

## Test Report

No. : CE/2018/23770

Date : 2018/02/23

Page : 1 of 7

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 BL01/CA-40 G24 (UL:PSR-4000DE/CA-40DE)  
Style/Item No. : INK  
Color : BLUE  
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 Report

No. : CE/2018/23770

Date : 2018/02/23

Page : 2 of 7

TAIYO INK MFG. CO., LTD.

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## Test Result(s)

PART NAME No.1 : BLUE 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 Report

No. : CE/2018/23770

Date : 2018/02/23

Page : 3 of 7

TAIYO INK MFG. CO., LTD.

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



| 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

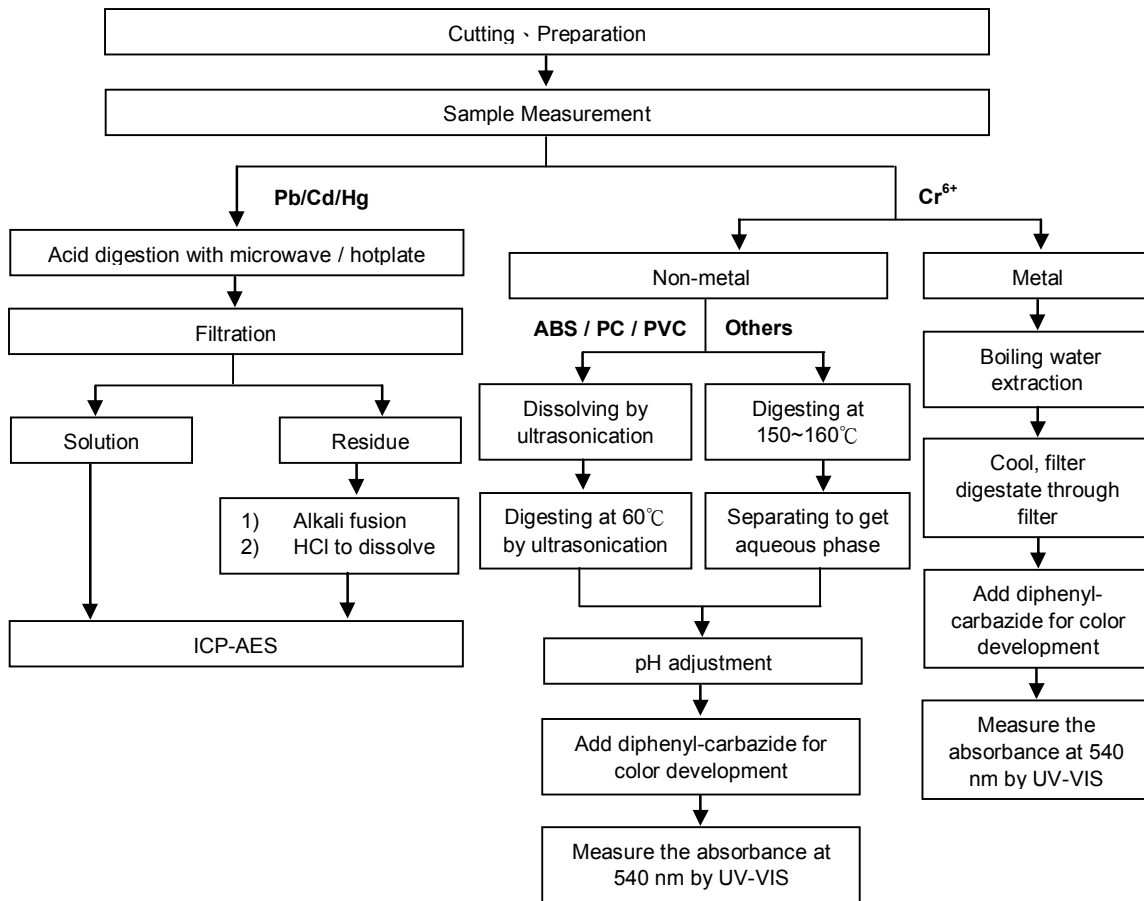
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### Analytical flow chart of Heavy Metal

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

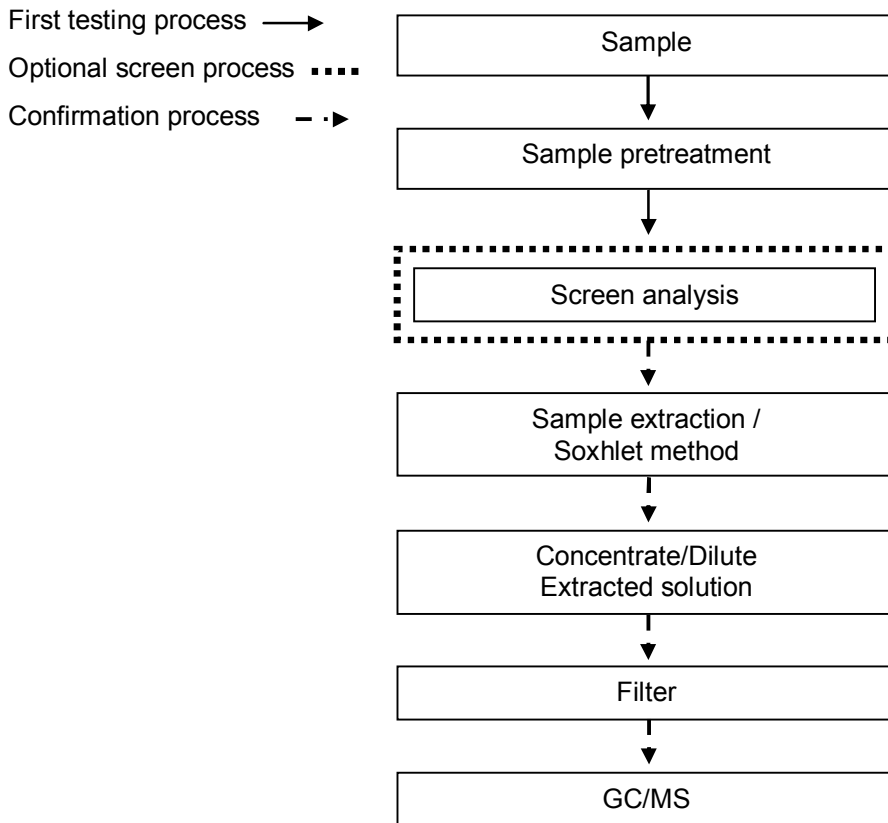


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### Analytical flow chart – PBB / PBDE

- Technician : Yaling Tu
- Supervisor: Troy Chang



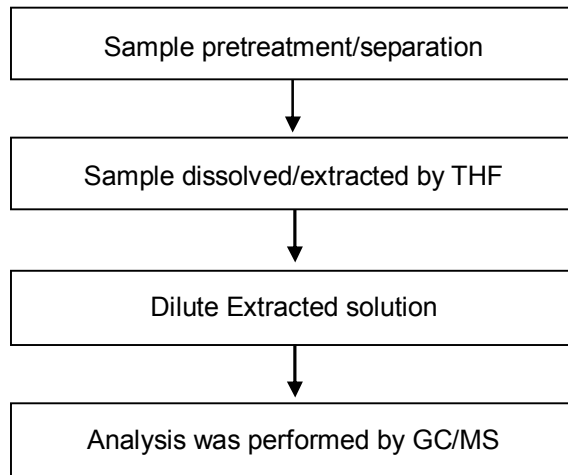
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### Analytical flow chart - Phthalate

- Technician: Andy Hsu
- Supervisor: Troy Chang

**【Test method: IEC 62321-8】**



## Test Report

No. : CE/2018/23770

Date : 2018/02/23

Page : 7 of 7

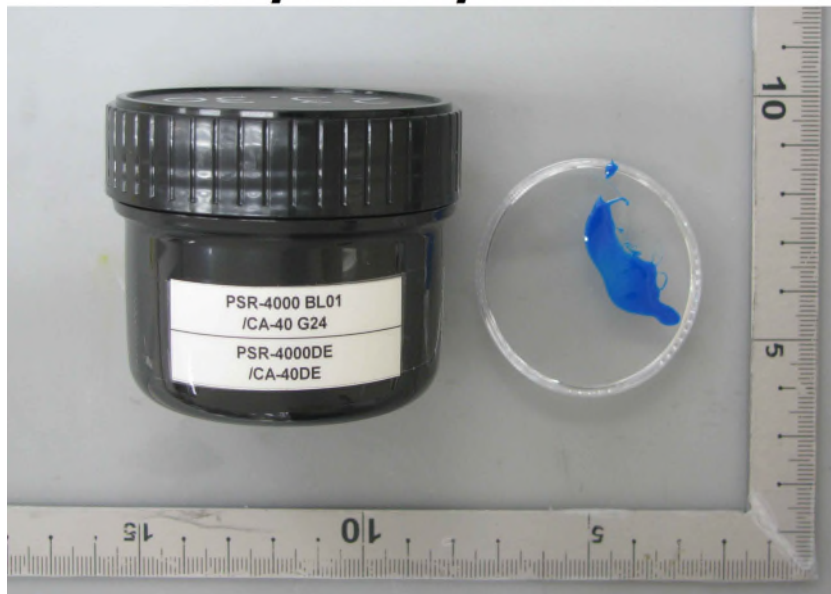
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\* The tested sample / part is marked by an arrow if it's shown on the photo. \*

### CE/2018/23770



\*\* End of Report \*\*

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