

Test Report

No. : CE/2018/12253

Date : 2018/01/15

Page : 1 of 7

SUMI-PAC CORPORATION

NO. 15, KON YE 5 ROAD, FON SAN TSUEN, FU KOW SHAN, HSIN CHU HSIEN, TAIWAN, R. O. C.



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

Sample Submitted By : SUMI-PAC CORPORATION
Sample Description : HEAT SHRINKABLE TUBE
Style/Item No. : SUMITUBE F32 (=SUMITUBE F34, IRRAXTUBE F32A, SUMITUBE F(Z),
SUMITUBE F2(Z), K32, KF32)
Sample Receiving Date : 2018/01/10
Testing Period : 2018/01/10 TO 2018/01/15

=====
Test Requested : As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).
Test Method : Please refer to following pages.
Test Result(s) : Please refer to following pages.



Troy Chang, Manager-Tech
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

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Test Report

No. : CE/2018/12253

Date : 2018/01/15

Page : 2 of 7

SUMI-PAC CORPORATION

NO. 15, KON YE 5 ROAD, FON SAN TSUEN, FU KOW SHAN, HSIN CHU HSIEN, TAIWAN, R. O. C.



Test Result(s)

PART NAME No.1 : BLACK PLASTIC TUBE WITH WHITE PRINTED

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	25.6
Mercury (Hg)	mg/kg	With reference to IEC 62321-4 (2013) and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) (◆)	mg/kg	With reference to IEC 62321-7-2 (2017) and performed by UV-VIS. ; With reference to IEC 62321-5 (2013) and performed by ICP-AES.	8	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321-6 (2015) and performed by GC/MS.	-	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.
Sum of PBDEs	mg/kg		-	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.	

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Test Report

No. : CE/2018/12253

Date : 2018/01/15

Page : 3 of 7

SUMI-PAC CORPORATION

NO. 15, KON YE 5 ROAD, FON SAN TSUEN, FU KOW SHAN, HSIN CHU HSIEN, TAIWAN, R. O. C.



Test Item(s)	Unit	Method	MDL	Result
				No.1
BBP (Butyl Benzyl phthalate) (CAS No.: 85-68-7)	mg/kg	With reference to IEC 62321-8 (2017). Analysis was performed by GC/MS.	50	n.d.
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	mg/kg		50	n.d.
DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	mg/kg		50	n.d.
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	mg/kg		50	n.d.

Note :

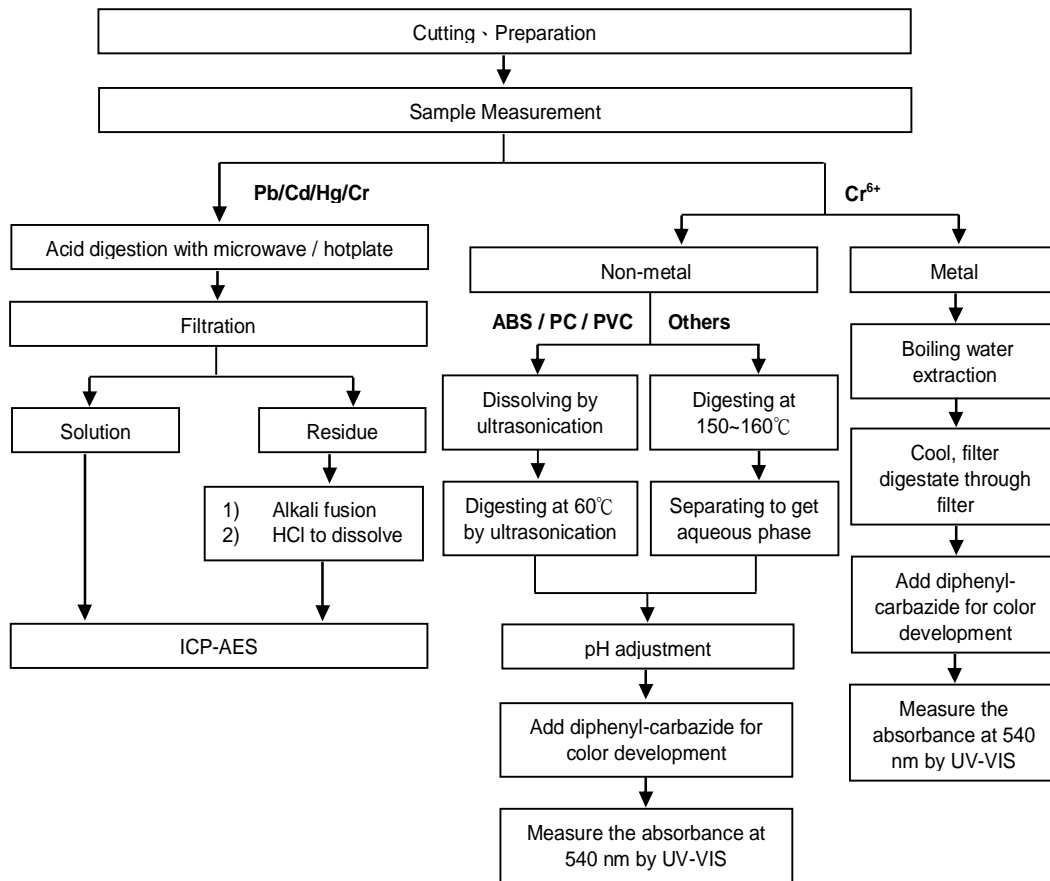
1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated
5. (◆) : The result of Cr(VI) is "n.d." as the result of Chromium (Cr) is less than the MDL of Cr(VI), and confirmation test of Cr(VI) is not required. If the Chromium (Cr) content is not less than the MDL of Cr(VI), confirmation test of Cr(VI) is required.



Analytical flow chart of Heavy Metal

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

- Technician : JR Wang
- Supervisor: Troy Chang

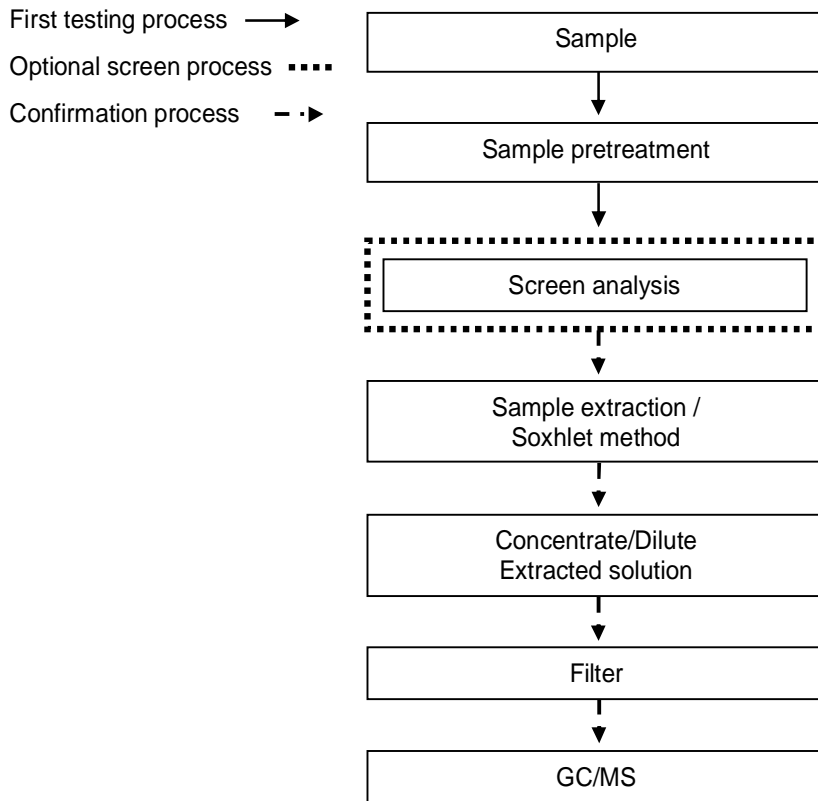


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Analytical flow chart – PBB / PBDE

- Technician : Yaling Tu
- Supervisor: Troy Chang



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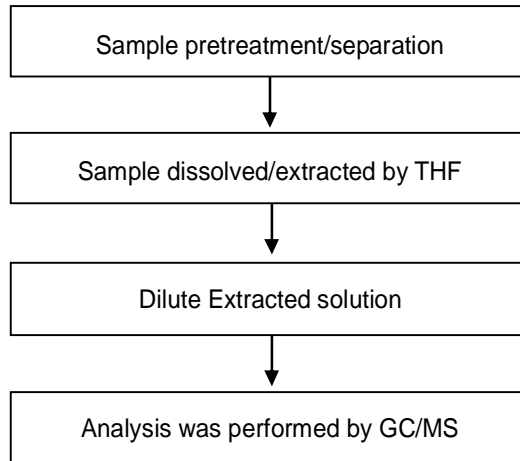
NO. 15, KON YE 5 ROAD, FON SAN TSUEN, FU KOW SHAN, HSIN CHU HSIEN, TAIWAN, R. O. C.



Analytical flow chart - Phthalate

- Technician: Andy Hsu
- Supervisor: Troy Chang

【Test method: IEC 62321-8】



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Test Report

No. : CE/2018/12253

Date : 2018/01/15

Page : 7 of 7

SUMI-PAC CORPORATION

NO. 15, KON YE 5 ROAD, FON SAN TSUEN, FU KOW SHAN, HSIN CHU HSIEN, TAIWAN, R. O. C.



* The tested sample / part is marked by an arrow if it's shown on the photo. *

CE/2018/12253



** End of Report **

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