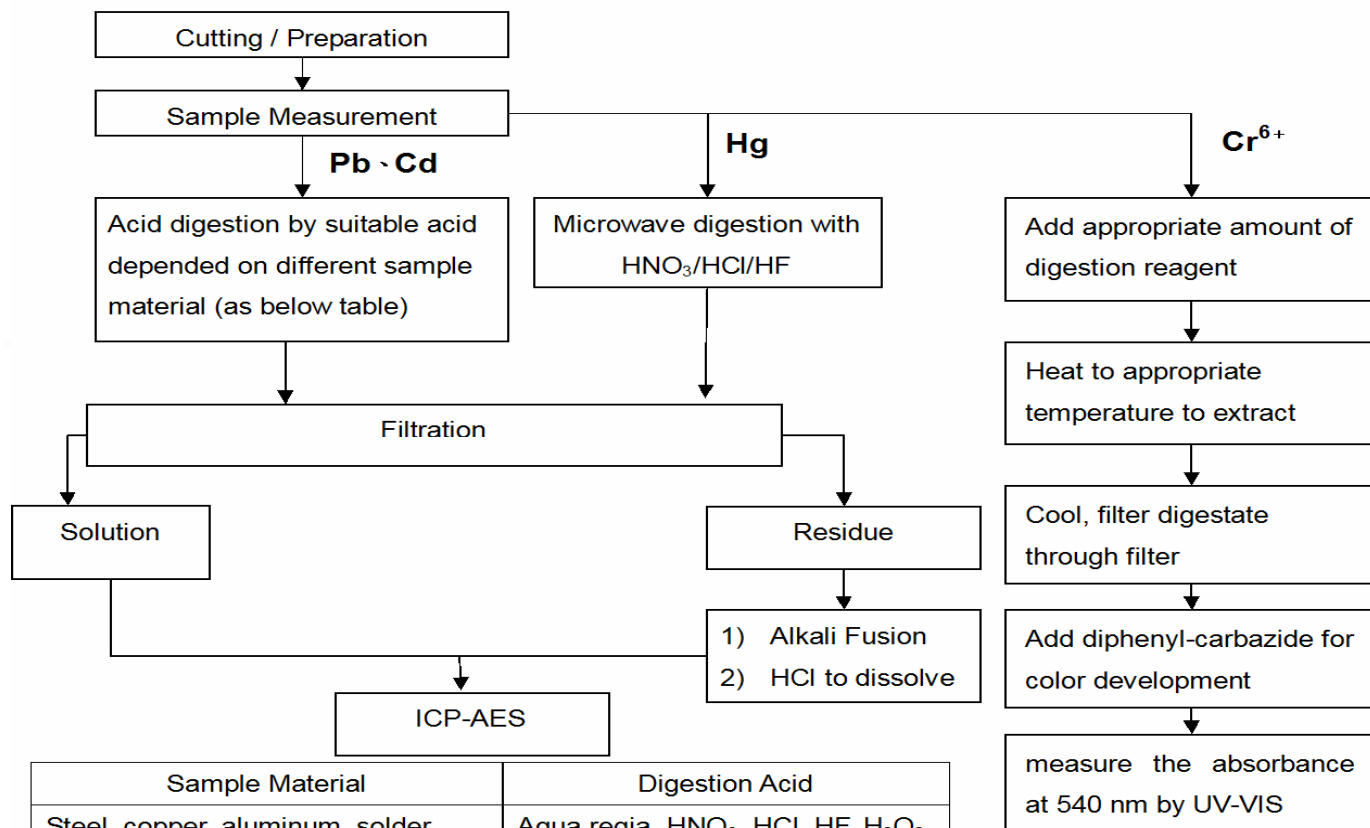
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- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr6+ test method excluded)
- 2) Name of the person who made measurement: Hungming Li
- 3) Name of the person in charge of measurement: George Huang



Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
Others	Any acid to total digestion

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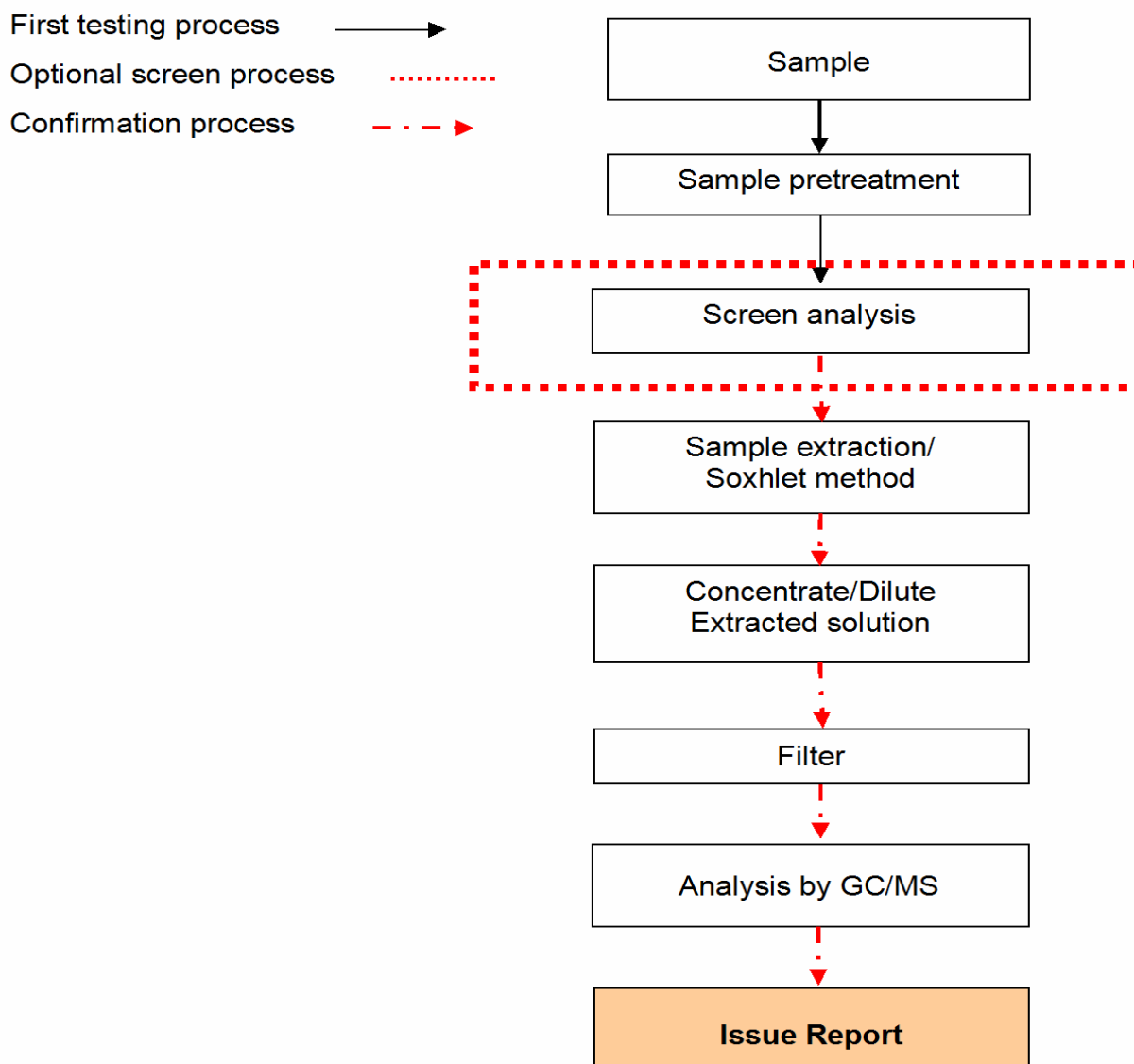
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PBB/PBDE analytical FLOW CHART



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** End of Report **

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