

TEST REPORT

APPLICANT : Xindao B.V.
ADDRESS : P.O. Box 3082, 2280 GB, Rijswijk, The Netherlands
SAMPLE DESCRIPTION : Bopp Sport bottle
ITEM NO. : P436.03
COUNTRY OF ORIGIN : China
COUNTRY OF DESTINATION : Europe
SAMPLE RECEIVED DATE : 08-Dec-2015
SAMPLE RESUBMISSION DATE : 26-Jan-2016
TURN AROUND TIME : 26-Jan-2016 to 29-Jan-2016, 4 working days

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	See Test Result
Overall Migration for Plastic	Pass
Specific Migration of Heavy Metal	Pass
Overall Migration for TPR	Pass
Overall Migration for Silicone	Pass

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

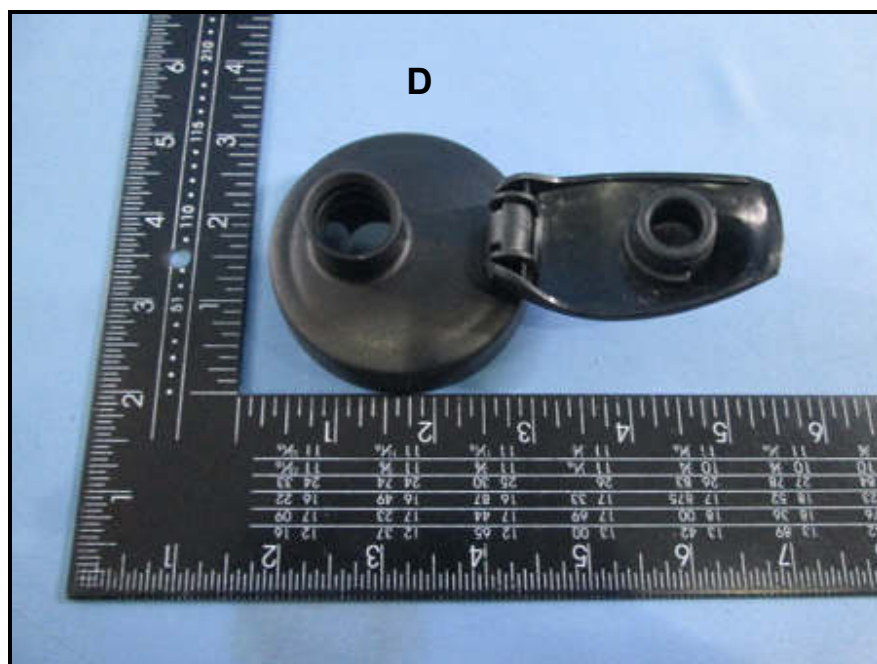
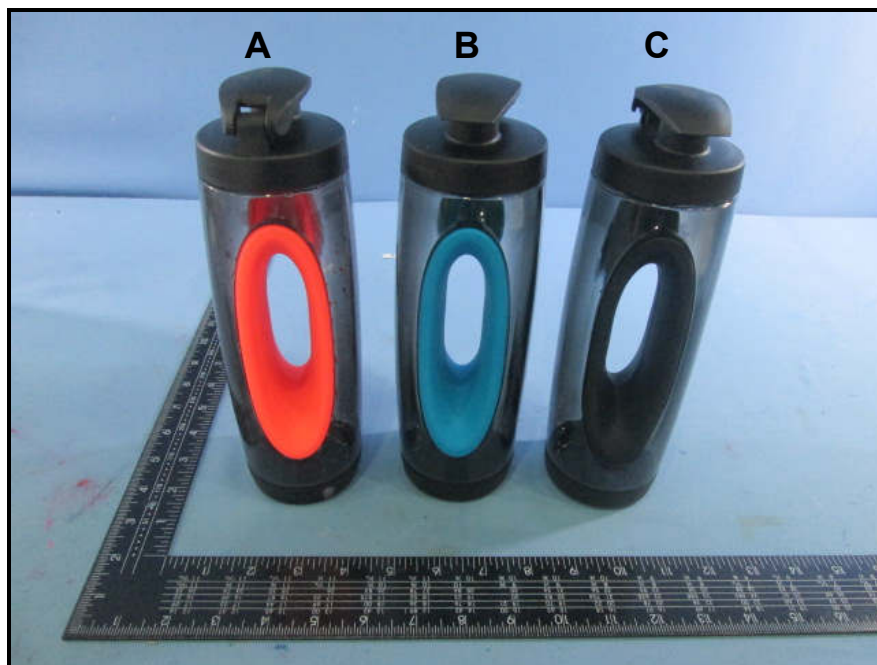
Signed for and on behalf of
Eurofins Product Testing Service (Shanghai) Co., Ltd



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 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(S)



EFSH15120369-CG-01

TO BE CONTINUED

COMPONENT LIST

Component No.	Component	Related Sample(s)
1	Grey tritan body	A, B, C
2	Black PP lid	A, B, C
3	Black TPR stopper	A, B, C
4	Transparent silicone rubber	A, B, C
5	Orange rubber on body	A
6	Black rubber on body	C
7	Blue rubber on body	B
8	Black TPR stopper	D

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 [#]	2	8 [#]
Benzo(a)pyrene	50-32-8	mg/kg	ND	ND	ND
Benzo(e)pyrene	192-97-2	mg/kg	ND	ND	ND
Benzo(a)anthracene	56-55-3	mg/kg	ND	ND	ND
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	ND	ND
Benzo(j)fluoranthene	205-82-3	mg/kg	ND	ND	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	ND	ND
Chrysene	218-01-9	mg/kg	ND	ND	ND
Dibenzo(a,h)anthracene	53-70-3	mg/kg	ND	ND	ND
Benzo(ghi)perylene	191-24-2	mg/kg	ND	ND	ND
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	ND	ND
Sum of Acenaphthene, Acenaphthylene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene	-	mg/kg	ND	0.464	0.716
Naphthalene	91-20-3	mg/kg	0.739	ND	ND
Sum 18 PAHs	-	mg/kg	0.739	0.464	0.716
Summary to above mentioned requirement:	For Category 1		Pass	Pass	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.

[#] Indicate retest result

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 for children with foreseeable skin contact for longer than 30 seconds (long-term skin contact)	Category 2 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 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		
					1 [#]	2	8 [#]
For rubber or plastic will direct contact with skin and mouth.							
Benzo(a)anthracene	56-55-3	mg/kg	1	0.2	ND	ND	ND
Chrysene	218-01-9	mg/kg	1	0.2	ND	ND	ND
Benzo(b)fluoranthene Benzo(j)fluoranthene	205-99-2 205-82-3	mg/kg	1	0.2	ND	ND	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	1	0.2	ND	ND	ND
Benzo(a)pyrene	50-32-8	mg/kg	1	0.2	ND	ND	ND
Dibenzo(a,h)anthracene	53-70-3	mg/kg	1	0.2	ND	ND	ND
Benzo(e)pyrene	192-97-2	mg/kg	1	0.2	ND	ND	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.

[#] Indicate retest result

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	2	3	4	5+6+7
Total Cadmium(Cd)	%	0.01	0.0005	ND	ND	ND	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

Bisphenol A

Test Request: Bisphenol A content as per client's request.

Test Method: Extraction with organic solvent, analysis was performed by GC-MS and LC/MS.

Tested Item(s)	CAS No.	Unit	MDL	Result	
				1	2
Bisphenol A	80-05-7	mg/kg	0.1	ND	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	2
3% Acetic Acid (W/V) Aqueous Solution	2hrs	70°C	60	<20	<20
50% Ethanol (V/V) Aqueous Solution	2hrs	70°C	60	<20	<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: 70°C 2hours

Test Item(s)	Max. Permissible limit	Unit	MDL	Test Result	
				1	2
Barium	1	mg/kg	0.25	ND	ND
Cobalt	0.05	mg/kg	0.05	ND	ND
Copper	5	mg/kg	0.25	ND	ND
Iron	48	mg/kg	0.25	ND	ND
Lithium	0.6	mg/kg	0.5	ND	ND
Manganese	0.6	mg/kg	0.05	ND	ND
Zinc	25	mg/kg	0.5	ND	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) 4 and 93/11/EEC.

Test Method : With reference to EN1186-1:2002 for selection of conditions and 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 EN1186-14:2002 substitute test

Simulant Used	Time	Temperature	Max. Permissible Limit (mg/kg)	Test Result (mg/kg)
				3
3% Acetic Acid (W/V) Aqueous Solution	2hrs	70°C	60	<20
50% Ethanol (V/V) Aqueous Solution	2hrs	70°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

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)
				4
3% Acetic Acid (W/V) Aqueous Solution	2hrs	70°C	60	<20
50% Ethanol (V/V) Aqueous Solution	2hrs	70°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

END OF THE REPORT