

85017-XXXX

## **RAPPORT D'ESSAIS** **TEST REPORT**



**Report number** TST-200804-002-KA/LD/PH  
**Issued on** Aug-26-2020

Applicant / Demandeur

SENTOSPHERE

Address / Address

59 bd du Général Martial Valin 75015 Paris – France

File Number

/ Numéro de dossier

Sample description

/ Description du produit

Samples received on

/ Echantillons reçus le

Testing period

/ Période des essais



P204578 DEC/2

Aquarellum ink concentrated

Aug-04-2020

From Aug-17-2020 to Aug-26-2020

### **Test requested :**

**ASTM F963-17 Standard Consumer Safety Specification for Toy Safety**

**4.3.5 Heavy Elements**

**4.3.5.1 Soluble heavy metal content**

**Lead content – US Consumer Product Safety Improvement Act of 2008 – Sec. 101:**

**Children's Products Containing lead; Lead Paint Rule**

**Lead in accessible substrate materials**

**CPSIA Section 108 : Phthalates (US Public Law 110-314)**

**CPSC, 16 CFR Part 1307, Final Rule : Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates**

### **Conclusions on tested portions :**

**Compliant / Conforme**

Authorized on behalf of LNE ASIA Ltd by

MA Chun Wai  
Supervisor Chemical Laboratory



## List of tested portions

In the table of results of this report, the test portion numbers listed refer to the following materials:

1. White plastic of flask lid
2. Transparent plastic of flask
3. Black ink

## Abbreviations

- " N " : Tested portion number
- " P " : Passed
- " F " : Failed
- " < " : less than

## Test results

### ASTM F963-17 Standard Consumer Safety Specification for

#### Toy Safety

#### 4.3.5.1 Soluble Heavy metal content

|                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |    |    |    |     |  |          |    |    |    |    |    |    |    |    |                                              |    |    |      |    |    |    |    |     |                        |    |    |     |    |    |    |    |     |                           |    |    |    |    |    |    |    |    |          |    |                                   |     |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|----|----|----|----|-----|--|----------|----|----|----|----|----|----|----|----|----------------------------------------------|----|----|------|----|----|----|----|-----|------------------------|----|----|-----|----|----|----|----|-----|---------------------------|----|----|----|----|----|----|----|----|----------|----|-----------------------------------|-----|
| <b>Test Method :</b>                         | Soluble heavy metals analysis was determined by Inductively Coupled Plasma Spectrometry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |    |      |    |    |    |    |     |  |          |    |    |    |    |    |    |    |    |                                              |    |    |      |    |    |    |    |     |                        |    |    |     |    |    |    |    |     |                           |    |    |    |    |    |    |    |    |          |    |                                   |     |
| <b>Notes:</b>                                | <div>- Testing location: chemical laboratory</div> <div>- All results in mg/kg</div> <div>- According to ASTM F963-17</div> <div>1. Test portions of less than 10mg of material shall not be tested.</div> <div>2. If only between 10mg and 100mg of material, calculate the quantity of the appropriate elements as if a test portion of 100mg had been used.</div>                                                                                                                                                                                                                                                                                                                                                     |    |      |    |    |    |    |     |  |          |    |    |    |    |    |    |    |    |                                              |    |    |      |    |    |    |    |     |                        |    |    |     |    |    |    |    |     |                           |    |    |    |    |    |    |    |    |          |    |                                   |     |
| <b>Requirements:</b>                         | <div>Part I</div> <table><tr><td>Elements</td><td>Sb</td><td>As</td><td>Ba</td><td>Cd</td><td>Cr</td><td>Pb</td><td>Hg</td><td>Se</td></tr><tr><td>Any toy material except modeling clay, mg/kg</td><td>60</td><td>25</td><td>1000</td><td>75</td><td>60</td><td>90</td><td>60</td><td>500</td></tr><tr><td>Modelling clay , mg/kg</td><td>60</td><td>25</td><td>250</td><td>50</td><td>25</td><td>90</td><td>25</td><td>500</td></tr><tr><td>Analytical correction (%)</td><td>60</td><td>60</td><td>30</td><td>30</td><td>30</td><td>30</td><td>50</td><td>60</td></tr></table> <div>Part II</div> <table><tr><td>Elements</td><td>Cd</td></tr><tr><td>Metal toys and toy components, µg</td><td>200</td></tr></table> |    |      |    |    |    |    |     |  | Elements | Sb | As | Ba | Cd | Cr | Pb | Hg | Se | Any toy material except modeling clay, mg/kg | 60 | 25 | 1000 | 75 | 60 | 90 | 60 | 500 | Modelling clay , mg/kg | 60 | 25 | 250 | 50 | 25 | 90 | 25 | 500 | Analytical correction (%) | 60 | 60 | 30 | 30 | 30 | 30 | 50 | 60 | Elements | Cd | Metal toys and toy components, µg | 200 |
| Elements                                     | Sb                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | As | Ba   | Cd | Cr | Pb | Hg | Se  |  |          |    |    |    |    |    |    |    |    |                                              |    |    |      |    |    |    |    |     |                        |    |    |     |    |    |    |    |     |                           |    |    |    |    |    |    |    |    |          |    |                                   |     |
| Any toy material except modeling clay, mg/kg | 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 25 | 1000 | 75 | 60 | 90 | 60 | 500 |  |          |    |    |    |    |    |    |    |    |                                              |    |    |      |    |    |    |    |     |                        |    |    |     |    |    |    |    |     |                           |    |    |    |    |    |    |    |    |          |    |                                   |     |
| Modelling clay , mg/kg                       | 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 25 | 250  | 50 | 25 | 90 | 25 | 500 |  |          |    |    |    |    |    |    |    |    |                                              |    |    |      |    |    |    |    |     |                        |    |    |     |    |    |    |    |     |                           |    |    |    |    |    |    |    |    |          |    |                                   |     |
| Analytical correction (%)                    | 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 60 | 30   | 30 | 30 | 30 | 50 | 60  |  |          |    |    |    |    |    |    |    |    |                                              |    |    |      |    |    |    |    |     |                        |    |    |     |    |    |    |    |     |                           |    |    |    |    |    |    |    |    |          |    |                                   |     |
| Elements                                     | Cd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |      |    |    |    |    |     |  |          |    |    |    |    |    |    |    |    |                                              |    |    |      |    |    |    |    |     |                        |    |    |     |    |    |    |    |     |                           |    |    |    |    |    |    |    |    |          |    |                                   |     |
| Metal toys and toy components, µg            | 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |    |      |    |    |    |    |     |  |          |    |    |    |    |    |    |    |    |                                              |    |    |      |    |    |    |    |     |                        |    |    |     |    |    |    |    |     |                           |    |    |    |    |    |    |    |    |          |    |                                   |     |

#### Part I : Table of results:

| N | Sample weight | Sb | As   | Ba | Cd | Cr | Pb | Hg | Se | Result |
|---|---------------|----|------|----|----|----|----|----|----|--------|
| 1 | 201mg         | <5 | <2.5 | <5 | <5 | <5 | <5 | <5 | <5 | P      |
| 2 | 202mg         | <5 | <2.5 | <5 | <5 | <5 | <5 | <5 | <5 | P      |
| 3 | 102mg         | <5 | <2.5 | <5 | <5 | 6  | <5 | <5 | <5 | P      |

**Lead content – US Consumer Product Safety Improvement Act of 2008 – Sec. 101**

|                      |                                                                                                                                                                                                              |                                                       |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| <b>Test Method :</b> | Digestion was done following in-house method, and total lead content was determined Inductively Coupled Plasma Spectrometer/ Atomic Absorption Spectrophotometry.                                            |                                                       |
| <b>Notes:</b>        | 1. In case of composite test, the calculated result is based on the smallest sample weight of the composite samples<br>2. Testing is conducted by audited subcontractor and results are reviewed by LNE Asia |                                                       |
| <b>Requirements:</b> | <b>Product category</b><br>For material and substrate<br>For paint and similar surface – coating materials                                                                                                   | <b>Maximum Allowable Limit</b><br>100mg/kg<br>90mg/kg |

Table of results:

| N   | Pb content Result (mg/kg) | Conclusion |
|-----|---------------------------|------------|
| 1+2 | <15                       | P          |
| 3   | <15                       | P          |

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*Report to be followed on next page*

**CPSIA Section 108 : Phthalates (US Public Law 110-314)**

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Method :</b> | With reference to CPSC-CH-C1001-09.4<br>After solvent extraction, phthalates were determined by gas chromatography and mass spectrometry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Notes:</b>        | <ol style="list-style-type: none"> <li>1. Testing laboratory : chemical laboratory</li> <li>2. All results are in % w/w</li> <li>3. "% w/w": percentage by weight</li> <li>4. "N/A": Not Applicable</li> <li>5. In case of composite test, the calculated result is based on the smallest sample weight of the composite samples</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Requirements:</b> | <p>US Congress permanently prohibited children's toys and child care articles containing concentrations of more than 0.1 percent of three phthalates (DEHP, DBP, BBP) in the Consumer Product Safety Improvement Act of 2008 (CPSIA).</p> <ul style="list-style-type: none"> <li>- Bis (2-ethylhexyl) phthalate (DEHP); CAS No 117-81-7; EC No 204-211-0</li> <li>- Di-n-butyl phthalate (DBP); CAS No 84-74-2; EC No 201-557-4</li> <li>- Benzyl butyl phthalate (BBP); CAS No 85-68-7; EC No 201-622-7</li> </ul> <p>CPSC Commission's final rule bans children's toys and child care articles containing more than 0.1 percent of five specific phthalate (DINP, DIBP, DPENP, DHEXP, DCHP) (each phthalate individually).</p> <ul style="list-style-type: none"> <li>- Di-isononyl phthalate (DINP); CAS No 28553-12-0 and 68515-48-0; EC No 249-079-5 and 271-090-9</li> <li>- Diisobutyl phthalate (DIBP) ; CAS No. 84-69-5 ; EC No 201-553-2.</li> <li>- Di-n-pentyl phthalate (DPENP), CAS No. 131-18-0 ; EC No 205-017-9</li> <li>- Di-n-hexyl phthalate (DHEXP), CAS No. 84-75-3 ; EC No 201-559-5</li> <li>- Dicyclohexyl phthalate (DCHP), CAS No. 84-61-7 ; EC No 201-545-9</li> </ul> |

Table of results:

| N   | DEHP<br>(%w/w) | DBP<br>(%w/w) | BBP<br>(%w/w) | DINP<br>(%w/w) | DIBP<br>(%w/w) | DPENP<br>(%w/w) | DHEXP<br>(%w/w) | DCHP<br>(%w/w) | Conclusion |
|-----|----------------|---------------|---------------|----------------|----------------|-----------------|-----------------|----------------|------------|
| 1+2 | <0.02          | <0.02         | <0.02         | <0.02          | <0.02          | <0.02           | <0.02           | <0.02          | P          |

**End of report / Fin du rapport**

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The above conclusions apply only to the tested product(s) or material(s) specified in this report, and do not imply that LNE Asia has performed a control of the manufacture.

Les conclusions ci-dessus ne s'appliquent qu'au(x) échantillon(s) ou matériel(s) spécifiés dans ce rapport d'essai, et n'impliquent pas que le LNE Asia a réalisé un contrôle de la fabrication.