

CHEMICAL ANALYSIS TEST REPORT

Company : APOGEE OPTOCOM Co., Ltd
Address : 4F No.7, Nan-Ke 3rd Rd., Tainan Science Industrial Park,
Hsin-shi Dist., Tainan City, Taiwan(R.O.C.)
Product Name : 光學膜
Date Received : JAN 17, 2018
Date Tested : JAN 26, 2018

TESTING LABORATORY IS ACCREDITED BY:

IECQ ISO/IEC 17025 certificate of independent test laboratory approval
Certificate No. : T5-001

WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

NOTE :

1. This report will be invalid if reproduced in part or altered in any way.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used otherwise.
3. This report is ONLY valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.

Signed and on behalf of

Wenston Lin

Wenston Lin
Technical Manager



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1. GENERAL INFORMATION

1.1 DESCRIPTION OF SAMPLE

Product Name : 光學膜

2. CHEMICAL ANALYSIS TEST

2.1 TEST CONDITIONS AND RESULTS

*Description of test part : 光學膜					
Test Item(s)	Method	Instrument	Unit	MDL	Result
Pb	Refer to IEC 62321-5:2013	ICP-OES	mg/kg	2	N.D.
Cd				2	N.D.
Hg	Refer to IEC 62321-4:2013			2	N.D.
Cr ⁶⁺	Refer to IEC 62321-7-2:2017	UV-VIS		2	N.D.
Monobromobiphenyl	Refer to IEC 62321-6:2015	GC-MS		5	N.D.
Dibromobiphenyl				5	N.D.
Tribromobiphenyl				5	N.D.
Tetrabromobiphenyl				5	N.D.
Pentabromobiphenyl				5	N.D.
Hexabromobiphenyl				5	N.D.
Heptabromobiphenyl			5	N.D.	
Octabromobiphenyl			5	N.D.	
Nonabromobiphenyl			5	N.D.	
Decabromobiphenyl			5	N.D.	
The above-mentioned total of (PBBs)	-	-	-	-	N.D.
Monobromodiphenyl ether	Refer to IEC 62321-6:2015	GC-MS	mg/kg	5	N.D.
Dibromodiphenyl ether				5	N.D.
Tribromodiphenyl ether				5	N.D.
Tetrabromodiphenyl ether				5	N.D.
Pentabromodiphenyl ether				5	N.D.
Hexabromodiphenyl ether				5	N.D.
Heptabromodiphenyl ether				5	N.D.
Octabromodiphenyl ether				5	N.D.
Nonabromodiphenyl ether				5	N.D.
Decabromodiphenyl ether				5	N.D.
The above-mentioned total of (PBDEs)	-	-	-	-	N.D.

*Description of test part : 光學膜

Test Item(s)	Method	Instrument	Unit	MDL	Result
DEHP	Refer to IEC 62321-8:2017	GC/MS	mg/kg	10	N.D.
BBP				10	N.D.
DBP				10	N.D.
DIBP				10	N.D.

Note :

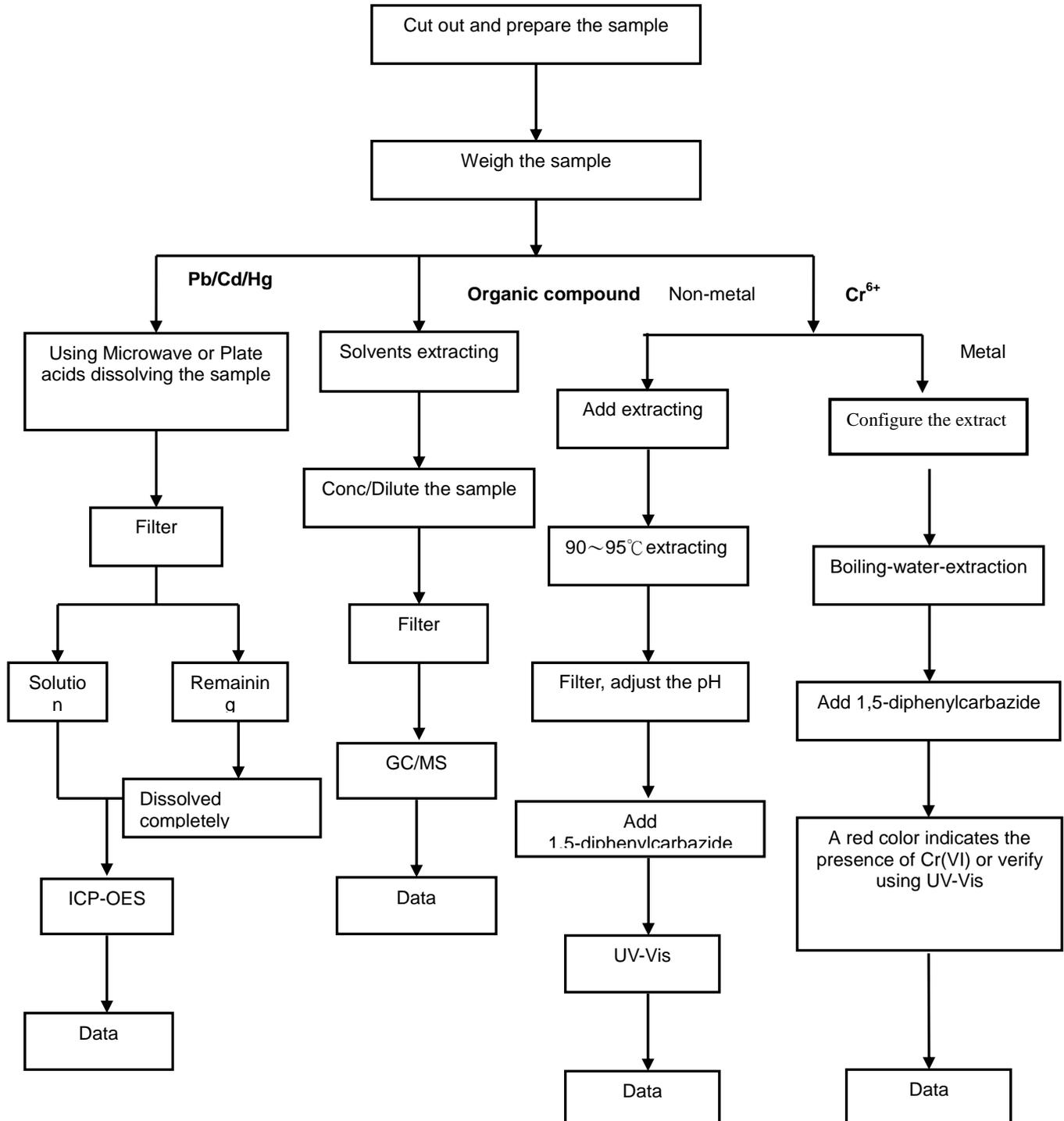
1. MDL = Method Detection Limit.
2. mg/kg = ppm.
3. N.D. = Not detected. (< MDL) If the clients required the result must be value(s), the value just for reference.
4. ICP-OES = Inductively Coupled Plasma-Optical Emission Spectrometer.
5. UV-VIS = Ultraviolet-Visible Spectrophotometer.
6. GC-MS = Gas Chromatograph-Mass Spectrometer.

2.2 PHOTO OF SAMPLE

Sample NO.	Description of test part	Photo
-	光學膜	

2.3 MEASUREMENT FLOW CHART

Measurement Flowchart of Pb/Cd/Hg/Cr⁶⁺/ PBBs/PBDEs/ DEHP/ BBP/ DBP/ DIBP



-----End of Report-----