



# Test Report

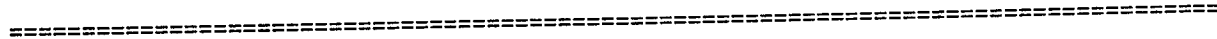
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JAZZ SEMICONDUCTOR  
4321 JAMBOREE RD., NEWPORT BEACH, CA 92660



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


Sample Description	:	WAFER
Style/Item No.	:	SBC18HX-K74576, W#25, #24
Sample Receiving Date	:	2008/10/20
Testing Period	:	2008/10/20 TO 2008/10/27



Test Requested	:	Sixteen (16) Substances of Very High Concern (SVHC) Based on the list published by European Chemicals Agency (ECHA) on 2008 July 4 for public consultation, regarding Regulation (EC) No 1907/2006 concerning the REACH.
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Test Method	:	Please refer to next page(s).
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Test Result(s)	:	Please refer to next page(s).
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**Chenyu Kung / Operation Manager**  
 Signed for and on behalf of  
**SGS TAIWAN LTD.**  
 Chemical Laboratory – Taipei

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## Test Result(s)

PART NAME NO.1 : WAFER

Test Item (s):	Unit	Method	MDL	Result
				No.1
✓ Anthracene (CAS No.: 000120-12-7)	mg/kg	With reference to ZEK 01.1-08. Analyzed by GC/MS.	0.2	n.d.
✓ 4,4' - Diaminodiphenylmethane (CAS No.: 000101-77-9)	mg/kg	With reference to § 64 LFGB, BVL B 82.02-2-2006. Analyzed by GC/MS.	20	n.d.
✓ Dibutyl phthalate (DBP) (CAS No.: 000084-74-2)	mg/kg	With reference to EN 14372: 2004. Analyzed by GC/MS.	30	n.d.
✓ Benzyl butyl phthalate (BBP) (CAS No.: 000085-68-7)	mg/kg	With reference to EN 14372: 2004. Analyzed by GC/MS.	30	n.d.
✓ Bis (2-ethylhexyl) phthalate (DEHP) (CAS No.: 000117-81-7)	mg/kg	With reference to EN 14372: 2004. Analyzed by GC/MS.	30	n.d.
✓ Cyclododecane (CAS No.: 000294-62-2)	mg/kg	With reference to US EPA 5021. Analyzed by GC/MS.	5	n.d.
✓ 5-tert-butyl-2,4,6-trinitro- m-xylene (Musk Xylene) (CAS No.: 000081-15-2)	mg/kg	With reference to US EPA 3550C: 1996. Analyzed by GC/MS.	10	n.d.
✓ Hexabromocyclododecane (HBCDD) (CAS No.: 025637-99-4)	mg/kg	With reference to US EPA 3540C: 1996. Analyzed by GC/MS.	5	n.d.
✓ Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (CAS No.: 085535-84-8)	mg/kg	With reference to US EPA 3540C: 1996. Analyzed by GC/MS.	100	n.d.
→ ✓ Cobalt dichloride*** (CAS No.: 007646-79-9)	mg/kg	With reference to US EPA 3052: 1996. Analyzed by ICP-AES.	2	29
✓ Diarsenic pentaoxide*** (CAS No.: 001303-28-2)	mg/kg	With reference to US EPA 3052: 1996. Analyzed by ICP-AES.	10	n.d.
✓ Diarsenic trioxide*** (CAS No.: 001327-53-3)	mg/kg	With reference to US EPA 3052: 1996. Analyzed by ICP-AES.	10	n.d.
✓ Triethyl arsenate*** (CAS No.: 015606-95-8)	mg/kg	With reference to US EPA 3052: 1996. Analyzed by ICP-AES.	10	n.d.

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Test Item (s):	Unit	Method	MDL	Result
				No.1
✓ Lead hydrogen arsenate*** (CAS No.: 007784-40-9)	mg/kg	With reference to US EPA 3052: 1996. Analyzed by ICP-AES.	10	n.d.
✓ Bis(tributyltin)oxide*** (CAS No.: 000056-35-9)	mg/kg	With reference to BS ISO 17353: 2004. Analyzed by GC/MS.	30	n.d.
✓ Sodium dichromate, dihydrate*** (CAS No.: 007789-12-0)	mg/kg	With reference to US EPA 3060A: 1996. Analyzed by UV-Vis.	2	n.d.

- Note :
1. mg/kg = ppm ; 0.1wt% = 1000ppm
  2. MDL = Method Detection Limit
  3. n.d.= not detected = below Method detection Limit
  4. \*\*\*: The substance is calculated by the test results of Tributyl Tin or element (Ex. Arsenic, Lead, Cobalt or Cr (VI) respectively).  
The MDL is evaluated for Tributyl Tin or element (Ex. Arsenic, Lead, Cobalt or Cr (VI) respectively).

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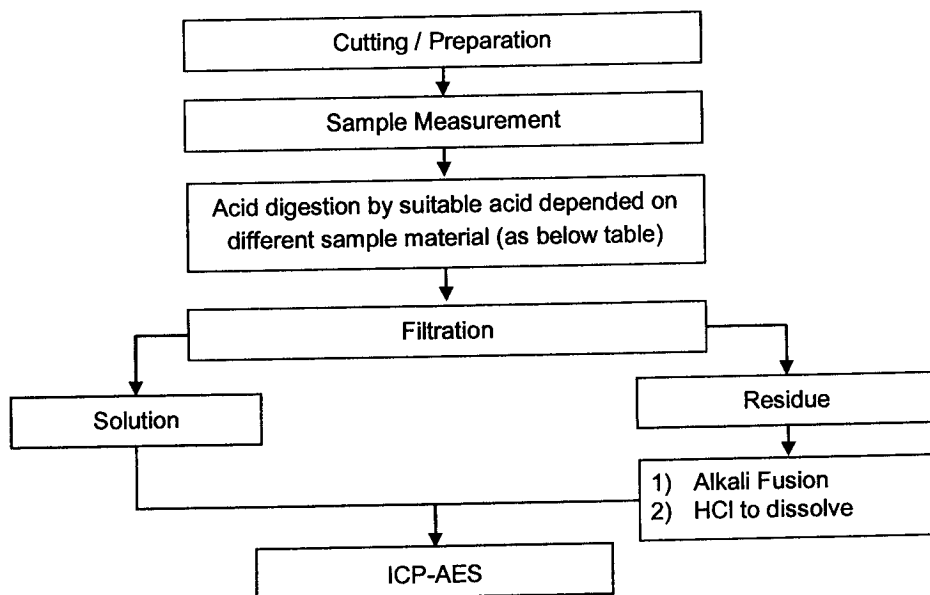
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- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

### Flow Chart of Digestion for elements analysis



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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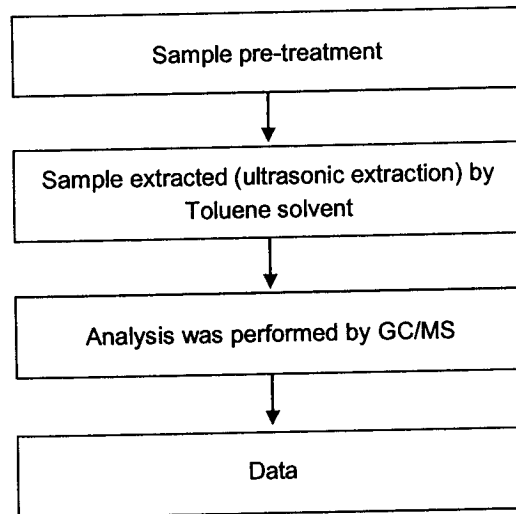
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### PAHs (Polynuclear Aromatic Hydrocarbons) analytical flow chart

- 1) Name of the person who made measurement: Andy Shu
- 2) Name of the person in charge of measurement: Shinjyh Chen



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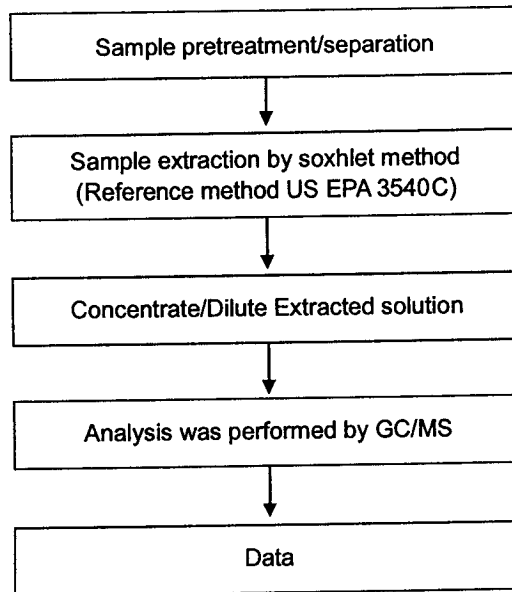
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### Analytical flow chart of phthalate content

- 1) Name of the person who made measurement: Andy Shu
- 2) Name of the person in charge of measurement: Shinjyh Chen



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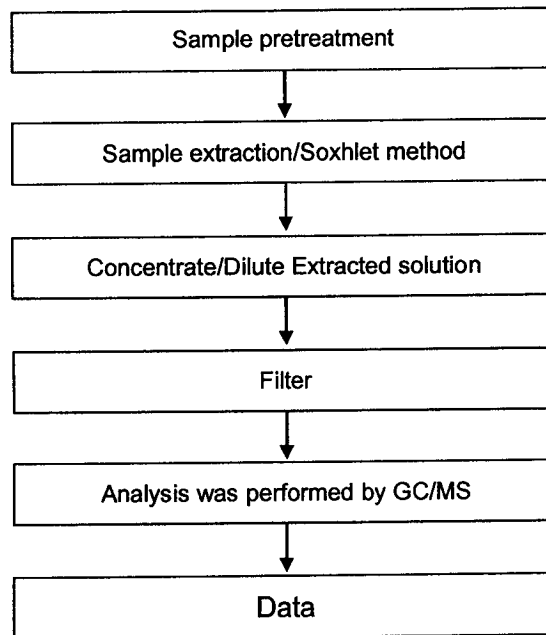
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### HBCDD Analytical FLOW CHART

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



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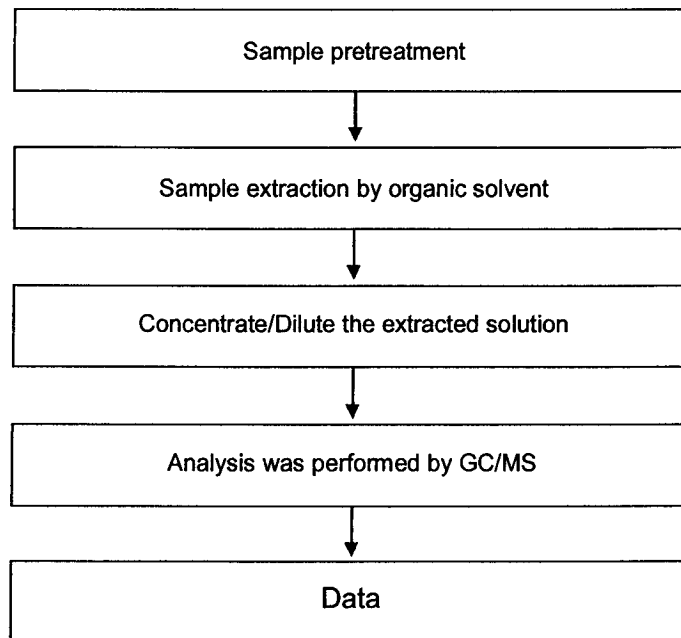
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### Chlorinated Flame retardant analytical flow chart

- 1) Name of the person who made measurement: Max Liu
  - 2) Name of the person in charge of measurement: Shinjyh Chen
- Reference method: US EPA 8270D, US EPA 3540
  - Test Items: PCBs, PCNs, PCTs, Mirex, CP, MCCP

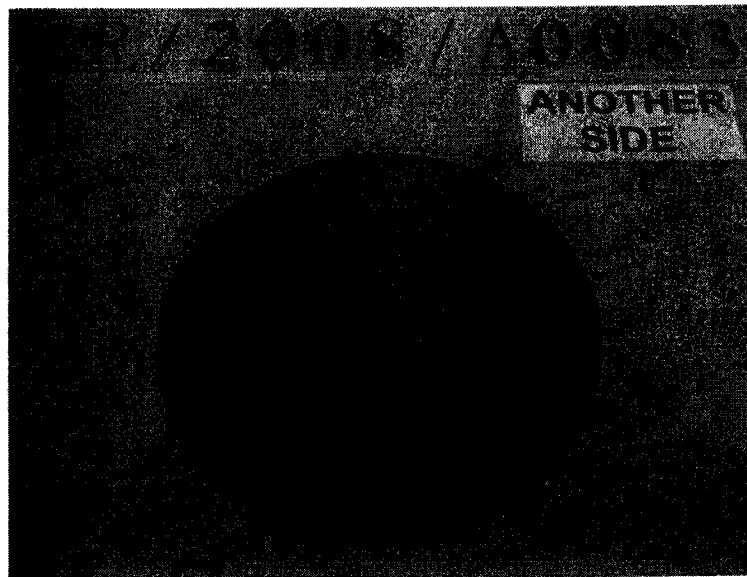
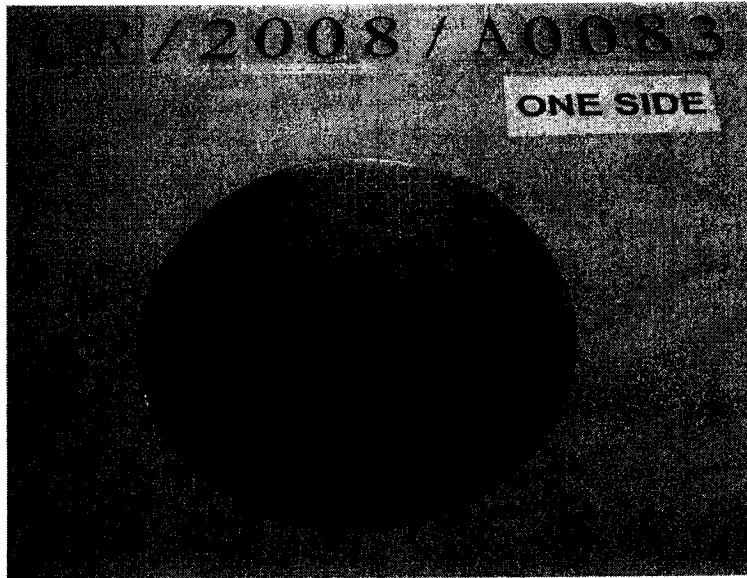


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\*\* End of Report \*\*

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