



Customer: SHENZHEN JLC TECHNOLOGY GROUP CO.,LTD.

Customer Address: 27TH FLOOR, OLYMPIC BUILDING, SHANGBAO ROAD, FUTIAN DISTRICT, SHENZHEN CITY, GUANGDONG PROVINCE

Sample Name: PCB
 Sample Description: Lead-free-HASL
 Sample Quantity: 1
 Manufacturer: SHENZHEN JLC TECHNOLOGY GROUP CO.,LTD.

The above samples and information are provided by the customer

Sample Received Date: Nov 20, 2024
 Test Period: Nov 20, 2024 to Nov 21, 2024
 Test Requirements: Test according to customer requirement
 Test Method: Please refer to next page(s)
 Test Result: Please refer to next page(s)
 Test Conclusion: **PASS**

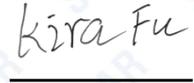
Result Summary:

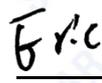
Test Requested	Conclusion
1. RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863	
1) Lead, Mercury, Cadmium, Hexavalent Chromium Content	PASS
2) PBBs and PBDEs Content	PASS
3) Di-(2-ethylhexyl) phthalate (DEHP), Benzylbutyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP) Content	PASS

**Soar Testing Certification
 (GuangDong) Co., Ltd.**

WRITTEN BY

 Zoey Zhang

REVIEWED BY

 Kira Fu

APPROVED BY


 Eric Wu Frank Wu
Approved Signatory



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Lab name: Soar Testing Certification (GuangDong) Co., Ltd. **Address:** Room 1093, No.12, East of Houjie Avenue, Houjie, Dongguan, Guangdong, China
Post Code: 523945 **Tel:** (86-769) 38937518 **E-mail:** service@soar-cert.com **Website:** http://www.soartestlab.com

**Test Result(s):****Description of test sample:**

Sample No.	Item / Component Description(s)	Location(s)	Style(s)/Model(s)
1.	PCB board	Refer to photo	/

Note: "/"= Customer does not provide.

1. RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863**1) Lead, Mercury, Cadmium, Hexavalent Chromium Content**

Test method: Refer to EN 62321-4:2014+A1:2017, EN 62321-5:2014 and EN 62321-7-2:2017, analysis was performed by ICP-OES and UV-Vis.

Test Item	Limit	Unit	MDL	Result
				No.1
Lead (Pb)	1000	mg/kg	2	N.D.
Mercury (Hg)	1000	mg/kg	2	N.D.
Cadmium(Cd)	100	mg/kg	2	N.D.
Hexavalent Chromium (CrVI)	1000	mg/kg	2	N.D.
Conclusion				PASS

Note:

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

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**2) PBBs and PBDEs Content**

Test method: Refer to EN 62321-6:2015 , analysis was performed by GC-MS.

Test Item	Limit	Unit	MDL	Result
				No.1
Sum of Polybrominated biphenyls(PBBs)	1000	mg/kg	-	N.D.
Sum of Polybrominated diphenyl ethers(PBDEs) .	1000	mg/kg	-	N.D.
Monobromobiphenyl	-	mg/kg	5	N.D.
Dibromobiphenyl	-	mg/kg	5	N.D.
Tribromobiphenyl	-	mg/kg	5	N.D.
Tetrabromobiphenyl	-	mg/kg	5	N.D.
Pentabromobiphenyl	-	mg/kg	5	N.D.
Hexabromobiphenyl	-	mg/kg	5	N.D.
Heptabromobiphenyl	-	mg/kg	5	N.D.
Octabromobiphenyl	-	mg/kg	5	N.D.
Nonabromobiphenyl	-	mg/kg	5	N.D.
Decabromobiphenyl	-	mg/kg	5	N.D.
Monobromodiphenyl ether	-	mg/kg	5	N.D.
Dibromodiphenyl ether	-	mg/kg	5	N.D.
Tribromodiphenyl ether	-	mg/kg	5	N.D.
Tetrabromodiphenyl ether	-	mg/kg	5	N.D.
Pentabromodiphenyl ether	-	mg/kg	5	N.D.
Hexabromodiphenyl ether	-	mg/kg	5	N.D.
Heptabromodiphenyl ether	-	mg/kg	5	N.D.
Octabromodiphenyl ether	-	mg/kg	5	N.D.
Nonabromodiphenyl ether	-	mg/kg	5	N.D.
Decabromodiphenyl ether	-	mg/kg	5	N.D.
Conclusion				PASS

Note:

1. mg/kg = milligram per kilogram = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit
4. "-" = Not Regulated

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**3) Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate(DIBP) Content**

Test method: Refer to EN 62321-8:2017, analysis was performed by GC-MS.

Test Item	Limit	Unit	MDL	Result
				No.1
Dibutyl phthalate (DBP)	1000	mg/kg	50	N.D.
Benzylbutyl phthalate (BBP)	1000	mg/kg	50	N.D.
Di-(2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	N.D.
Diisobutyl phthalate(DIBP)	1000	mg/kg	50	N.D.
Conclusion				PASS

Note:

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

Remark: As specified by applicant, to test content in the selected materials of the submitted samples. The test results are only responsible for the submitted sample. The test report is only for customer research, teaching, internal quality control, product development and other purposes, for reference only.

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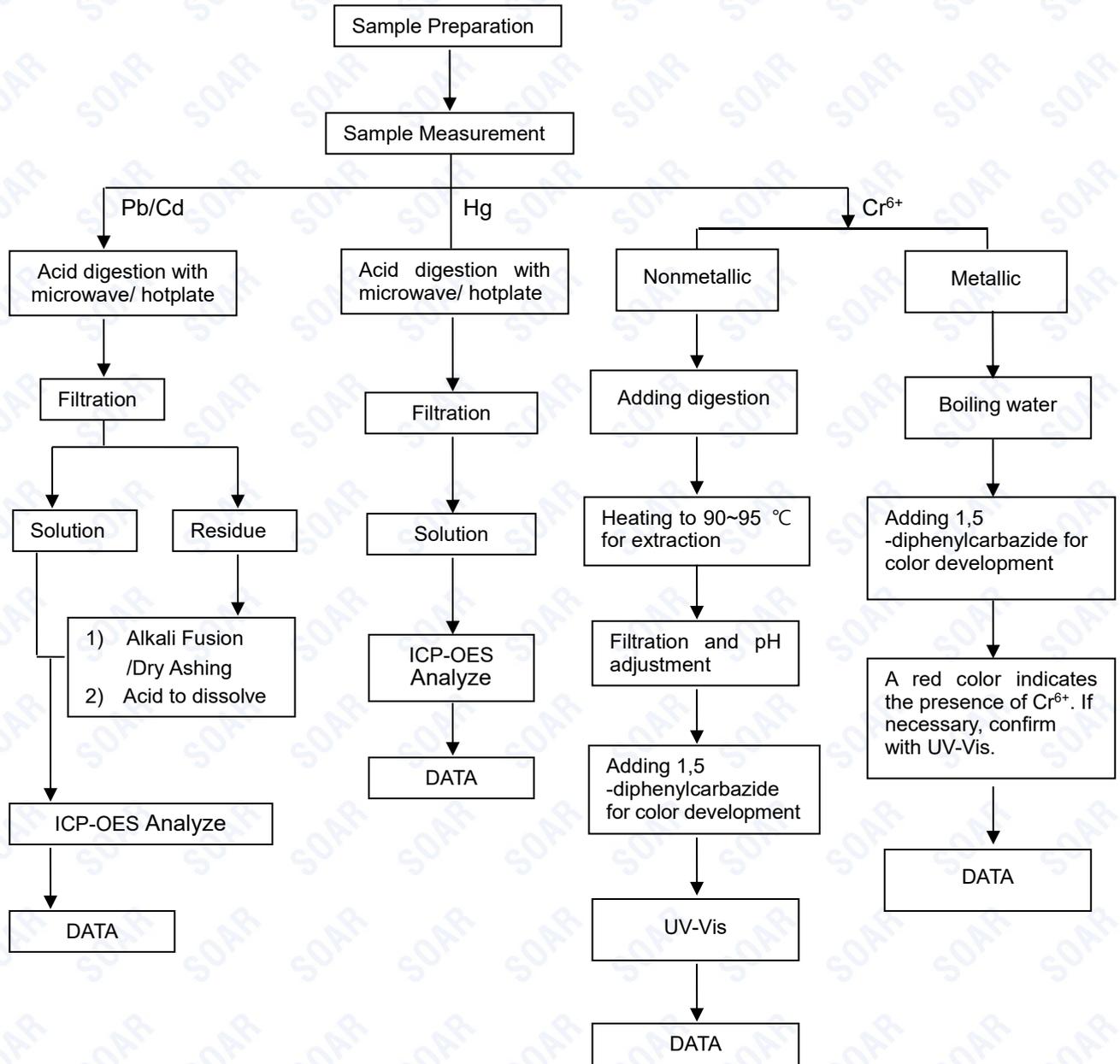
Tel: (86-769) 38937518

Address: Room 1093, No.12, East of Houjie Avenue, Houjie, Dongguan, Guangdong, China
E-mail: service@soar-cert.com

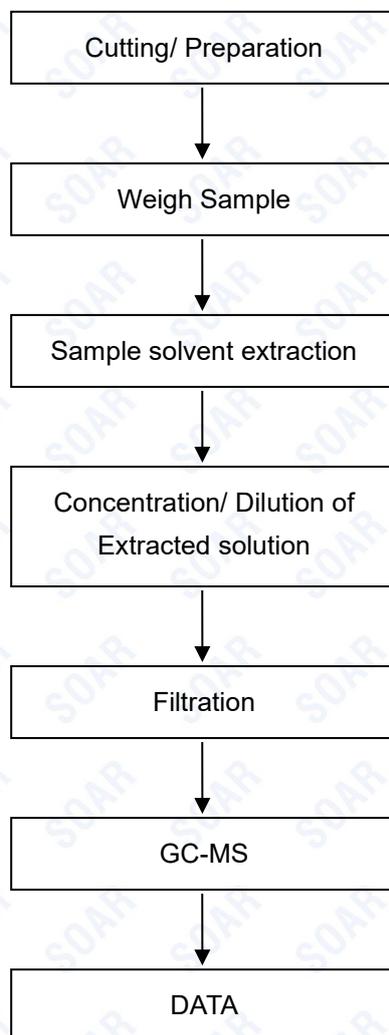
Website: <http://www.soartestlab.com>

Pb/Cd/Hg/Cr⁶⁺ Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr⁶⁺ test method excluded)



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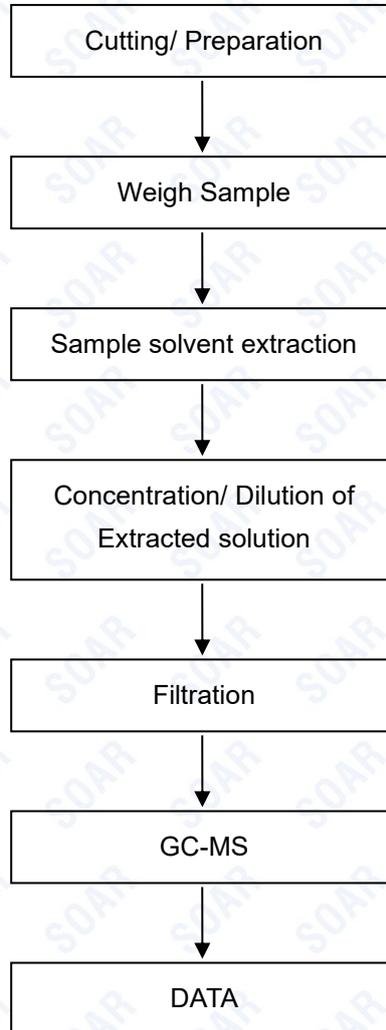
PBBs/PBDEs Testing Flow Chart

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Phthalates Testing Flow Chart

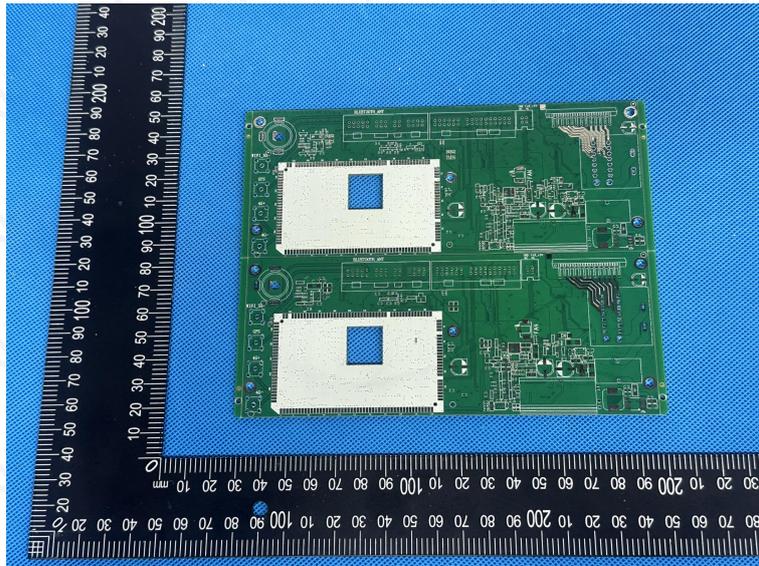
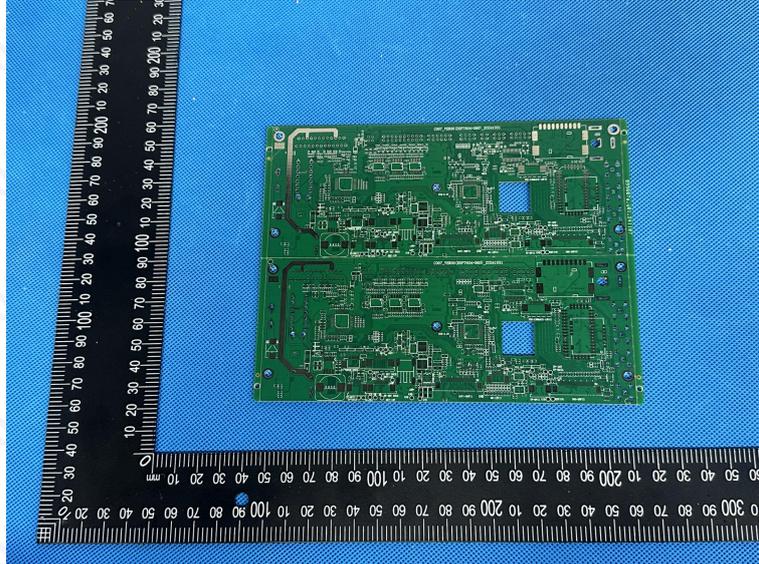
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Photo of the Sample:



The photo is for use with SOAR original report only.

*** End of Report ***

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Customer: SHENZHEN JLC TECHNOLOGY GROUP CO.,LTD.

Customer Address: 27TH FLOOR, OLYMPIC BUILDING,SHANGBAO ROAD,FUTIAN DISTRICT,SHENZHEN CITY,GUANGDONG PROVINCE

Sample Name: PCB

Sample Description: ENIG (Electroless Nickel/ Immersion Gold)

Sample Quantity: 1

Manufacturer: SHENZHEN JLC TECHNOLOGY GROUP CO.,LTD.

The above samples and information are provided by the customer

Sample Received Date: Nov 20, 2024

Test Period: Nov 20, 2024 to Nov 21, 2024

Test Requirements: Test according to customer requirement

Test Method: Please refer to next page(s)

Test Result: Please refer to next page(s)

Test Conclusion: **PASS**

Result Summary:

Test Requested	Conclusion
1. RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863	
1) Lead, Mercury,Cadmium,Hexavalent Chromium Content	PASS
2) PBBs and PBDEs Content	PASS
3) Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate(DIBP) Content	PASS

Soar Testing Certification (GuangDong) Co., Ltd.

WRITTEN BY
Zoey Zhang
Zoey Zhang

REVIEWED BY
Kira Fu
Kira Fu

APPROVED BY
Eric Wu Frank Wu
Eric Wu Frank Wu
Approved Signatory

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**Test Result(s):****Description of test sample:**

Sample No.	Item / Component Description(s)	Location(s)	Style(s)/Model(s)
1.	PCB board	Refer to photo	/

Note: "/"= Customer does not provide.

1. RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863**1) Lead, Mercury, Cadmium, Hexavalent Chromium Content**

Test method: Refer to EN 62321-4:2014+A1:2017, EN 62321-5:2014 and EN 62321-7-2:2017, analysis was performed by ICP-OES and UV-Vis.

Test Item	Limit	Unit	MDL	Result
				No.1
Lead (Pb)	1000	mg/kg	2	N.D.
Mercury (Hg)	1000	mg/kg	2	N.D.
Cadmium(Cd)	100	mg/kg	2	N.D.
Hexavalent Chromium (CrVI)	1000	mg/kg	2	N.D.
Conclusion				PASS

Note:

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**2) PBBs and PBDEs Content**

Test method: Refer to EN 62321-6:2015 , analysis was performed by GC-MS.

Test Item	Limit	Unit	MDL	Result
				No.1
Sum of Polybrominated biphenyls(PBBs)	1000	mg/kg	-	N.D.
Sum of Polybrominated diphenyl ethers(PBDEs) .	1000	mg/kg	-	N.D.
Monobromobiphenyl	-	mg/kg	5	N.D.
Dibromobiphenyl	-	mg/kg	5	N.D.
Tribromobiphenyl	-	mg/kg	5	N.D.
Tetrabromobiphenyl	-	mg/kg	5	N.D.
Pentabromobiphenyl	-	mg/kg	5	N.D.
Hexabromobiphenyl	-	mg/kg	5	N.D.
Heptabromobiphenyl	-	mg/kg	5	N.D.
Octabromobiphenyl	-	mg/kg	5	N.D.
Nonabromobiphenyl	-	mg/kg	5	N.D.
Decabromobiphenyl	-	mg/kg	5	N.D.
Monobromodiphenyl ether	-	mg/kg	5	N.D.
Dibromodiphenyl ether	-	mg/kg	5	N.D.
Tribromodiphenyl ether	-	mg/kg	5	N.D.
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Heptabromodiphenyl ether	-	mg/kg	5	N.D.
Octabromodiphenyl ether	-	mg/kg	5	N.D.
Nonabromodiphenyl ether	-	mg/kg	5	N.D.
Decabromodiphenyl ether	-	mg/kg	5	N.D.
Conclusion				PASS

Note:

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**3) Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate(DIBP) Content**

Test method: Refer to EN 62321-8:2017, analysis was performed by GC-MS.

Test Item	Limit	Unit	MDL	Result
				No.1
Dibutyl phthalate (DBP)	1000	mg/kg	50	N.D.
Benzylbutyl phthalate (BBP)	1000	mg/kg	50	N.D.
Di-(2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	N.D.
Diisobutyl phthalate(DIBP)	1000	mg/kg	50	N.D.
Conclusion				PASS

Note:

1. mg/kg = milligram per kilogram = ppm
2. N.D. = Not Detected (< MDL)
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Remark:

1. The report S241120064002-1 was repealed and replaced by the report S241120064002-1A.
2. As specified by applicant, to test content in the selected materials of the submitted samples. The test results are only responsible for the submitted sample. The test report is only for customer research, teaching, internal quality control, product development and other purposes, for reference only.

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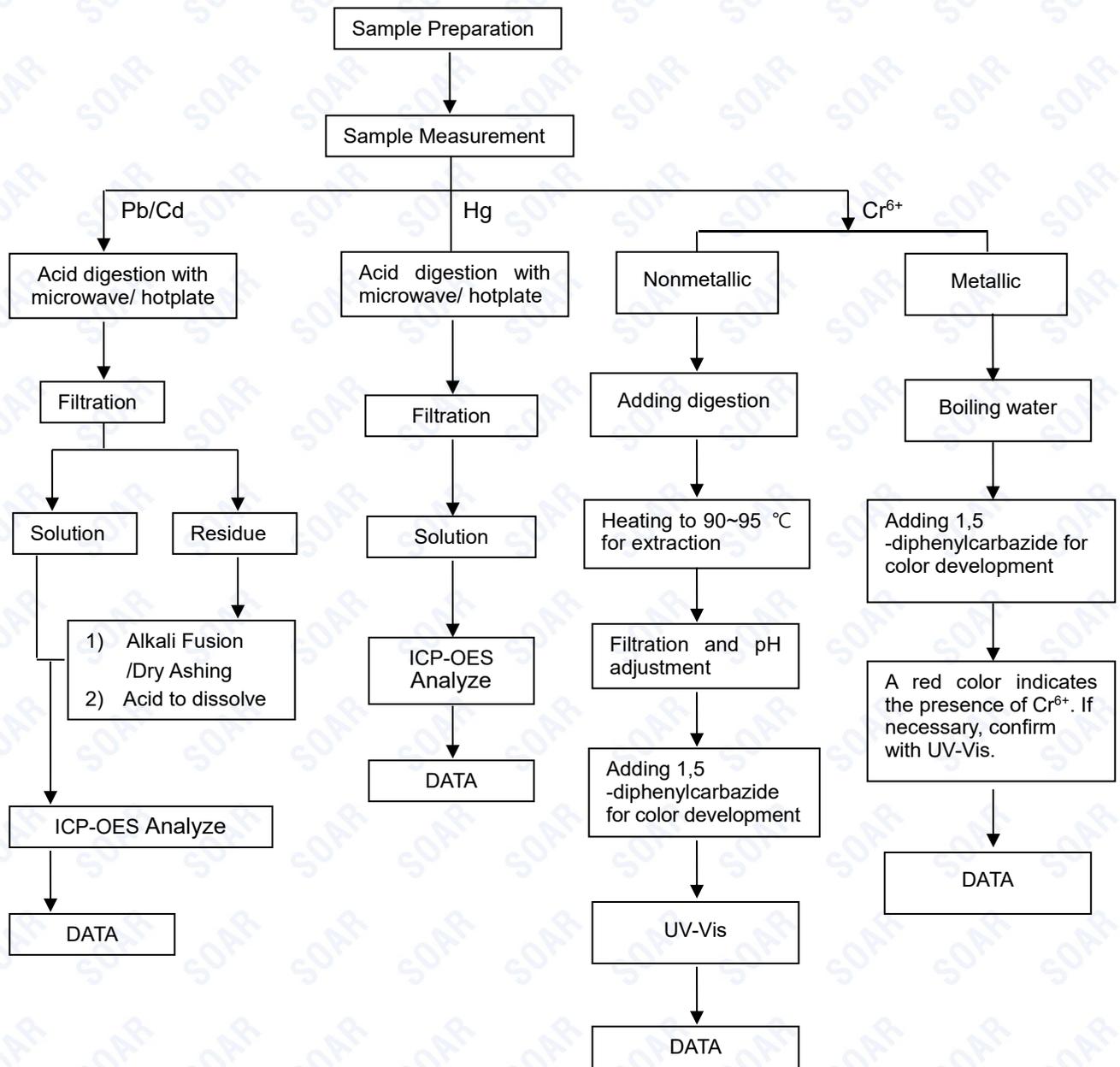
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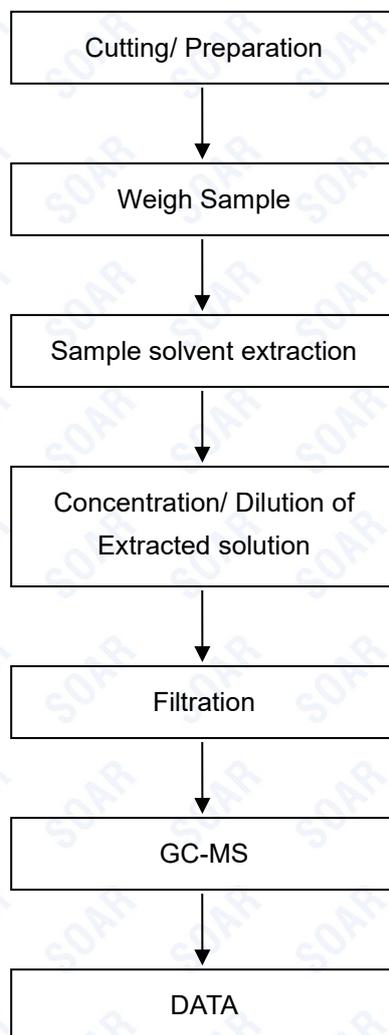
Website: <http://www.soartestlab.com>

Pb/Cd/Hg/Cr⁶⁺ Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr⁶⁺ test method excluded)



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PBBs/PBDEs Testing Flow Chart

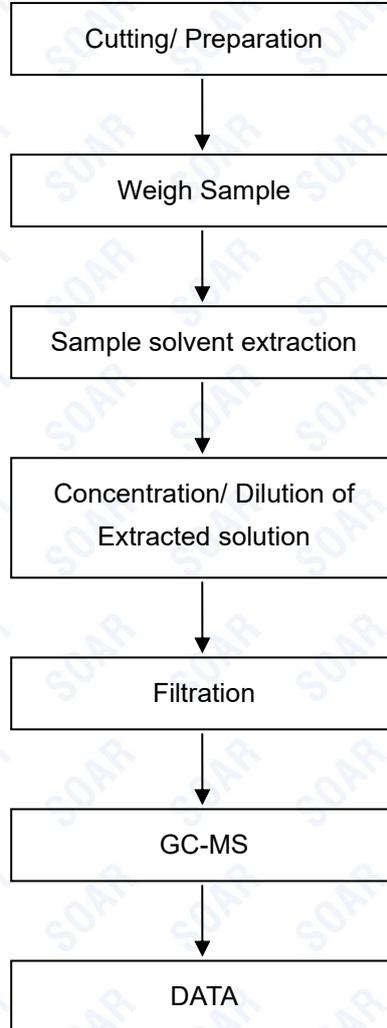
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Phthalates Testing Flow Chart

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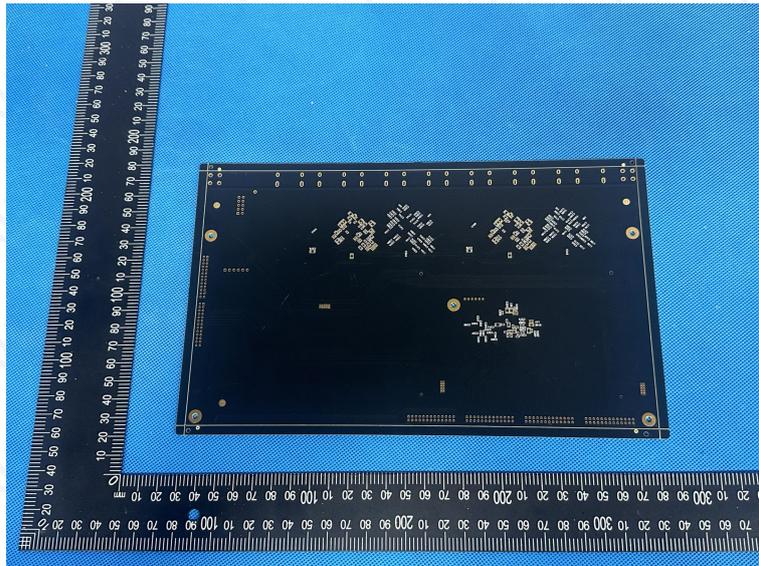
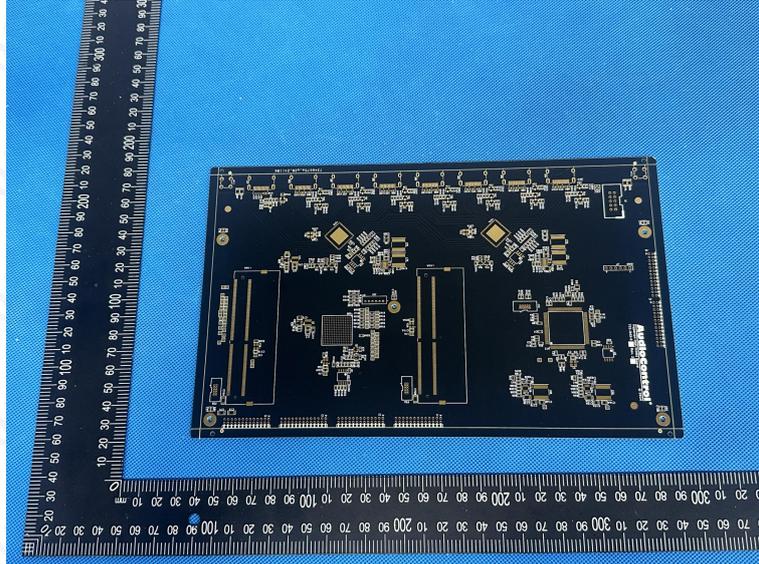
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Photo of the Sample:



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*** End of Report ***

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