TEST REPORT
(시험성적서)

신청기관 (인) : 한국 다이요 잉크
APPLICANT : TAIYO INK MFG. CO., (KOREA) LTD.
주소 (한글) : 경기도 안산시 단원구 만해로 166
ADDRESS (ENGL.) : 166, Manhae-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Korea

시험성적서 번호 (REPORT NO.) : RT22R-S3650-010-K1
발행일자 (DATE) : 2022. 07. 11.

시료 명세 (SAMPLE DESCRIPTION) : 시료에 대한 상세한 정보는 아래와 같음
(The following submitted sample(s) said to be)
제품명/형식 (NAME/TYPE OF PRODUCT) : IJR-4000 CW100
 재질 (NAME OF MATERIAL) : Ink
 시료고유번호 (SAMPLE ID NO.) : RT22R-S3650-010
 제품 생산자/공급자 (MANUFACTURER/VENDOR) : 한국 다이요 잉크
(TAIYO INK MFG. CO., (KOREA) LTD.)

시료접수일자 (SAMPLE RECEIVED) : 2022. 07. 04.
( Jul. 04, 2022)
시험일자 (TESTING DATE) : 2022. 07. 04. ~ 2022. 07. 11.
( Jul. 04, 2022 ~ Jul. 11, 2022)
시험방법 (TEST METHOD) : 이 시험성적서의 다음 페이지 첨부
(Please see the following page)
시험결과 (TEST RESULT) : 이 시험성적서의 다음 페이지 첨부
(Please see the following page)

비고 (Notes) : 1. 이 시험성적서는 제시된 시료 및 시료명으로 시험한 결과로서 유사 대상시료에 적용할 수 없음.
(The test results presented in this report refer only to the object tested.)
2. 이 시험성적서는 승인없이 복사 사용을 금함.
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승인자 (Approved by) : 
권한자 (Authorized by) :

장준용/기술책임자
(Jade Jang / Lab. Technical Manager)
박병옥/소장
(Bo Park / Lab. General Manager)

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## TEST REPORT

**REPORT NO.:** RT22R-S3650-010-K1

**SAMPLE ID NO.:** RT22R-S3650-010

**SAMPLE DESCRIPTION:** IJR-4000 CW100

<table>
<thead>
<tr>
<th>TEST ITEM</th>
<th>UNIT</th>
<th>TEST METHOD</th>
<th>MDL</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium (Cd)</td>
<td>mg/kg</td>
<td>With reference to IEC 62321-5 Edition 1.0 : 2013, by acid digestion and determined by ICP-OES</td>
<td>0.5</td>
<td>N.D.</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>mg/kg</td>
<td>With reference to IEC 62321-4 : 2013/AMD1 : 2017, by acid digestion and determined by ICP-OES</td>
<td>5</td>
<td>N.D.</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>mg/kg</td>
<td>With reference to IEC 62321-1 Edition 1.0 : 2017, by alkaline/toluene digestion and determined by UV-VIS Spectrophotometer</td>
<td>2</td>
<td>N.D.</td>
</tr>
</tbody>
</table>

### PBDEs

<table>
<thead>
<tr>
<th>PBDE</th>
<th>UNIT</th>
<th>TEST METHOD</th>
<th>MDL</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MonoBDE</td>
<td>mg/kg</td>
<td>With reference to IEC 62321-6 Edition 1.0 : 2015, by solvent extraction and determined by GC/MS</td>
<td>5</td>
<td>N.D.</td>
</tr>
</tbody>
</table>

### PBBs

<table>
<thead>
<tr>
<th>PBB</th>
<th>UNIT</th>
<th>TEST METHOD</th>
<th>MDL</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MonoBB</td>
<td>mg/kg</td>
<td>With reference to IEC 62321-6 Edition 1.0 : 2015, by solvent extraction and determined by GC/MS</td>
<td>5</td>
<td>N.D.</td>
</tr>
</tbody>
</table>

*Notes: mg/kg = ppm = parts per million (함량 표시 : 백만분의 일)  
< = Less than (결과 값 이하)  
N.D. = Not detected (< MDL, 미검출 – 검출한계 이하)  
MDL = Method detection limit (검출한계)*

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TEST REPORT
(시험 성적 서)

시험성적서 번호 (REPORT NO.) : RT22R-S3650-010-K1
발행면수 (PAGE) : 3 of 4
발행일자 (DATE) : 2022. 07. 11.
시료고유번호 (SAMPLE ID NO.) : RT22R-S3650-010
시료명 (SAMPLE DESCRIPTION) : IJR-4000 CW100
(IJR-4000 CW100)

시료 접수 시 시료 상태 :
( View of sample as received )

※ 시료 접수 시 시료 상태 :
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Flow Chart (IEC62321 Edition 1.0)

**Flow Chart**

1. **Receive**
2. **Sampling/Grinding or Cutting**
   - Pb, Cd, Hg
   - For different material, digest the sample with appropriate acid
   - Confirm the tested samples are totally dissolved
   - Make up with deionized water
   - Analyzed by ICP-OES
3. **Boiling water extraction**
   - Get 50cm³ sample
4. **Metal**
   - Polymeric/Electronic
   - Weigh sample
   - Soluble by HNO₃
   - Soluble by HCl
   - Completely dissolved and then add alkaline solution
   - Concentrate the extract and make up with organic solvent
   - Soxhlet extraction or solvent extraction
   - Weigh sample and add organic solvent
5. **PBBS/PBDES**
   - Analyzed by GC-MS

**Remarks:**

*1: List of appropriate acid:

<table>
<thead>
<tr>
<th>Material</th>
<th>Acid added for digestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Acid added for digestion</td>
</tr>
<tr>
<td>Polymers</td>
<td>HNO₃, HCl, HF, H₂O₂, H₃BO₃</td>
</tr>
<tr>
<td>Metals</td>
<td>HNO₃, HCl, HF</td>
</tr>
<tr>
<td>Electronics</td>
<td>HNO₃, HCl, H₂O₂, HBF₄</td>
</tr>
</tbody>
</table>

*2: The samples were dissolved totally by pre-conditioning method according to above flow chart.

***** End of Report *****

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