

TEST REPORT

APPLICANT : Xindao B.V.

ADDRESS : P.O. Box 3082, 2280 GB, Rijswijk, The Netherlands

SAMPLE DESCRIPTION : Vacuum insulated leak proof standard mouth bottle

ITEM NO. : P436.66

COUNTRY OF ORIGIN : China

COUNTRY OF DESTINATION : Europe

SAMPLE RECEIVED DATE : 30-May-2018

TURN AROUND TIME : 30-May-2018 to 21-Jun-2018

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

TEST REQUESTED	RESULT
Bisphenol A (BPA) Content	Pass
Total Lead Content	Pass
Polycyclic Aromatic Hydrocarbons (PAHs) / German GS Specification document: AfPS GS 2014:01 PAK (PAK=PAHs)	Pass
Polycyclic Aromatic Hydrocarbons (PAHs) / REACH Annex XVII, Entry 50	Pass
Overall Migration	Pass
Specific Migration of Heavy Metal	Pass
Specific Release of Heavy Metals	Pass

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 info.sh@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., If you happen to have any complaints, please do it by sending email to chinacomplaint@eurofins.com and referring to this report number. Ltd.

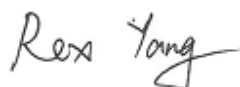
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***** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) *****

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



Rex Yang
Assistant Chemical Lab Manager

SAMPLE PHOTO



EFSH18052972-CG-01

TO BE CONTINUED

COMPONENT LIST

Component No.	Component	Sample No.
1	Black coating on metal	C
2	White coating on metal	A
3	Red coating on metal	D
4	Blue coating on metal	B
5	Black plastic	A B C D
6	Transparent soft plastic gasket (cover)	A B C D
7	Silver metal inner	A B C D

TO BE CONTINUED

TEST RESULT

Bisphenol A (BPA) Content

Test Requested : In accordance with French Law No. 2012/1442, and French recommendation DGCCRF
Organic materials from synthetic materials intended for food contact - 10/10/2016.

Test Method: Extraction with organic solvent, analysis by GC-MS and LC-MS

Tested Item(s)	Unit	Limit	MDL	Result
				5
Bisphenol A (BPA) content	mg/kg	0.1	0.1	ND

Remark:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

TO BE CONTINUED

TEST RESULT

Total Lead Content

Test Request: Total lead content as specified in entry 63 of annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 2015/628.

Test Method: EPA 3050B:1996, EPA 3051A:2007, EPA 3052:1996
Acid digestion/ microwave digestion method was used and total lead content was determined by ICP-OES.

Tested Item(s)	Unit	Limit	MDL	Result	
				1+2	3+4
Total Lead(Pb)	%	0.05	0.001	ND	ND

Remark:

MDL = method detection limit

ND = Not detected, less than MDL

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

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
			5
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	0.502
Naphthalene	91-20-3	mg/kg	ND
Sum 18 PAHs	-	mg/kg	0.502
Conclusion:	For Category 2 (Other products under ProdSG)		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 Materials indented to be put in the mouth, or materials of toys intended long term skin contact (longer than 30s)	Category 2 Materials not covered by category 1, with foreseeable skin contact for longer than 30 seconds (long-term skin contact) or repeated short-term skin contact		Category 3 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(e)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 Sum*	<5 Sum*	<10 Sum*	<20 Sum*	<50 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
					5
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	mg/kg	1	0.2	ND
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(e)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.

TO BE CONTINUED

TEST RESULT

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 EN 1186-1:2002 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	Result
				5
3% Acetic Acid (W/V) Aqueous Solution	2hrs	70°C	10 mg/dm ²	4.8 mg/dm ²
50% Ethanol (V/V) Aqueous Solution	2hrs	70°C	10 mg/dm ²	<3.0 mg/dm ²

Simulant used	Time	Temperature	Max. Permissible Limit	Result
				6
3% Acetic Acid (W/V) Aqueous Solution	2hrs	70°C	10 mg/dm ²	5 mg/dm ²
50% Ethanol (V/V) Aqueous Solution	2hrs	70°C	10 mg/dm ²	<3.0 mg/dm ²

Note :

- (1) mg/dm²=milligram per square decimeter
- (2) mg/kg = milligram per kilogram
- (3) °C=degree Celsius
- (4) <= less than
- (5) Analytical tolerance of aqueous simulants is 1 mg/dm² or 6mg/kg
- (6) Analytical tolerance of fatty food simulants is 3 mg/dm² or 20mg/kg
- (7) 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: 70 °C 2 hours

Tested Item(s)	Unit	Limit	MDL	Result
				5
Aluminium	mg/kg	1	0.1	ND
Barium	mg/kg	1	0.25	ND
Cobalt	mg/kg	0.05	0.05	ND
Copper	mg/kg	5	0.25	ND
Iron	mg/kg	48	0.25	ND
Lithium	mg/kg	0.6	0.5	ND
Manganese	mg/kg	0.6	0.05	ND
Zinc	mg/kg	5	0.5	ND
Nickel	mg/kg	*0.02	0.01	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.
- (5) "*", Requirement for migration of Nickel is 0.02mg/kg for (EU) 2017/752.

TO BE CONTINUED

TEST RESULT

Specific Release of Heavy Metals

Test : In accordance with CM/Res (2013)9 on metals and alloys used in food contact
 Requested : 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: 70°C 2hours

Test Item(s)	Unit	MDL	Result			
			7			
			1 st + 2 nd Migration		3 rd Migration	
			Result	7xSRL ^{*2}	Result	SRL ^{*1}
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 ^{*3} (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