

## Test Report

No. : CE/2018/23772

Date : 2018/02/23

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TAIYO INK MFG. CO., LTD.

900, HIRASAWA, RANZAN-MACHI, HIKI-GUN, SAITAMA 355-0215 JAPAN



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

Sample Submitted By : TAIYO INK MFG. CO., LTD.  
Sample Description : PSR-4000 EG23/CA-40 G23K (UL:PSR-4000DE/CA-40DE)  
Style/Item No. : INK  
Color : BLACK  
Sample Receiving Date : 2018/02/14  
Testing Period : 2018/02/14 TO 2018/02/23

=====  
**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 Result(s)** : Please refer to following pages.

**Conclusion** : Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS and amending Directive (EU) 2015/863.

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

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## Test Result(s)

PART NAME No.1 : BLACK INK

Test Item(s)	Unit	Method	MDL	Result	Limit
				No.1	
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n.d.	100
Lead (Pb)	mg/kg		2	n.d.	1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4 (2013) and performed by ICP-AES.	2	n.d.	1000
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321-7-2 (2017) and performed by UV-VIS.	8	n.d.	1000
<b>Sum of PBBs</b>	mg/kg	With reference to IEC 62321-6 (2015) and performed by GC/MS.	-	n.d.	1000
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.	-
<b>Sum of PBDEs</b>	mg/kg		-	n.d.	1000
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 Item(s)	Unit	Method	MDL	Result	Limit
				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.	1000
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	mg/kg		50	n.d.	1000
DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	mg/kg		50	n.d.	1000
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	mg/kg		50	n.d.	1000

**Note :**

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

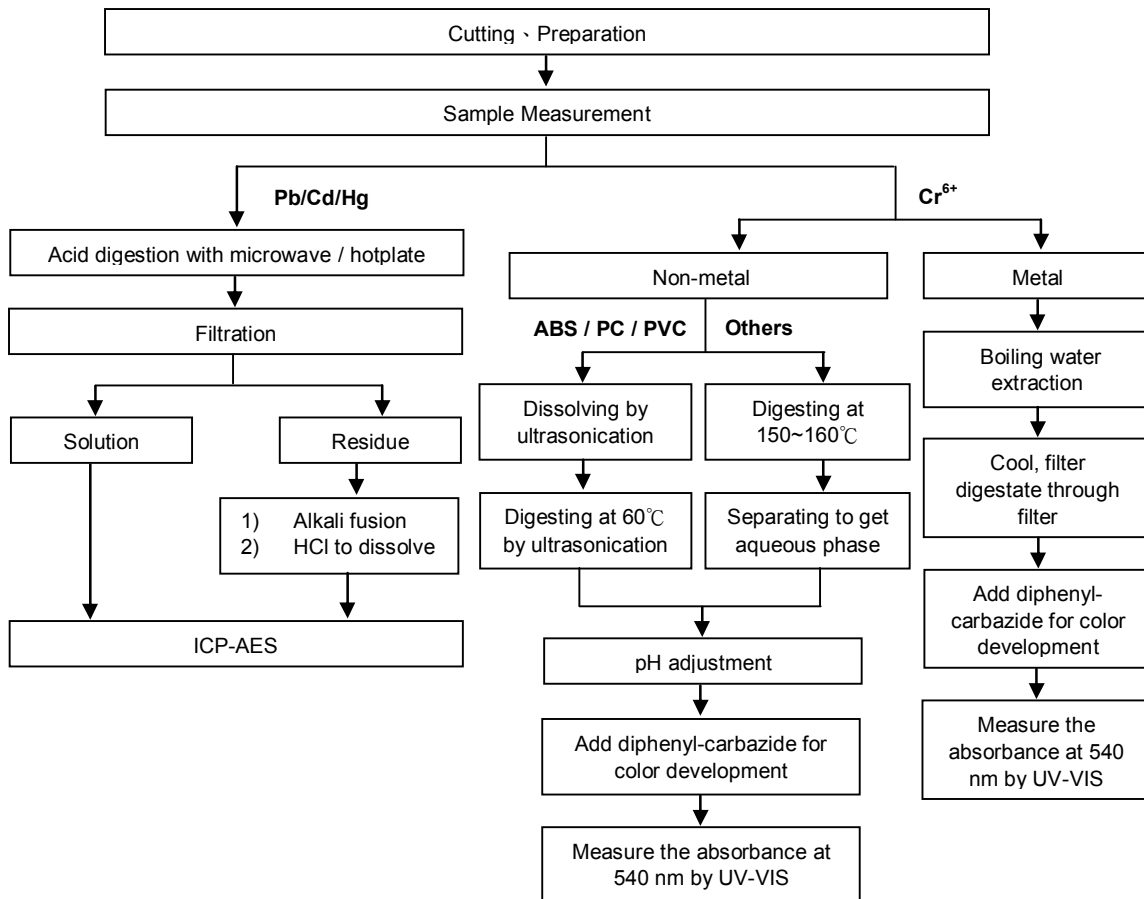
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### Analytical flow chart of Heavy Metal

These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)

- Technician : JR Wang
- Supervisor: Troy Chang

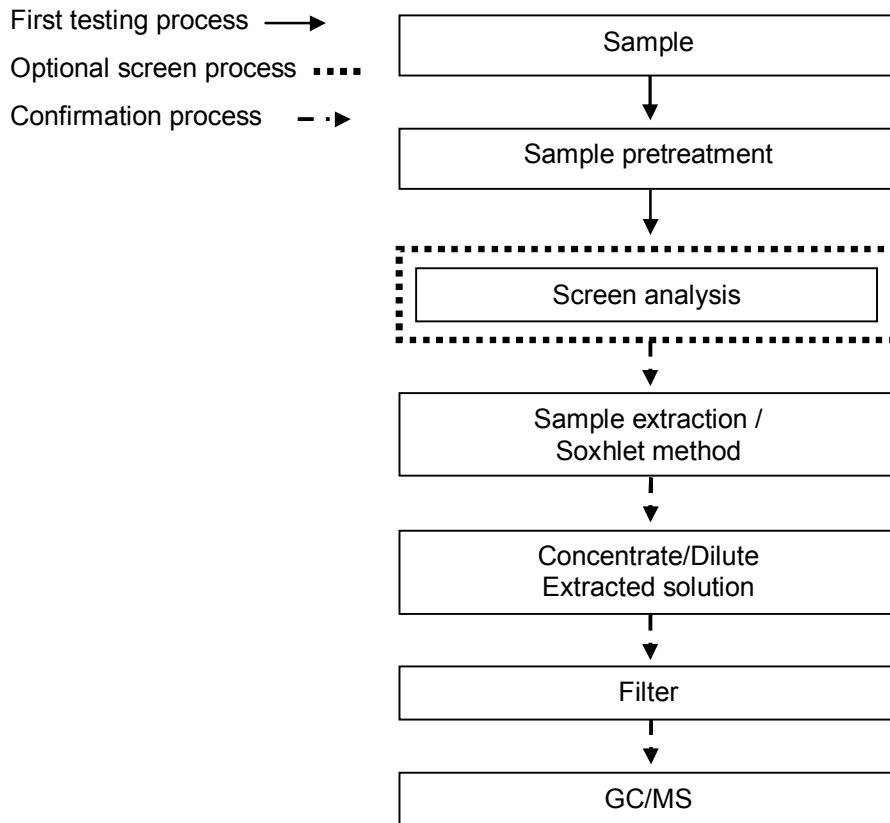


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### Analytical flow chart – PBB / PBDE

- Technician : Yaling Tu
- Supervisor: Troy Chang



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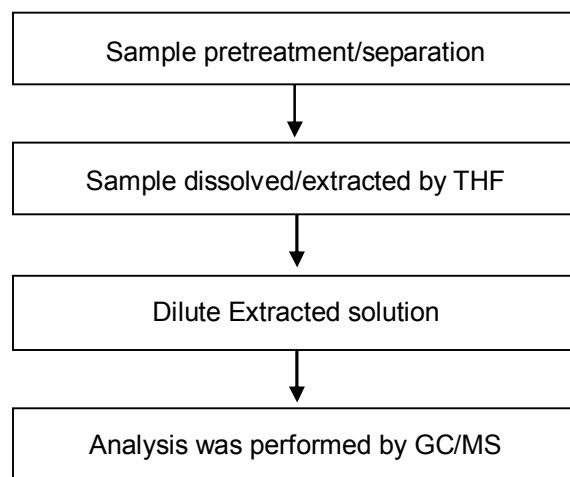
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### Analytical flow chart - Phthalate

- Technician: Andy Hsu
- Supervisor: Troy Chang

**【Test method: IEC 62321-8】**



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

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\*\* End of Report \*\*

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