CAMBRIDGE ELECTRONICS LTD.

HUANG YONG NO.3 INDUSTRIAL DISTRICT,ZHONG TANG TOWN,DONG GUAN CITY,GUANG DONG CHINA

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

SGS Job No.	: CP15-041330 - GZ
Model No.	: KBU
Client Reference Information	: ABS、MBS MBM、MBF、DB、RS、RB、KBL、KBU、GBJ、KBJ、BR、 KBPC、WOL、WOG、GBU、GBPC、GBP、KBP、GBL D2KB、D3KB、D4KB 、D*UB
Date of Sample Received	: 20 Jun 2015
Testing Period	: 20 Jul 2015 – 24 Jul 2015

Test Requested A: In accordance with the RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

B: To determine Polynuclear Aromatic Hydrocarbons (PAHs).

C: To determine Tetrabromobisphenol-A (TBBP-A) content in the submitted sample

Test Method : A

(1)With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
(2)With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
(3)With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
(4)With reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
(5)With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.
(6)With reference to EN 14372:2004, determination of phthalates by GC-MS.

B: With reference to AfPS GS 2014:01 PAK, analysis was performed by GC-MS.

C: With reference to US EPA Method 3540C:1996, analysis was performed by GC-MS&HPLC-MS.

Test Results : Please refer to next page.

Conclusion A: Based on the performed tests on selected part of submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

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Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Merry

Merry Lv
Approved Signatory

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Testing Chemical Laboratory
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Test results by chemical method (Unit: mg/kg)

No	Specimen Name	Specimen Description & Photo	Report No.	Test Item & Results		MDL	Limit
1	Silicone rubber	White liquid 	CANEC1512497201	**Cd**	N.D.	2	100
				Pb	N.D.	2	1000
				Hg	N.D.	2	1000
				Cr(VI)	N.D.	2	1000
				PBBs	N.D.	5/each	1000
				PBDEs	N.D.	5/each	1000
				DBP	N.D.	30	1000
				BBP	N.D.	30	1000
				DEHP	N.D.	30	1000
				DIBP	N.D.	30	1000
				Naphthalene (NAP)	N.D.	0.1	-
				Acenaphthylene (ANY)	N.D.	0.1	-
				Acenaphthene (ANA)	N.D.	0.1	-
				Fluorene (FLU)	N.D.	0.1	-
				Phenanthrene (PHE)	N.D.	0.1	-
				Anthracene (ANT)	N.D.	0.1	-
				Fluoranthene (FLT)	N.D.	0.1	-
				Pyrene (PYR)	N.D.	0.1	-
				Benzo(a)anthracene (BaA)	N.D.	0.1	-
				Chrysene (CHR)	N.D.	0.1	-
				Benzo(b)fluoranthene (BbF)	N.D.	0.1	-
				Benzo(j)fluoranthene (BjF)	N.D.	0.1	
				Benzo(k)fluoranthene (BkF)	N.D.	0.1	-
				Benzo(a)pyrene (BaP)	N.D.	0.1	-
				Benzo(e)pyrene (BeP)	N.D.	0.1	-
				Indeno(1-,2,3-c,d)pyrene (IPY)	N.D.	0.1	-
				Dibenzo(a,h)anthracene (DBA)	N.D.	0.1	-
				Benzo(g,h,i)perylene (BPE)	N.D.	0.1	-
				Sum of 7 PAHS Acenaphthylene. Acenaphthene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene	N.D.	-	-
				Sum of 18 PAHs	N.D.	-	-

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No	Specimen Name	Specimen Description & Photo	Report No.	Test Item & Results		MDL	Limit
2	Dice	Silver-grey grains 	CANEC1512497201	**Cd**	N.D.	2	100
				Pb	362	2	1000
				Hg	N.D.	2	1000
				Cr(VI)	N.D.	2	1000
				PBBs	N.D.	5/each	1000
				PBDEs	N.D.	5/each	1000
				DBP	N.D.	30	1000
				BBP	N.D.	30	1000
				DEHP	N.D.	30	1000
				DIBP	N.D.	30	1000

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No	Specimen Name	Specimen Description & Photo	Report No.	Test Item & Results		MDL	Limit
3	Ink	Grey paste 	CANEC1512497201	**Cd**	N.D.	2	100
				Pb	N.D.	2	1000
				Hg	N.D.	2	1000
				Cr(VI)	N.D.	2	1000
				PBBs	N.D.	5/each	1000
				PBDEs	N.D.	5/each	1000
				DBP	N.D.	30	1000
				BBP	N.D.	30	1000
				DEHP	N.D.	30	1000
				DIBP	N.D.	30	1000
				Naphthalene (NAP)	12.4	0.1	-
				Acenaphthylene (ANY)	N.D.	0.1	-
				Acenaphthene (ANA)	N.D.	0.1	-
				Fluorene (FLU)	20.4	0.1	-
				Phenanthrene (PHE)	96.7	0.1	-
				Anthracene (ANT)	N.D.	0.1	-
				Fluoranthene (FLT)	0.2	0.1	-
				Pyrene (PYR)	N.D.	0.1	-
				Benzo(a)anthracene (BaA)	N.D.	0.1	-
				Chrysene (CHR)	N.D.	0.1	-
				Benzo(b)fluoranthene (BbF)	N.D.	0.1	-
				Benzo(j)fluoranthene (BjF)	N.D.	0.1	
				Benzo(k)fluoranthene (BkF)	N.D.	0.1	-
				Benzo(a)pyrene (BaP)	N.D.	0.1	-
				Benzo(e)pyrene (BeP)	N.D.	0.1	-
				Indeno(1-,2,3-c,d)pyrene (IPY)	N.D.	0.1	-
				Dibenzo(a,h)anthracene (DBA)	N.D.	0.1	-
				Benzo(g,h,i)perylene (BPE)	N.D.	0.1	-
				Sum of 7 PAHS Acenaphthylene. Acenaphthene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene	117.3	-	-
				Sum of 18 PAHs	129.7	-	-
				TBBP-A	N.D.	10	-

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No	Specimen Name	Specimen Description & Photo	Report No.	Test Item & Results		MDL	Limit
4	Epoxy	Black material 	CANEC1512497201	**Cd**	N.D.	2	100
				Pb	N.D.	2	1000
				Hg	N.D.	2	1000
				Cr(VI)	N.D.	2	1000
				PBBs	N.D.	5/each	1000
				PBDEs	N.D.	5/each	1000
				DBP	N.D.	30	1000
				BBP	N.D.	30	1000
				DEHP	N.D.	30	1000
				DIBP	N.D.	30	1000
				Naphthalene (NAP)	N.D.	0.1	-
				Acenaphthylene (ANY)	N.D.	0.1	-
				Acenaphthene (ANA)	N.D.	0.1	-
				Fluorene (FLU)	N.D.	0.1	-
				Phenanthrene (PHE)	N.D.	0.1	-
				Anthracene (ANT)	N.D.	0.1	-
				Fluoranthene (FLT)	N.D.	0.1	-
				Pyrene (PYR)	N.D.	0.1	-
				Benzo(a)anthracene (BaA)	N.D.	0.1	-
				Chrysene (CHR)	N.D.	0.1	-
				Benzo(b)fluoranthene (BbF)	N.D.	0.1	-
				Benzo(j)fluoranthene (BjF)	N.D.	0.1	
				Benzo(k)fluoranthene (BkF)	N.D.	0.1	-
				Benzo(a)pyrene (BaP)	N.D.	0.1	-
				Benzo(e)pyrene (BeP)	N.D.	0.1	-
				Indeno(1-,2,3-c,d)pyrene (IPY)	N.D.	0.1	-
				Dibenzo(a,h)anthracene (DBA)	N.D.	0.1	-
				Benzo(g,h,i)perylene (BPE)	N.D.	0.1	-
				Sum of 7 PAHS Acenaphthylene. Acenaphthene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene	N.D.	-	-
				Sum of 18 PAHs	N.D.	-	-
				TBBP-A	N.D.	10	-

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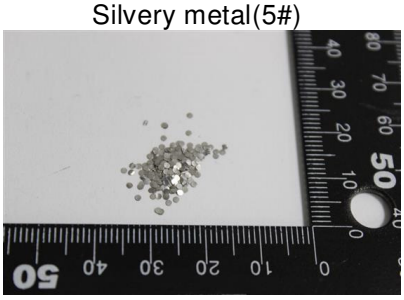
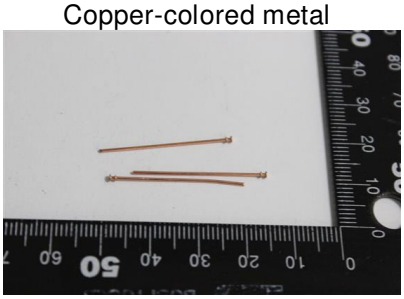
No	Specimen Name	Specimen Description & Photo	Report No.	Test Item & Results		MDL	Limit
5	Solder	Silvery metal(5#) 	CANEC1512497201	**Cd**	N.D.	2	100
				Pb	948892▲	2	1000
				Hg	N.D.	2	1000
				Cr(VI)	Negative	◇	-
6	Lead Frame	Copper-colored metal 	CANEC1512497201	**Cd**	N.D.	2	100
				Pb	N.D.	2	1000
				Hg	N.D.	2	1000
				Cr(VI)	Negative	◇	-
7	Tin	Silvery metal(7#) 	CANEC1514 97201	**Cd**	N.D.	2	100
				Pb	160	2	1000
				Hg	N.D.	2	1000
				Cr(VI)	Negative	◇	-

Note : 1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit
4. ◇ Spot-test:

Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;
(The tested sample should be further verified by boiling-water-extraction method if the spot test result is Negative or cannot be confirmed.)

◇ Boiling-water-extraction:

Negative = Absence of CrVI coating
Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm2 sample surface area.

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Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

5. The maximum permissible limit is quoted from directive 2011/65/EU, Annex II

Remark1: The result(s) shown No.1&No.3 is/are of the total weight of wet sample.
Remark2:Result of Pb of No.5 is only for reference
Remark3:▲:According to the declaration from the client, Lead (Pb) in specimen No.5 is exempted by EU RoHS directive 2011/65/EU based on |ANNEX III 7(a)|: Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).

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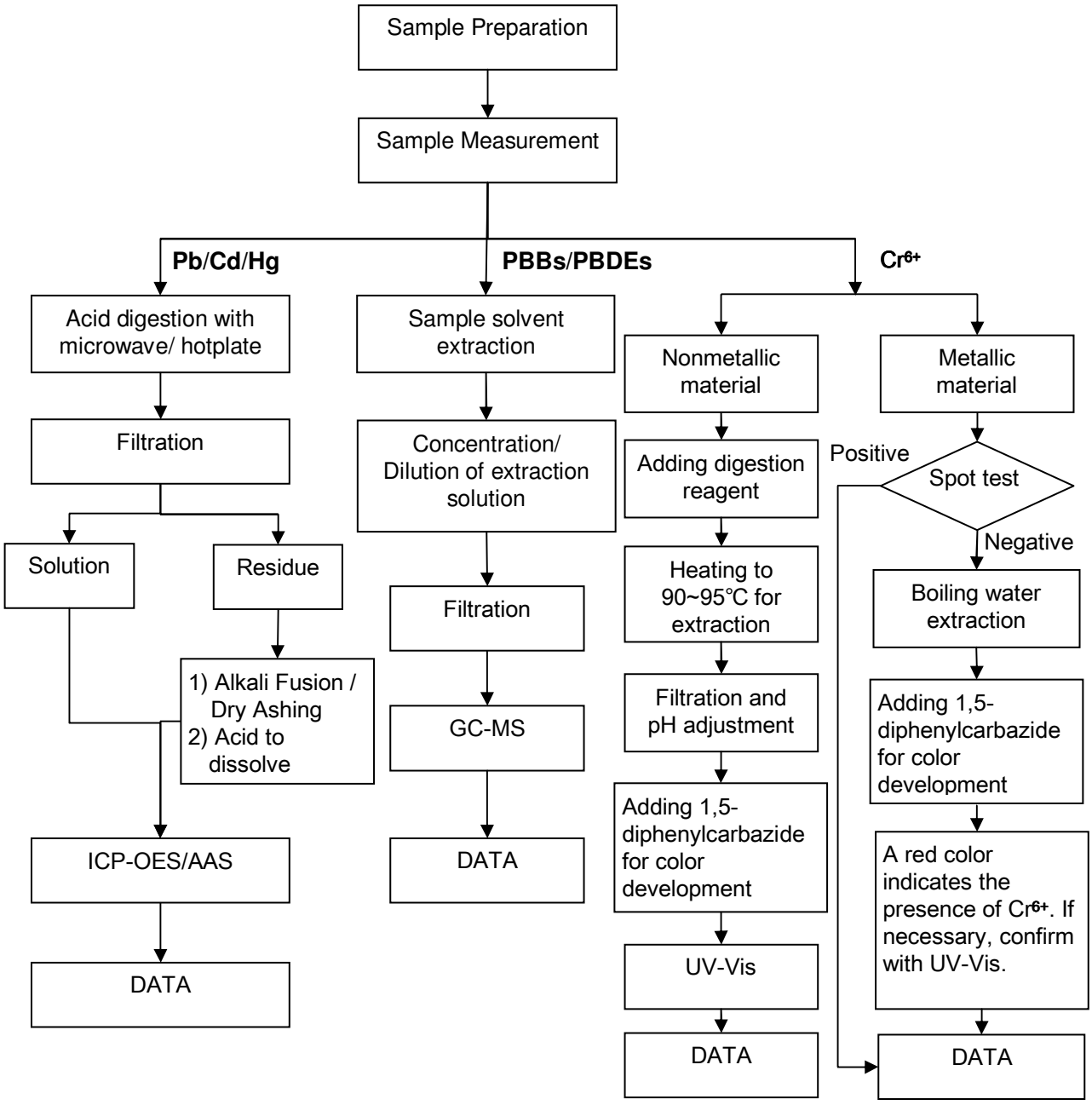
ATTACHMENTS

RoHS Testing Flow Chart

1) Name of the person who made testing: Bruce Xiao / Sunny Hu
2) Name of the person in charge of testing: Bella Wang / Cutey Yu
3) These samples were dissolved totally by pre-conditioning method according to below flow chart (Cr^{6+} and PBBs/PBDEs test method excluded).



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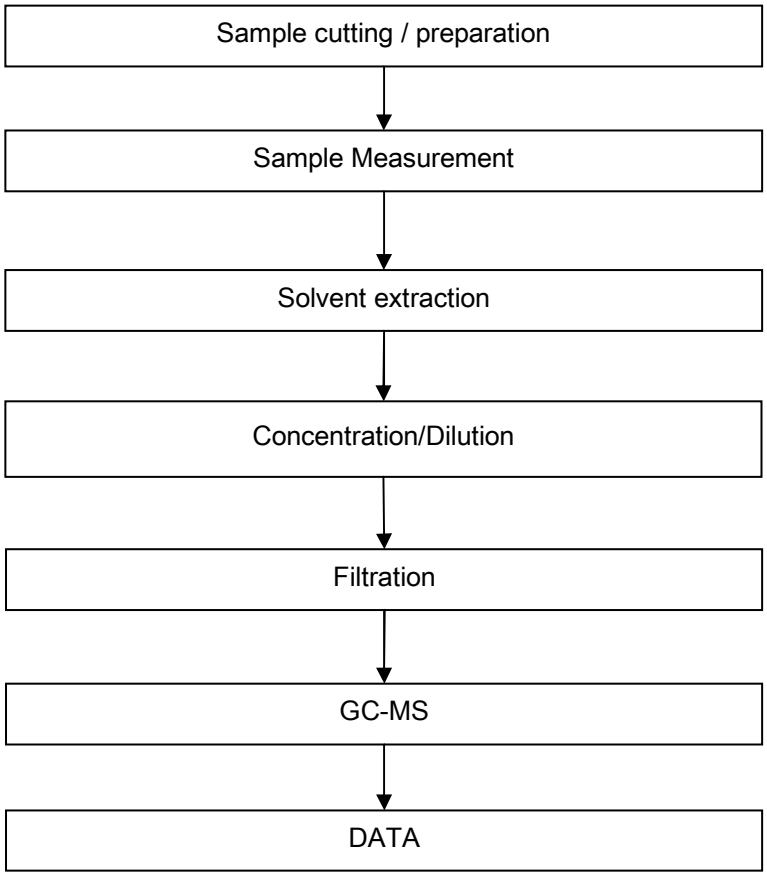
ATTACHMENTS

Phthalates Testing Flow Chart

1) Name of the person who made testing: Sunny Hu
2) Name of the person in charge of testing: Cutey Yu



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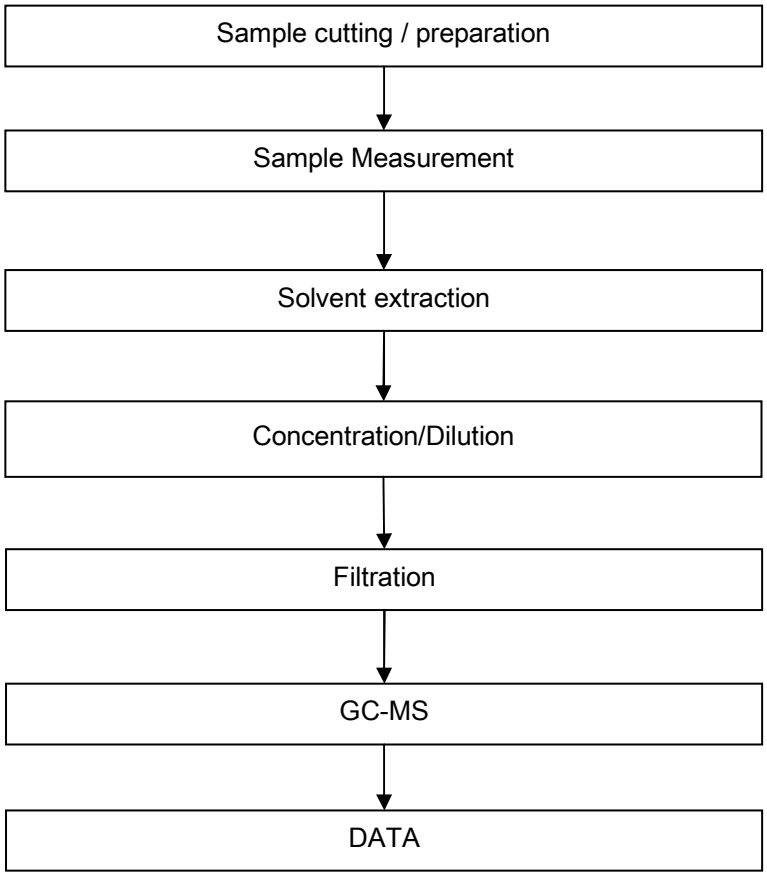
ATTACHMENTS

PAHs Testing Flow Chart

1) Name of the person who made testing: Sunny Hu
2) Name of the person in charge of testing: Cutey Yu



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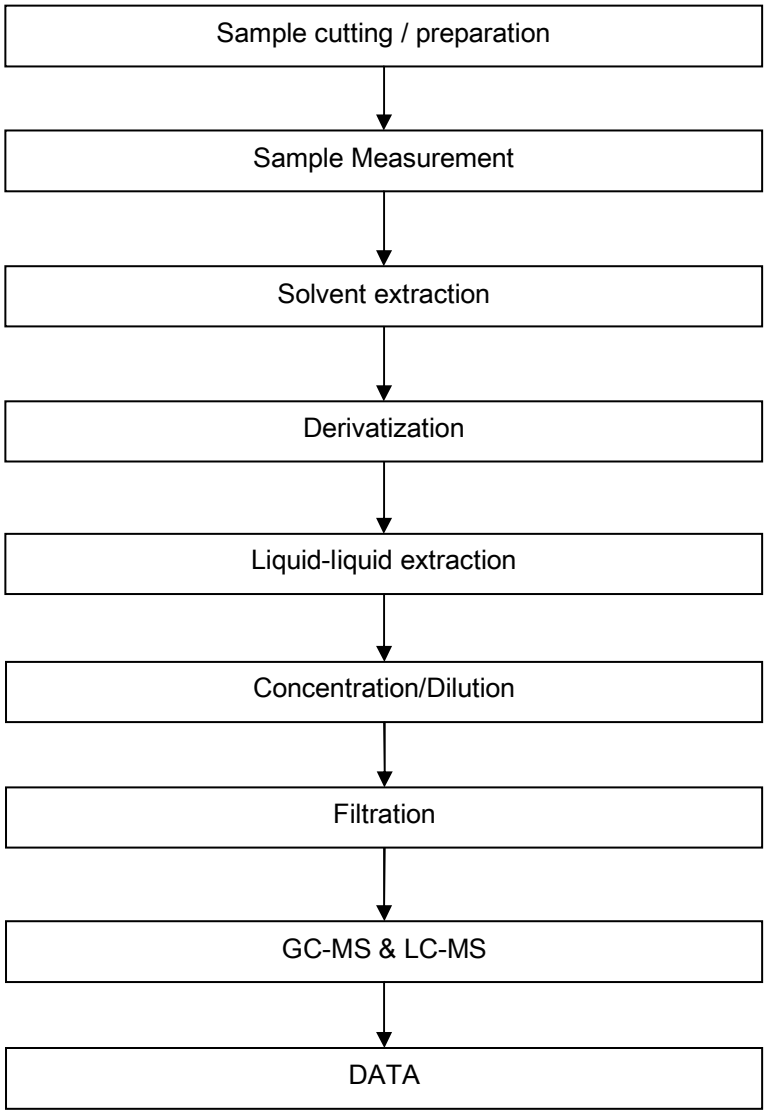
ATTACHMENTS

TBBP-A Testing Flow Chart

1) Name of the person who made testing: Erin Guo
2) Name of the person in charge of testing: Cutey Yu



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Finished product photo:

SGS authenticate the photo on original report only

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