

## Test Report

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KULICKE & SOFFA .  
BLOCK 5002, ANG MO KIO AVE 5, #4-05, TECH PLACE II, SINGAPORE 569871.

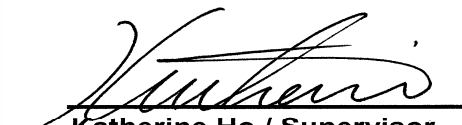
The following sample(s) was/were submitted and identified by/on behalf of the client as :

Sample Description : Au bonding wire  
Style/Item No. : RADIX  
Color : GOLD  
Customer Contact Person : See Tho, Wai Khee  
Email & Tel. Number : wksth@kns.com, +65 64856871  
Date of Manufactured : Sep 2008  
Lot Number : 22377  
Country of Origin : Singapore  
Qty of sample submitted for analysis : 3 spools (27.919 g)  
Sample Receiving Date : 2008/09/22  
Testing Period : 2008/09/22 TO 2008/09/26

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

**Test Method** :  
(1) With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Cadmium by ICP-AES.  
(2) With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Lead by ICP-AES.  
(3) With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Mercury by ICP-AES.  
(4) With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Hexavalent Chromium for non-metallic samples by UV/Vis Spectrometry.  
(5) With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of PBBs and PBDEs 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)	n.d.	2
Mercury (Hg)	(3)	n.d.	2
Hexavalent Chromium Cr(VI) by alkaline extraction	(4)	n.d.	2
<b>Sum of PBBs</b>	(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
<b>Sum of PBDEs</b>		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 : Au bonding wire

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- Note :
1. mg/kg = ppm
  2. n.d. = Not Detected
  3. MDL = Method Detection Limit
  4. The exemption of DecaBDE in polymeric application according 2005/717/EC was overruled by the European Court of Justice by its decision of 01.04.2008. Subsequently DecaBDE will be included in the sum of PBDE after 01.07.2008
  5. " - " = Not Regulated

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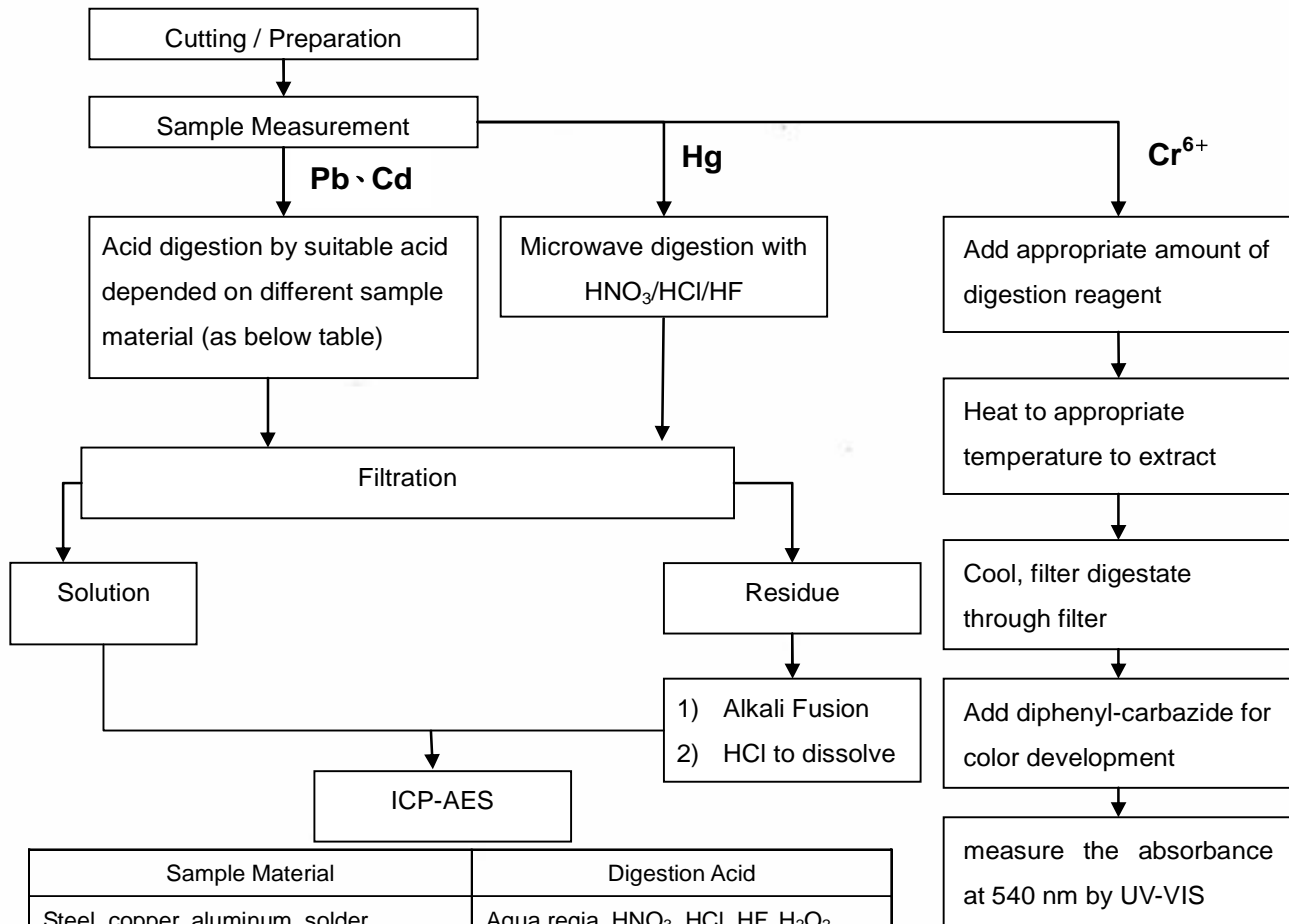
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- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) Name of the person who made measurement: Hungming Li
- 3) Name of the person in charge of measurement: Ray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



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

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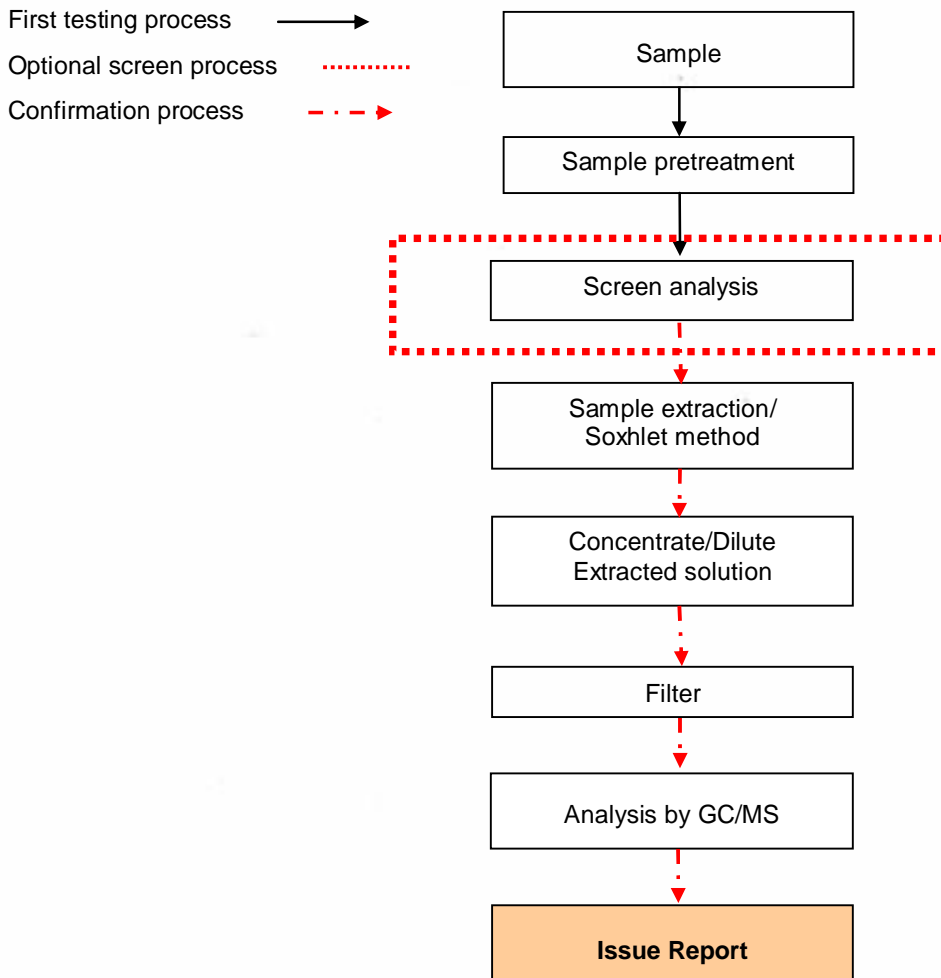


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### PBB/PBDE analytical FLOW CHART

1) Name of the person who made measurement: Anson Tsao

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



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\*\* End of Report \*\*

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