



**BUREAU  
VERITAS**

# TEST REPORT

Technical Report : (6616)272-0202  
DATE : September 28, 2016  
PAGE : 1 OF 12

**APPLICANT:**

[REDACTED]

Date of Submission: August 31, 2016  
Test Period: August 31, 2016 to September 6, 2016

Sample Description: Sample(s) received is/are stated to be:

Test Item(s): A) vacuum bottle  
Details see page 3

Color: / Model No./ Style No(s): /  
Age Grade: / PO No.: /  
Vendor: / Supplier Reference: /  
Manufacturer: / Country of Origin: /  
End Buyer: / Country of Destination: /

### SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION
Sensory Test (Odour and Taste) for Materials in Contact with Foodstuffs – EC No. 1935/2004 and § 30 and 31 LFGB	PASS
Overall Migration Test for Plastic Materials in Contact with Foodstuffs – Commission Regulation (EU) No. 10/2011 and Its Amendments	PASS
Overall Migration Test for Silicon in Contact with Foodstuffs – Council of Europe, Resolution ResAP(2004)5	PASS
Specific Migration of Heavy Metals for Plastic Materials in Contact with Foodstuffs – Commission Regulation (EU) No. 10/2011 and Its Amendments	PASS
Specific Migration of Heavy Metals for Plastic Materials in Contact with Foodstuffs – Draft Amendment of Commission Regulation (EU) No 10/2011	PASS
Extractable Matter Content for Silicon in Contact with Foodstuffs – § 30 and 31 LFGB and BfR Recommendation	PASS
Migration of Heavy Metals Contents for Metal in Contact with Foodstuffs	PASS

- Note:
- 1) The tested part of the sample was specified by client.
  - 2) The test requested was specified by client.
  - 3) The test conclusion was given based on the results of tested part.
  - 4) The below results are transferred from (6616)244-0567 dated September 6, 2016.

**REMARK**

If there are questions or concerns on this report, please contact the following persons:

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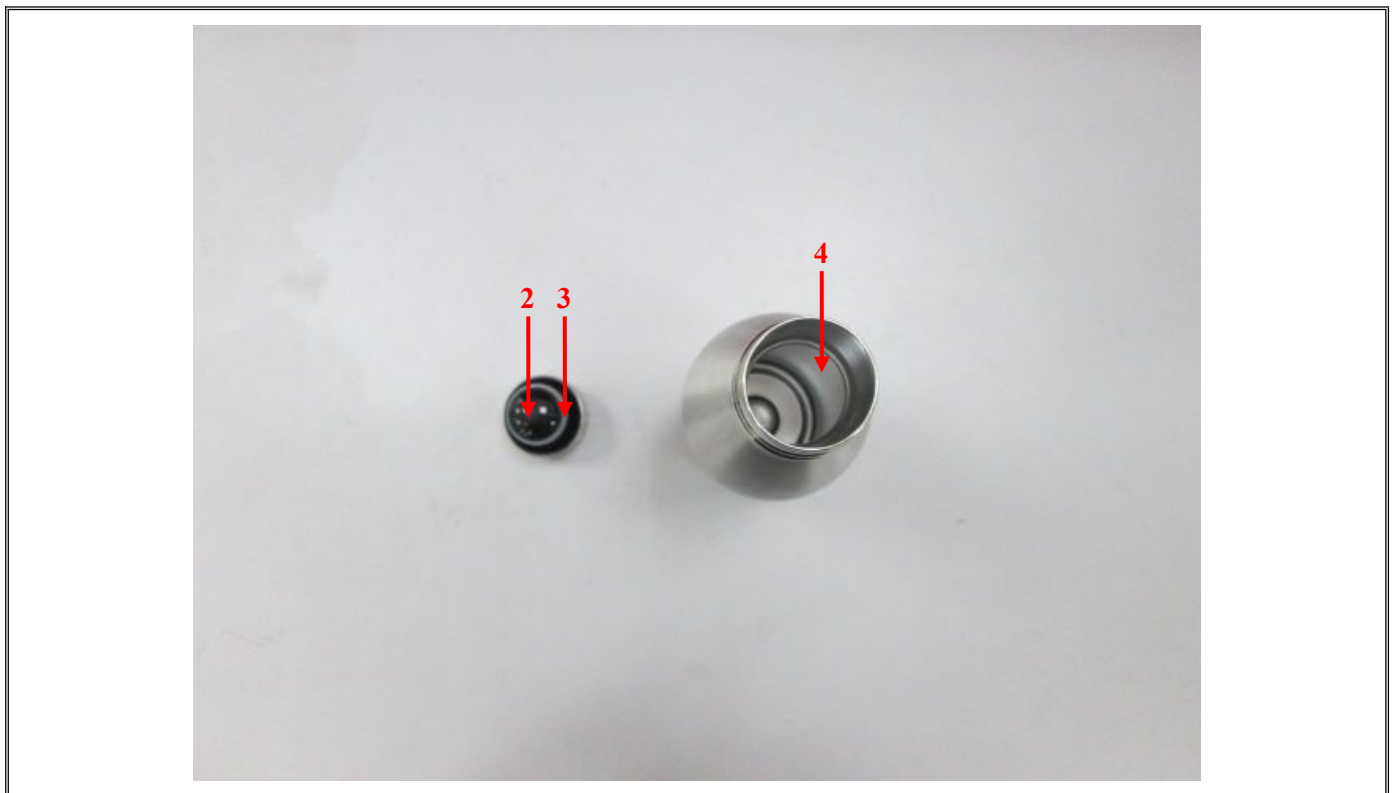
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RW/2016

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Photo of the Submitted Sample





### TEST RESULT

#### Sample Description Assigned by Laboratory:

Test Item	Description	Client Claimed Material
1	Complete product	-
2	Black plastic lid	PP
3	Translucent soft plastic sealing	Silicone
4	Silvery metal inner body	-

#### I. Sensory Test (Odour and Taste) for Materials in Contact with Foodstuffs – EC No. 1935/2004 and § 30 and 31 LFGB

Parameter	Result	Maximum Allowable Limit
	1	
Odour transfer into foodstuff through simulant, Mineral Water	0	2.5 Scale
Taste transfer into foodstuff through simulant, Mineral Water	0	2.5 Scale
<b>Conclusion</b>	PASS	-

Note: Scale: 0 = no perceptible off-odour (or taste transfer);  
1 = off-odour (or taste transfer) just perceptible (but still difficult to define);  
2 = slight off-odour (or taste transfer);  
3 = distinct off-odour (or taste transfer);  
4 = strong off-odour (or taste transfer)

Method: DIN 10955: 2004-06

Remark: 1) The test simulant used was specified by client.  
2) Selected test was specified by client.

#### II. Overall Migration Test for Plastic Materials in Contact with Foodstuffs – Commission Regulation (EU) No. 10/2011 and Its Amendments

Test Condition: 2 h at 70 °C (Distilled Water)

Simulant Used	Unit	Result	Maximum Allowable Limit	Analytical Tolerance
		2		
Food contact surface area	dm <sup>2</sup>	1.00	-	-
Volume of stimulant used	mL	100	-	-
Distilled Water	mg/dm <sup>2</sup>	<5	10	+2
<b>Conclusion</b>	-	PASS	-	-

Note: “<” = less than  
mg/dm<sup>2</sup> = milligram per square decimeter

Method: EN 1186-1: 2002 and EN 1186-3: 2002.

Remark: 1) The migration test is carried out according to EC Regulation No. 10/2011 and the corresponding regulatory statutes.  
2) For article intended for repeated use, the migration tests are carried out three times on the same test sample and the third test result is shown in result table.  
3) The test condition and simulant used were specified by client.  
4) Selected test was specified by client.



### TEST RESULT

#### III. Overall Migration Test for Silicon in Contact with Foodstuffs – Council of Europe, Resolution ResAP(2004)5

Test Condition: 2 h at 70 °C (Distilled Water)

Simulant Used	Unit	Result	Maximum Allowable Limit	Analytical Tolerance
		3		
Food contact surface area	dm <sup>2</sup>	1.00	-	-
Volume of stimulant used	mL	100	-	-
Distilled Water	mg/dm <sup>2</sup>	<5	10	+2
<b>Conclusion</b>	-	PASS	-	-

Note: “<” = less than  
mg/dm<sup>2</sup> = milligram per square decimeter

Method: EN 1186-1: 2002 and EN 1186-3: 2002.

Remark: 1) The migration test is carried out reference to EC Regulation No. 10/2011 and the corresponding regulatory statutes.  
2) For article intended for repeated use, the migration tests are carried out three times on the same test sample and the third test result is shown in result table.  
3) The test condition and simulant used were specified by client.  
4) The test was conducted as per client’s request.

#### IV. Specific Migration of Heavy Metals for Plastic Materials in Contact with Foodstuffs – Commission Regulation (EU) No. 10/2011 and Its Amendments

Test Condition: 2 h at 100 °C (Distilled Water)

Parameter	Simulant Used	Unit	Result	Maximum Allowable Limit
			2	
Food contact surface area	-	dm <sup>2</sup>	0.60	-
Volume of stimulant used	-	mL	100	-
Barium (Ba)	Distilled Water	mg/kg	<0.1	1
Cobalt (Co)	Distilled Water	mg/kg	<0.005	0.05
Copper (Cu)	Distilled Water	mg/kg	<0.5	5
Iron (Fe)	Distilled Water	mg/kg	<5	48
Lithium (Li)	Distilled Water	mg/kg	<0.1	0.6
Manganese (Mn)	Distilled Water	mg/kg	<0.1	0.6
Zinc (Zn)	Distilled Water	mg/kg	<3	25
<b>Conclusion</b>	-	-	PASS	-

Note: “<” = less than  
mg/kg = milligram per kilogram

Method: EN 13130-1: 2004 and analysis by Inductively Coupled Argon Plasma Spectrometer (ICP).

Remark: 1) The migration test is carried out according to EC Regulation No. 10/2011 and the corresponding regulatory statutes.  
2) The test simulant used was specified by client.  
3) Selected test was specified by client.



### TEST RESULT

#### V. Specific Migration of Heavy Metals for Plastic Materials in Contact with Foodstuffs – Draft Amendment of Commission Regulation (EU) No 10/2011

Test Condition: 2 h at 100 °C (Distilled Water)

Parameter	Simulant Used	Unit	Result	Maximum Allowable Limit
			2	
Food contact surface area	-	dm <sup>2</sup>	0.60	-
Volume of simulant used	-	mL	100	-
Aluminum (Al)	Distilled Water	mg/kg	<0.1	1
Nickel (Ni)	Distilled Water	mg/kg	<0.002	0.02
Zinc (Zn)	Distilled Water	mg/kg	<3	5
<b>Conclusion</b>	-	-	PASS	-

Note: “<” = less than  
mg/kg = milligram per kilogram

Method: EN 13130-1: 2004 and analysis by Inductively Coupled Argon Plasma Spectrometer (ICP).

Remark: 1) The migration test is carried out according to EC Regulation No. 10/2011 and the corresponding regulatory statutes.  
2) The test simulant used was specified by client.  
3) Selected test was specified by client.

#### VI. Extractable Matter Content for Silicon in Contact with Foodstuffs – § 30 and 31 LFGB and BfR Recommendation

Parameter	Unit	Result	Maximum Allowable Limit
		3	
Extractable Matter	% w/w	<0.05	0.5
<b>Conclusion</b>	-	PASS	-

Note: “<” = less than  
% w/w = percent weight by weight

Method: Gravimetric method after reflux for 5 hours with water.

Remark: 1) The limit refers to BfR Recommendation XV.  
2) Selected test was specified by client.



**TEST RESULT**

**VII. Migration of Heavy Metals Contents for Metal in Contact with Foodstuffs**

Test Condition: 2 h at 100 °C (Artificial tap water)

Parameter	Unit	Result			Seven Times of Maximum Specific Release Limit(s) (SRLs) <sup>[a, b]</sup>
		4			
		1st Migrate	2nd Migrate	Sum of 1st & 2nd Migrate <sup>[b]</sup>	
Filling volume	cm <sup>3</sup>	500	500	-	-
Volume of stimulant used	mL	330	330	-	-
Aluminum (Al)	mg/kg	<0.1	<0.1	<0.1	35
Antimony (Sb)	mg/kg	<0.004	<0.004	<0.004	1.4
Chromium (Cr)	mg/kg	<0.1	<0.1	<0.1	7.0
Cobalt (Co)	mg/kg	<0.005	<0.005	<0.005	0.7
Copper (Cu)	mg/kg	<0.5	<0.5	<0.5	28
Iron (Fe)	mg/kg	<5	<5	<5	280
Magnesium (Mg)	mg/kg	<0.5	<0.5	<0.5	-
Manganese (Mn)	mg/kg	<0.1	<0.1	<0.1	12.6
Molybdenum (Mo)	mg/kg	<0.01	<0.01	<0.01	4.2
Nickel (Ni)	mg/kg	<0.02	<0.02	<0.02	4.9
Silver (Ag)	mg/kg	<0.01	<0.01	<0.01	0.56
Tin (Sn)	mg/kg	<5	<5	<5	700
Titanium (Ti)	mg/kg	<0.5	<0.5	<0.5	-
Vanadium (V)	mg/kg	<0.002	<0.002	<0.002	0.35
Zinc (Zn)	mg/kg	<1	<1	<1	35
Arsenic (As)	mg/kg	<0.001	<0.001	<0.001	0.07
Barium (Ba)	mg/kg	<0.1	<0.1	<0.1	8.4
Beryllium (Be)	mg/kg	<0.001	<0.001	<0.001	0.35
Cadmium (Cd)	mg/kg	<0.001	<0.001	<0.001	0.14
Lead (Pb)	mg/kg	<0.002	<0.002	<0.002	0.28
Lithium (Li)	mg/kg	<0.01	<0.01	<0.01	0.336
Mercury (Hg)	mg/kg	<0.0004	<0.0004	<0.0004	0.105
Thallium (Tl)	mg/kg	<0.00005	<0.00005	<0.00005	0.0035
<b>Conclusion</b>	-	-	-	PASS	-



**TEST RESULT**

Parameter	Unit	Result	Maximum Specific Release Limit(s) (SRLs) <sup>[a]</sup>
		4 3rd Migrate	
Filling volume	cm <sup>3</sup>	500	-
Volume of stimulant used	mL	330	-
Aluminum (Al)	mg/kg	<0.1	5
Antimony (Sb)	mg/kg	<0.004	0.2
Chromium (Cr)	mg/kg	<0.1	1.0
Cobalt (Co)	mg/kg	<0.005	0.1
Copper (Cu)	mg/kg	<0.5	4
Iron (Fe)	mg/kg	<5	40
Magnesium (Mg)	mg/kg	<0.5	-
Manganese (Mn)	mg/kg	<0.1	1.8
Molybdenum (Mo)	mg/kg	<0.01	0.6
Nickel (Ni)	mg/kg	<0.02	0.7
Silver (Ag)	mg/kg	<0.01	0.08
Tin (Sn)	mg/kg	<5	100
Titanium (Ti)	mg/kg	<0.5	-
Vanadium (V)	mg/kg	<0.002	0.05
Zinc (Zn)	mg/kg	<1	5
Arsenic (As)	mg/kg	<0.001	0.01
Barium (Ba)	mg/kg	<0.1	1.2
Beryllium (Be)	mg/kg	<0.001	0.05
Cadmium (Cd)	mg/kg	<0.001	0.02
Lead (Pb)	mg/kg	<0.002	0.04
Lithium (Li)	mg/kg	<0.01	0.048
Mercury (Hg)	mg/kg	<0.0004	0.015
Thallium (Tl)	mg/kg	<0.00005	0.0005
<b>Conclusion</b>	-	<b>PASS</b>	-

Note: “<” = less than  
 mg/kg = milligram per kilogra

Method: With reference to Metals and Alloys used in Food Contact Materials and articles - A Practical Guide to Manufacturers and Regulators (2013 1st Edition) published by European Directorate for the Quality of Medicines and HealthCare (EDQM), Chapter 3.

Remark: 1) <sup>[a]</sup> denotes as this (these) maximum specific release limit(s) was (were) referenced from Metals and Alloys used in Food Contact Materials and articles - A Practical Guide to Manufacturers and Regulators (2013 1st Edition) published by European Directorate for the Quality of Medicines and HealthCare (EDQM), Chapter 1, Article 4, Tables 1 and 2.  
 2) Appropriate test condition(s) was (were) selected according to Guidelines on Testing Conditions for Articles in Contact with Foodstuffs (With a Focus on Kitchenware) (2009 1st Edition) published by European Commission Joint Research Center (JRC).  
 3) Artificial tap water was prepared according to German Standard DIN 10531: 2011-06.  
 4) <sup>[b]</sup> denotes as the sum of the results of the first and second migrates should not be exceed seven times the SRL  
 5) Acceptable deviation on maximum specific release limit(s) (SRLs) of certain elements was recommended by the Consumer Health Protection Committee (CD-P-SC) of the Biological Standardisation, Network of Official Medicines Control Laboratories (OMCL) and Healthcare Department (DBO) dated on November 18, 2013 (With Document Number RZ/PH/2013-06790L SBA/mfs). See details in Comment.

Comment :

Acceptable Deviation on Maximum SRLs of Certain Elements expressed in mg/kg :												
Element(s)	Sb	Cr	Co	Mo	Ni	V	As	Be	Cd	Pb	Hg	Tl
Guided SRLs	0.04	0.250	0.02	0.12	0.14	0.01	0.002	0.01	0.005	0.010	0.003	0.0001
Recommended SRLs	0.2	1.0	0.1	0.6	0.7	0.05	0.01	0.05	0.02	0.04	0.015	0.0005

6) The test condition and simulant used were specified by client.  
 7) Selected test was specified by client.

**END**