

# TEST REPORT

**APPLICANT** : Xindao B.V.  
**ADDRESS** : P.O. Box 3082, 2280 GB, Rijswijk, The Netherlands  
**SAMPLE DESCRIPTION** : Easy lock vacuum flask  
**ITEM NO.** : P433.99  
**COUNTRY OF ORIGIN** : China  
**COUNTRY OF DESTINATION** : Europe  
**SAMPLE RECEIVED DATE** : 28-Jan-2016  
**FURTHER INFORMATION DATE** : 15-Feb-2016  
**TURN AROUND TIME** : 15-Feb-2016 to 15-Feb-2016, 1 Working Day

The following test item(s) was/were performed on selected sample(s) and/or component(s) appointed by applicant.

| TEST REQUESTED  | RESULT |
|---|--------|
| PAH Limit according to German GS Specification document: AfPS GS 2014:01 PAK (PAK=PAHs) | Pass   |
| PAH Limit according to REACH Annex XVII, Entry 50                                       | Pass   |
| Total Cadmium Content   | Pass   |
| Bisphenol A   | Pass   |
| Overall Migration for Plastic   | Pass   |
| Specific Migration of Heavy Metal   | Pass   |
| Overall Migration for Silicone  | Pass   |
| Specific Release of Heavy Metals  | Pass   |

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\*\*\*\*\* FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) \*\*\*\*\*

Signed for and on behalf of  
Eurofins Product Testing Service (Shanghai) Co., Ltd



Terric Ji  
Lab Manager

*Results obtained refer only to samples, products or material received in Laboratory, as described in point related to sample description, and tested in conditions shown in present report. Eurofins Product Testing Service (Shanghai) Co., Ltd ensures that this job has been performed according to our Quality System and complying contract and legal conditions. If you happen to have any comments, please do it by sending email to [sh.info@eurofins.com](mailto:sh.info@eurofins.com) and referring to this report number. Reproduction of this document is only valid if it is done completely and under the written permission of Eurofins Product Testing Service (Shanghai) Co., Ltd.*

**SAMPLE PHOTO**



**EFSH16011667-CG-01**

\*\*\*TO BE CONTINUED\*\*\*

## **COMPONENT LIST**

| <b>Component No.</b> | <b>Component</b>             |
|----------------------|------------------------------|
| 1                    | Black PP lid                 |
| 2                    | Grey silicone rubber on lid  |
| 3                    | Silvery plastic on lid       |
| 4                    | Black coating                |
| 5                    | White coating                |
| 6                    | Red coating                  |
| 7                    | Silvery stainless steel body |

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Polycyclic Aromatic Hydrocarbons (PAHs)

Test Request: 18 Polycyclic Aromatic Hydrocarbons in polymers (PAHs) according to German GS Specification document: AfPS GS 2014:01 PAK (PAK=PAHs)

Test Method: Solvent extraction and quantification by gas chromatography-mass selective detection (GC-MS) with respect to AfPS GS 2014:01 PAK (PAK=PAHs) requirement

Requirement: AfPS GS 2014:01 PAK (PAK=PAHs) requirement: Limits for PAHs in Toys under Directive 2009/48/EC and Other products under ProdSG, see table 1 on next page(s):

| Parameter   | CAS No.        | Unit  | Result |
|---|----------------|-------|--------|
|   |                |       | 1      |
| Benzo(a)pyrene  | 50-32-8        | mg/kg | ND     |
| Benzo(e)pyrene  | 192-97-2       | mg/kg | ND     |
| Benzo(a)anthracene  | 56-55-3        | mg/kg | ND     |
| Benzo(b)fluoranthene  | 205-99-2       | mg/kg | ND     |
| Benzo(j)fluoranthene  | 205-82-3       | mg/kg | ND     |
| Benzo(k)fluoranthene  | 207-08-9       | mg/kg | ND     |
| Chrysene  | 218-01-9       | mg/kg | ND     |
| Dibenzo(a,h)anthracene  | 53-70-3        | mg/kg | ND     |
| Benzo(ghi)perylene  | 191-24-2       | mg/kg | ND     |
| Indeno(1,2,3-cd)pyrene  | 193-39-5       | mg/kg | ND     |
| Sum of Acenaphthene, Acenaphthylene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene | -              | mg/kg | 0.740  |
| Naphthalene   | 91-20-3        | mg/kg | ND     |
| Sum 18 PAHs   | -              | mg/kg | 0.740  |
| Summary to above mentioned requirement:   | For Category 1 |       | Pass   |

**Remark:**

mg/kg = milligram per kilogram

ND = not detected, less than 0.2 mg/kg

As per client's request, only the appointed materials have been tested.

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

**Table 1**

AfPS GS 2014:01 PAK (PAK=PAHs) requirement: Limits for PAHs in Toys under Directive 2009/48/EC and Other products under ProdSG.

| Parameter  | Unit  | Category 1<br>Materials indented to be put in the mouth, or materials of toys for children with foreseeable skin contact for longer than 30 seconds (long-term skin contact) | Category 2<br>Materials not covered by category 1, with foreseeable skin contact for longer than 30 seconds (long-term skin contact) or short-term repetitive contact with the human skin |                             | Category 3<br>Materials not covered by category 1 or 2 with foreseeable skin contact up to 30 seconds (short term skin contact) |                             |
|--|-------|--|---|-----------------------------|---|-----------------------------|
|  |       | -  | Toys under Directive 2009/48/EC   | Other products under ProdSG | Toys under Directive 2009/48/EC   | Other products under ProdSG |
| Benzo(a)pyrene   | mg/kg | <0.2   | <0.2  | <0.5                        | <0.5  | <1                          |
| Benzo(b)pyrene   | mg/kg | <0.2   | <0.2  | <0.5                        | <0.5  | <1                          |
| Benzo(a)anthracene   | mg/kg | <0.2   | <0.2  | <0.5                        | <0.5  | <1                          |
| Benzo(b)fluoranthene   | mg/kg | <0.2   | <0.2  | <0.5                        | <0.5  | <1                          |
| Benzo(j)fluoranthene   | mg/kg | <0.2   | <0.2  | <0.5                        | <0.5  | <1                          |
| Benzo(k)fluoranthene   | mg/kg | <0.2   | <0.2  | <0.5                        | <0.5  | <1                          |
| Chrysene   | mg/kg | <0.2   | <0.2  | <0.5                        | <0.5  | <1                          |
| Dibenzo(a,h)anthracene   | mg/kg | <0.2   | <0.2  | <0.5                        | <0.5  | <1                          |
| Benzo(ghi)perylene   | mg/kg | <0.2   | <0.2  | <0.5                        | <0.5  | <1                          |
| Indeno(1,2,3-cd)pyrene   | mg/kg | <0.2   | <0.2  | <0.5                        | <0.5  | <1                          |
| Acenaphthene, Acenaphthylene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene | mg/kg | <1<br>Sum*   | <5<br>Sum*  | <10<br>Sum*                 | <20<br>Sum*   | <50<br>Sum*                 |
| Naphthalene  | mg/kg | <1   | <2  |                             | <10   |                             |
| Sum* 18 PAHs   | mg/kg | <1   | <5  | <10                         | <20   | <50                         |

\* = Only those PAH components are taken into account, which have been specified in the material over the 0.2 mg/kg.

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Polycyclic Aromatic Hydrocarbons (PAHs)

Test Request: Polycyclic Aromatic Hydrocarbons (PAHs) content as specified in Regulation (EU) 2015/326 amending entry 50 of Annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: Solvent extraction and quantification by gas chromatography-mass selective detection (GC-MS) with respect to AfPS GS 2014:01 PAK (PAK=PAHs) requirement

| Tested Item(s)   | CAS No.  | Unit  | Limit | MDL | Result |
|--|----------|-------|-------|-----|--------|
|  |          |       |       |     | 1      |
| For rubber or plastic will direct contact with skin and mouth. |          |       |       |     |        |
| Benzo(a)anthracene   | 56-55-3  | mg/kg | 1     | 0.2 | ND     |
| Chrysene   | 218-01-9 | mg/kg | 1     | 0.2 | ND     |
| Benzo(b)fluoranthene   | 205-99-2 | mg/kg | 1     | 0.2 | ND     |
| Benzo(j)fluoranthene   | 205-82-3 |       |       |     |        |
| Benzo(k)fluoranthene   | 207-08-9 | mg/kg | 1     | 0.2 | ND     |
| Benzo(a)pyrene   | 50-32-8  | mg/kg | 1     | 0.2 | ND     |
| Dibenzo(a,h)anthracene   | 53-70-3  | mg/kg | 1     | 0.2 | ND     |
| Benzo€pyrene   | 192-97-2 | mg/kg | 1     | 0.2 | ND     |

**Remark:**

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

### Total Cadmium Content

Test Request: Total cadmium content as specified in Commission Regulation (EU) No 835/2012 amending entry 23 of Annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: EN 1122:2001 Method B, acid digestion method was used and total cadmium content was determined by ICP-OES.

| Tested Item(s)    | Unit | Limit | MDL    | Result |    |
|-------------------|------|-------|--------|--------|----|
|                   |      |       |        | 1      | 3  |
| Total Cadmium(Cd) | %    | 0.01  | 0.0005 | ND     | ND |

| Tested Item(s)    | Unit | Limit | MDL    | Result  |  |
|-------------------|------|-------|--------|---------|--|
|                   |      |       |        | 4+5+6   |  |
| Total Cadmium(Cd) | %    | 0.1   | 0.0005 | 0.00307 |  |

**Remark:**

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Bisphenol A

Test Method: With reference to EPA 3550C:2007, EPA 8270D:2007, extraction by organic solvent, analysis with LC-MS.

Limit: According to client's requirement

| Tested Item(s) | CAS No. | Unit  | Limit | MDL | Result |
|----------------|---------|-------|-------|-----|--------|
|                |         |       |       |     | 1      |
| Bisphenol A    | 80-05-7 | mg/kg | 1     | 1   | ND     |

#### **Remark:**

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

### Overall Migration

Test Requested : To determine the Overall Migration for compliance with Commission Regulation (EU) No 10/2011 and its amendments relating to plastic materials and articles intended to come into contact with foodstuffs.

Test Method : By reference to EU 10/2011 for selection of test condition;  
With reference to EN1186-1:2002 for selection of test methods;  
or EN1186-3:2002 aqueous food simulants by total immersion method;  
or EN1186-9:2002 aqueous food simulants by article filling method;  
or EN1186-2:2002 olive oil by total immersion method;  
or EN1186-8:2002 olive oil by article filling method;  
or EN 1186-14:2002 substitute test

| Simulant Used                         | Time | Temperature | Max. Permissible Limit (mg/kg) | Test Result (mg/kg) |
|---------------------------------------|------|-------------|--------------------------------|---------------------|
|                                       |      |             |                                | 1                   |
| 3% Acetic Acid (W/V) Aqueous Solution | 4hrs | 100°C       | 60                             | <20                 |
| 50% Ethanol (V/V) Aqueous Solution    | 4hrs | 100°C       | 60                             | <20                 |

#### **Note:**

- (1) mg/kg = milligram per kilogram
- (2) Analytical tolerance of aqueous simulants is 6 mg/kg
- (3) Analytical tolerance of fatty food simulants is 20 mg/kg
- (4) Test condition & simulant were specified by client

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Specific Migration of Heavy Metal

Test Requested : To determine the Specific Migration of Heavy Metal for compliance with Commission Regulation (EU) No 10/2011 and its amendments on plastic materials and articles intended to come into contact with food.

Test Method : With reference to Regulation (EU) 10/2011 for selection of test condition and EN 13130-1:2004 for test preparation method; analysis was performed by ICP-OES.

Simulant used: 3% Acetic Acid (W/V) Aqueous Solution

Test condition: 100°C 4hours

| Test Item(s) | Max. Permissible limit | Unit  | MDL  | Test Result |
|--------------|------------------------|-------|------|-------------|
|              |                        |       |      | 1           |
| Barium       | 1                      | mg/kg | 0.25 | ND          |
| Cobalt       | 0.05                   | mg/kg | 0.05 | ND          |
| Copper       | 5                      | mg/kg | 0.25 | ND          |
| Iron         | 48                     | mg/kg | 0.25 | ND          |
| Lithium      | 0.6                    | mg/kg | 0.5  | ND          |
| Manganese    | 0.6                    | mg/kg | 0.05 | ND          |
| Zinc         | 25                     | mg/kg | 0.5  | ND          |

**Note:**

- (1) mg/kg = milligram per kilogram
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected(<MDL)
- (4) Test condition & simulant were specified by client.

### Overall Migration

Test Requested : In accordance with Council of Europe Resolution AP (2004) 5.

Test Method : With reference to EN 1186-1:2002 for selection of conditions and test methods;  
or EN 1186-3:2002 aqueous food simulants by total immersion method;  
or EN 1186-9:2002 aqueous food simulants by article filling method;  
or EN 1186-2:2002 olive oil by total immersion method;  
or EN 1186-8:2002 olive oil by article filling method;  
or EN 1186-14:2002 substitute test.

| Simulant Used                         | Time | Temperature | Max. Permissible Limit (mg/kg) | Test Result (mg/kg) |
|---------------------------------------|------|-------------|--------------------------------|---------------------|
|                                       |      |             |                                | 2                   |
| 3% Acetic Acid (W/V) Aqueous Solution | 4hrs | 100°C       | 60                             | <20                 |
| 50% Ethanol (V/V) Aqueous Solution    | 4hrs | 100°C       | 60                             | <20                 |

**Note:**

- (1) mg/kg = milligram per kilogram
- (2) Analytical tolerance of aqueous simulants is 6 mg/kg
- (3) Analytical tolerance of fatty food simulants is 20 mg/kg
- (4) Test condition & simulant were specified by client

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Specific Release of Heavy Metals

Test Requested : In accordance with CM/Res (2013)9 on metals and alloys used in food contact materials and articles.

Test Method : Samples were prepared at specific condition, analysed by using ICP-OES/ICP-MS.

Simulant used: 0.5% citric acid

Test condition: 100°C 4hours

| Test Item(s)           | Unit  | MDL     | Result                                      |                     |                           |                   |
|------------------------|-------|---------|---|---------------------|---------------------------|-------------------|
|                        |       |         | 7   |                     |                           |                   |
|                        |       |         | 1 <sup>st</sup> + 2 <sup>nd</sup> Migration |                     | 3 <sup>rd</sup> Migration |                   |
|                        |       |         | Result                                      | 7xSRL <sup>*2</sup> | Result                    | SRL <sup>*1</sup> |
| Aluminum (Al)          | mg/kg | 0.5     | ND  | 35                  | ND                        | 5                 |
| Antimony (Sb)          | mg/kg | 0.01    | ND  | 0.28                | ND                        | 0.04              |
| Chromium (Cr)          | mg/kg | 0.05    | ND  | 1.75                | ND                        | 0.25              |
| Cobalt (Co)            | mg/kg | 0.005   | ND  | 0.14                | ND                        | 0.02              |
| Copper (Cu)            | mg/kg | 0.5     | ND  | 28                  | ND                        | 4                 |
| Iron (Fe)              | mg/kg | 5       | ND  | 280                 | ND                        | 40                |
| Manganese (Mn)         | mg/kg | 0.2     | ND  | 12.6                | ND                        | 1.8               |
| Molybdenum (Mo)        | mg/kg | 0.01    | ND  | 0.84                | ND                        | 0.12              |
| Nickel (Ni)            | mg/kg | 0.01    | ND  | 0.98                | ND                        | 0.14              |
| Silver (Ag)            | mg/kg | 0.01    | ND  | 0.56                | ND                        | 0.08              |
| Tin <sup>*3</sup> (Sn) | mg/kg | 5       | ND  | 700                 | ND                        | 100               |
| Vanadium (V)           | mg/kg | 0.001   | ND  | 0.07                | ND                        | 0.01              |
| Zinc (Zn)              | mg/kg | 0.5     | ND  | 35                  | ND                        | 5                 |
| Arsenic (As)           | mg/kg | 0.0005  | ND  | 0.014               | ND                        | 0.002             |
| Barium (Ba)            | mg/kg | 0.1     | ND  | 8.4                 | ND                        | 1.2               |
| Beryllium (Be)         | mg/kg | 0.001   | ND  | 0.07                | ND                        | 0.01              |
| Cadmium (Cd)           | mg/kg | 0.001   | ND  | 0.035               | ND                        | 0.005             |
| Lead (Pb)              | mg/kg | 0.001   | ND  | 0.07                | ND                        | 0.01              |
| Lithium (Li)           | mg/kg | 0.005   | ND  | 0.336               | ND                        | 0.048             |
| Mercury (Hg)           | mg/kg | 0.0005  | ND  | 0.021               | ND                        | 0.003             |
| Thallium (Tl)          | mg/kg | 0.00005 | ND  | 0.0007              | ND                        | 0.0001            |

#### Note:

- (1) mg/kg =milligram per kilogram
- (2) MDL = method detection limit
- (3) ND = not detected (<MDL)
- (4) SRL = Specific Release Limit
- (5) \*1 Compliance is established on the result from the third migration test for repeated used articles.
- (6) \*2 Meantime, the sum of the results of the first and second tests should not exceed 7 times the SRL
- (7) \*3 Except in field of application under Regulation (EC) No.1881/2006.(canned food container)
- (8) Test condition & simulant were specified by client.

\*\*\*END OF THE REPORT\*\*\*