

## Test Report

No. CANEC0903024811

Date: 17 Jun 2009

Page 1 of 12

HENKEL HUAWEI ELECTRONICS CO.,LTD  
SONGTIAO INDUSTRIAL PARK,LIANYUNGANG.JIANGSU  
CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as :  
Epoxy Moulding Compounds

SGS Job No. : 11822349 - SZ  
Client Reference Information : KL-1000-4/4T/4TX/4TX(NT)  
SGS Internal Reference No. : 13.11  
Date of Sample Received : 10 Jun 2009  
Testing Period : 10 Jun 2009 - 17 Jun 2009  
  
Test Requested : Selected test(s) as requested by client.  
Test Method : Please refer to next page(s).  
Test Results : Please refer to next page(s).  
Conclusion : A:Based on the performed tests on submitted sample(s), the results **comply with** the RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of  
SGS-CSTC Ltd.



Sunny Huang  
Lab Sr. Supervisor

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

# Test Report

No. CANEC0903024811

Date: 17 Jun 2009

Page 2 of 12

## Test Results:

ID for specimen 1 : CAN09-030248.011  
 Description for specimen 1 : Black particle

### A:RoHS Directive 2002/95/EC

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Cadmium (Cd)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	100
Lead (Pb)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	1000
Mercury (Hg)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by alkaline extraction	mg/kg	IEC 62321:2008, UV-Vis	N.D.	2	1000
Sum of PBBs	mg/kg	-	N.D.	-	1000
Monobromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Dibromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Tribromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Tetrabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Pentabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Hexabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Heptabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Octabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Nonabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Decabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Sum of PBDEs	mg/kg	-	N.D.	-	1000
Monobromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Dibromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Tribromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Tetrabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Pentabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Hexabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Heptabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Octabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Nonabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Decabromodiphenyl ether ##	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	

## Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
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 is included in the sum of PBDE after 01.07.2008
5. "-" = Not regulated

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

# Test Report

No. CANEC0903024811

Date: 17 Jun 2009

Page 3 of 12

## B:Phthalate(s)

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Dibutyl Phthalate (DBP)	% (w/w)	EN14372: 2004, GC-MS	N.D.	0.003
Benzylbutyl Phthalate (BBP)	% (w/w)	EN14372: 2004, GC-MS	N.D.	0.003
Di-(2-ethylhexyl) Phthalate (DEHP)	% (w/w)	EN14372: 2004, GC-MS	N.D.	0.003
Diisononyl Phthalate (DINP)	% (w/w)	EN14372: 2004, GC-MS	N.D.	0.01
Di-n-octyl Phthalate (DNOP)	% (w/w)	EN14372: 2004, GC-MS	N.D.	0.003
Diisodecyl Phthalate (DIDP)	% (w/w)	EN14372: 2004, GC-MS	N.D.	0.01
Di-n-hexyl phthalate (DNHP)	% (w/w)	EN14372: 2004, GC-MS	N.D.	0.005

### Note :

1. mg/kg = ppm; 0.1% = 1000ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

For reference: According to EU Directive 2005/84/EC,

- (1) The phthalates DEHP, DBP, BBP shall not be used as substances or as constituents of preparation, at concentrations of greater than 0.1% by mass of plasticized material, in toys and childcare articles.
- (2) The phthalates DINP, DIDP, DNOP shall not be used as substances or as constituents of preparations, at concentrations of greater than 0.1% by mass of the plasticized materials, in toys and childcare articles which can be placed in the mouth by children.

## C:PFOA & PFOS ( Perfluorooctanoic acid & Perfluorooctane sulfonates )

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Perfluorooctanoic acid (PFOA)	mg/kg	EPA 3550C: 2007, LC-MS	N.D.	10
Perfluorooctane sulfonates (PFOS)	mg/kg	EPA 3550C: 2007, LC-MS	N.D.	10
PFOS Acid				
PFOS Metal Salt				
PFOS Amide				

### Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

Reference Information: Directive 2006/122/EC

- (1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005 % by mass.
- (2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

## Test Report

No. CANEC0903024811

Date: 17 Jun 2009

Page 4 of 12

PFOS is equal to or higher than 0.1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1 $\mu$ g /m<sup>2</sup> of the coated material.

### D:TBBP-A (Tetrabromobisphenol-A)

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Tetrabromobisphenol-A (TBBP-A)	mg/kg	EPA 3550C: 2007, GC-MS	N.D.	10

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

### E:PAHs (Polynuclear Aromatic Hydrocarbons)

Test Item(s)	Unit	Test Method	Result	MDL
Naphthalene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Acenaphthylene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Acenaphthene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Fluorene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Phenanthrene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Anthracene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Fluoranthene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Pyrene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Benz(a)anthracene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Chrysene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Benzo(b)fluoranthene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Benzo(k)fluoranthene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Benzo(a)pyrene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Indeno(1,2,3-cd)pyrene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Dibenzo(a,h)anthracene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Benzo(g,h,i)perylene	mg/kg	ZEK 01.2-08, GC-MS	N.D.	0.2
Sum of 16 PAHs acc. US EPA	mg/kg	-	N.D.	-

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

**ZEK 01.2-08 : Restraining maximum values for products**

Parameter	Category 1 Material indented to be put in the mouth or material for toys with normal skin contact for children aged < 36 months	Category 2 Materials those are not included in Category 1, with predictable contact with the skin longer than 30 s. (long-term skin contact).	Category 3 Materials those are not included in Category 1 or 2, with predictable skin contact up to 30 s (short-term skin contact).
Benzo[a]pyrene (mg/kg)	<MDL (<0.2)***	1	20
Sum 16 PAH (US EPA) (mg/kg)**	<MDL (<0.2)***	10	200

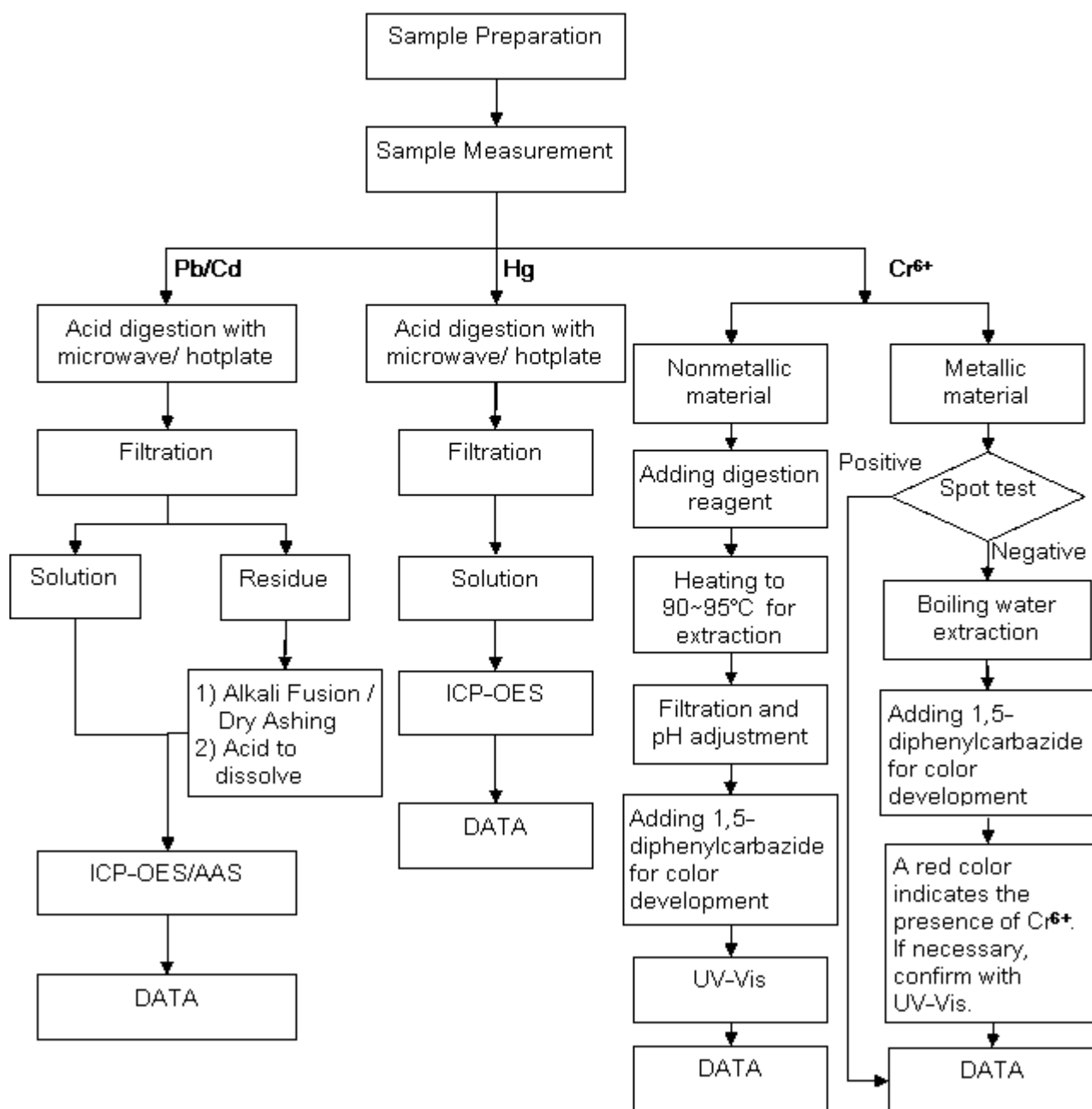
Remark : \*\* = Only PAH substances >0.2 mg/kg are taken into account while calculating the sum of PAHs  
 \*\*\* = In case that the maximum values exceed the limits of category 1, but are within the limits of category 2, one may confirm the suitability of the tested material which indented to be put in the mouth by additional specific migration tests of PAH components based on DIN EN 1186ff and §64 LFGB 80.30-1. The conclusion of the migration test results must be made based on food law criteria.

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

### ATTACHMENTS

#### Testing Flow Chart

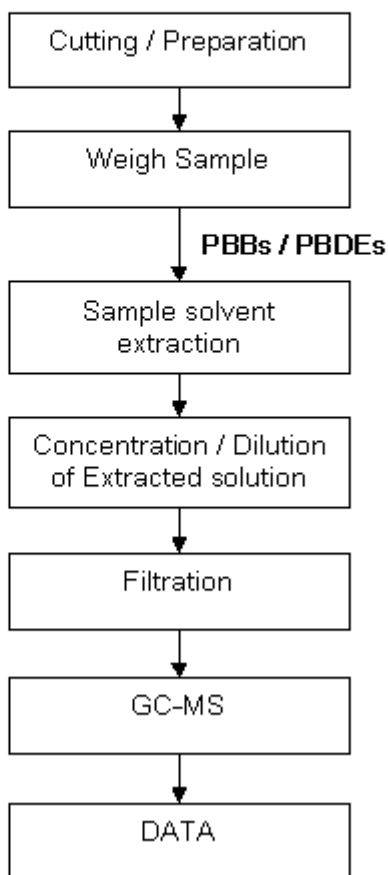
- 1) Name of the person who made measurement: Luke Xu / Lily Lee
- 2) Name of the person in charge of measurement: Adams Yu / Leo Wang
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart (Cr<sup>6+</sup> test method excluded) .



This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at <http://www.sgs.com/termsandconditions.htm>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

### Testing Flow Chart

- 1) Name of the person who made measurement: Lina Tang
- 2) Name of the person in charge of measurement: Tina Zhao

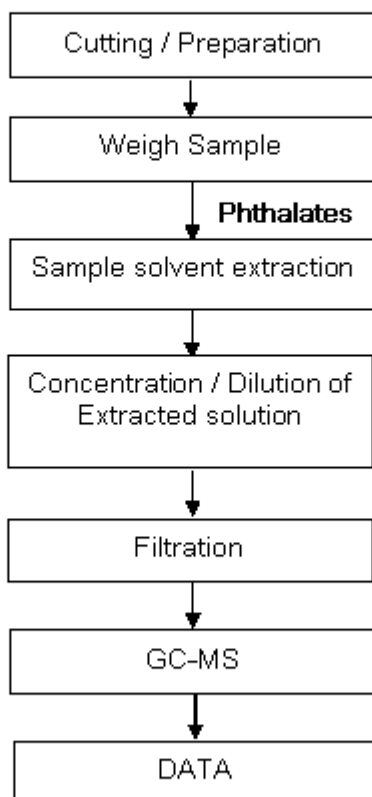


This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

### ATTACHMENTS

#### Testing Flow Chart

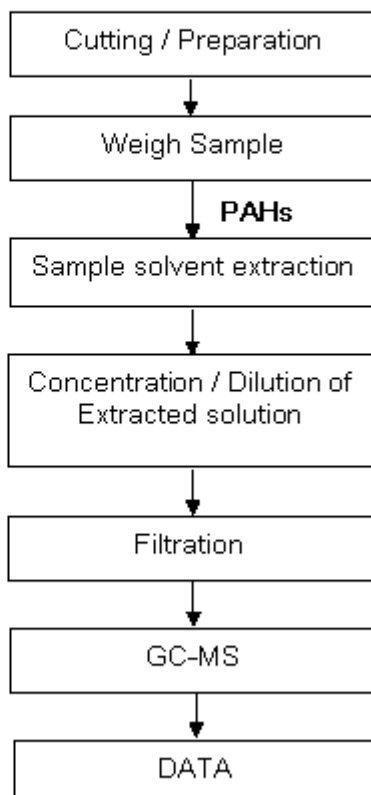
- 1) Name of the person who made measurement: Yimin Fang
- 2) Name of the person in charge of measurement: Tina Zhao



This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

### Testing Flow Chart

- 1) Name of the person who made measurement: Lina Tang
- 2) Name of the person in charge of measurement: Tina Zhao

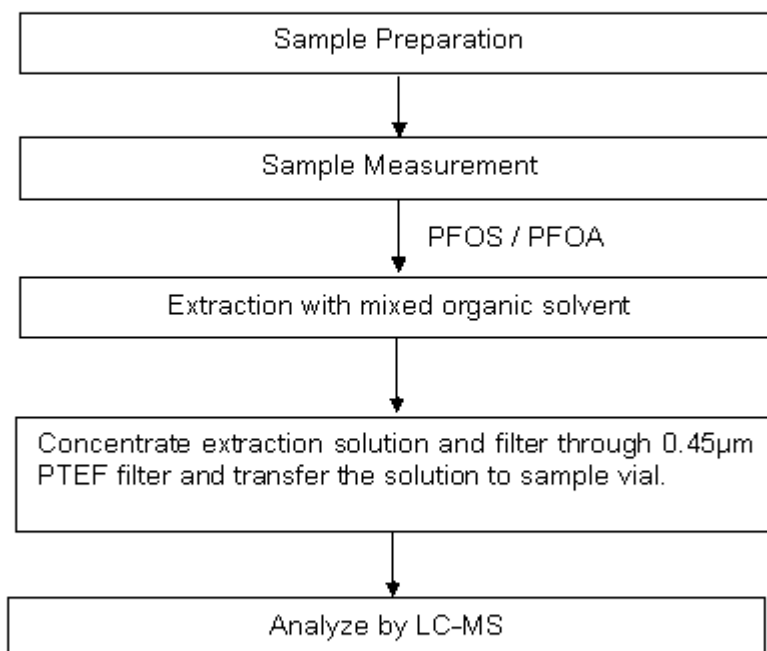


This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

ATTACHMENTS

Testing Flow Chart

- 1) Name of the person who made measurement: Cindy Huang
- 2) Name of the person in charge of measurement: Rain Qiao

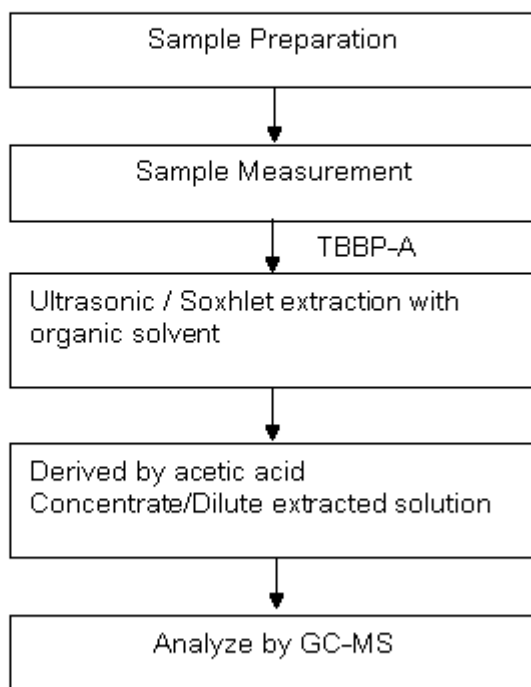


This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

### ATTACHMENTS

#### Testing Flow Chart

- 1) Name of the person who made measurement: Na Gao
- 2) Name of the person in charge of measurement: Tina Zhao



This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

Sample photo:



CAN09-030248.011

SGS authenticate the photo on original report only

\*\*\* End of Report \*\*\*

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.