

The following sample(s) was/were submitted and identified on behalf of the clients as : STAINLESS STEEL VACUUM FLASK WITH CERAMIC COATING

SGS Job No. :

Date of Sample Received : 22 Nov 2019
 Testing Period : 22 Nov 2019 - 02 Dec 2019
 Test Requested : Selected test(s) as requested by client.
 Test Method : Please refer to next page(s).
 Test Results : Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments, Council of Europe Resolution AP (2004) 1 and BfR recommendation – Overall migration	PASS
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31 with amendments and BfR recommendation - Sensorial examination odour and taste test	PASS
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 with amendments & DIN 51032:2017 - Leachable lead and cadmium content	PASS
ALS Opinion Number 2017/15 - Leachable Cobalt	PASS
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments, European Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments and BfR recommendation–Specific Migration of Polycyclic Aromatic Hydrocarbons (PAHs)	PASS
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31 with amendments, European Commission Regulation (EU) No 10/2011 with amendments and BfR recommendations - Specific Migration of Heavy Metal	PASS

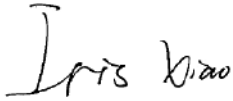


Test Report

Date: 02 Dec 2019

Page 2 of 8

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch



Iris Xiao
Approved Signatory



SGS-CSTC Standards Technical Services Co., Ltd.
Ningbo Branch Chemical Laboratory

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Test Report

Date: 02 Dec 2019

Page 3 of 8

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description	Material (claimed by the client)
SN1		Silvery metal vacuum flask with inner white ceramic coating	STAINLESS STEEL + CERAMIC COATING

Remarks :

- (1) mg/dm² = milligram per square decimeter
- (2) mg/kg = milligram per kilogram
- (3) °C= degree Celsius
- (4) < = less than
- (5) MDL = Method Detection Limit
- (6) ND = Not Detected (< MDL)

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments, Council of Europe Resolution AP (2004) 1 and BfR recommendation – Overall migration

Test Method : With reference to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III and Annex V for selection of condition and EN 1186-1:2002 for selection of test methods; EN1186-9:2002 aqueous food simulants by article filling method.

<u>Simulant Used</u>	<u>Time</u>	<u>Temperature</u>	<u>Max. Permissible Limit</u>	<u>Result of 001 Overall Migration</u>
3% Acetic Acid (W/V) Aqueous Solution	1.0hr(s)	100°C	10mg/dm ²	<3.0mg/dm ²
50% Ethanol (V/V) Aqueous Solution	1.0hr(s)	100°C	10mg/dm ²	<3.0mg/dm ²

Notes :

- (1) Analytical tolerance of aqueous simulants is 2 mg/dm².
- (2) Test condition & simulant were specified by client.

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31 with amendments and BfR recommendation - Sensorial examination odour and taste test

Test Method : With reference to DIN 10955:2004.

Test media: Deionized water;

No.of panelist: 6



Test Report

Date: 02 Dec 2019

Page 4 of 8

<u>Test Item(s)</u>	<u>Limit</u>	<u>001</u>
Test time(hr)	-	24
Temperature(°C)	-	100
Sensorial examination odour (Point scale)	2.5	0
Sensorial examination taste (Point scale)	2.5	0

Notes :

Scale evaluation:

- 0 – no perceptible difference
- 1 – just perceptible difference
- 2 – slight difference
- 3 – marked difference
- 4 – strong difference

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 with amendments & DIN 51032:2017 - Leachable lead and cadmium content

Test Method : With reference to EN 1388-1:1995, analysis was performed by ICP-OES.

Sample 001 Hollowware

	<u>Vol.of 4%Acetic acid for vessel (mL)</u>	<u>Depth (mm)</u>
1	650	215
2	650	215

	<u>Leachable Lead (mg/L)</u>	<u>Leachable Cadmium (mg/L)</u>
1	<0.1	<0.01
2	<0.1	<0.01
Limit	4.0	0.3

Notes :

- (1) Flatware: With an internal depth not exceeding 25mm, measured from the lowest point to the horizontal plane passing through the overflow point.
- (2) Hollowware: Those articles which do not fall into the category of Flatware.
- (3) Drinking rim: The drinking rim is a 20mm wide section of the external surface of a drinking vessel. The width is measured downwards from the upper edge along the wall of the vessel.



Table 1
Permissible limits for articles made from ceramics, glass and glass ceramics

Items	Flatware		Hollow-ware	
	Lead mg/dm ²	Cadmium mg/dm ²	Lead mg/l	Cadmium mg/l
Table ware and kitchen utensils made of ceramics, glass and glass ceramics	0.8 ^a	0.07 ^a	4.0 ^a	0.3 ^a
Cooking and baking equipment, packaging containers, storage containers made of ceramic, glass and glass ceramics	0.4	0.05	1.5 ^a	0.1 ^a

Note: ^a In accordance with the EU directive on ceramic objects.

Table 2
Permissible limits for drinking rim

Lead mg/article	Cadmium mg/article
2.0	0.20

ALS Opinion Number 2017/15 - Leachable Cobalt

Test Method : With reference to EN 1388-1:1995. Analysis was performed by ICP-OES.

Sample 001 Hollowware

	vol. of 4% Acetic acid (mL)	Depth (mm)
1	650	215
2	650	215

	Leachable Cobalt (mg/L)
1	<0.05
2	<0.05
Limit	0.1

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments, European Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments and BfR recommendation—Specific Migration of Polycyclic Aromatic Hydrocarbons (PAHs)

Test Method : With reference to EN 13130-1: 2004, analysis was performed by GC-MS.

Sample 001

Simulant Used : Isooctane

Test Condition : 60 °C 6 hr(s)



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Test Report

Date: 02 Dec 2019

Page 6 of 8

<u>Test Item(s)</u>	<u>Max. Permissible</u> <u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>Test result</u>
Migration times	-	-	-	1st
Area/volume	-	dm ² /kg	-	6.6
Naphthalene(NAP)	★	mg/kg	0.01	ND
Acenaphthylene(ANY)	★	mg/kg	0.01	ND
Acenaphthene(ANA)	★	mg/kg	0.01	ND
Fluorene(FLU)	★	mg/kg	0.01	ND
Phenanthrene(PHE)	★	mg/kg	0.01	ND
Anthracene(ANT)	★	mg/kg	0.01	ND
Fluoranthene(FLT)	★	mg/kg	0.01	ND
Pyrene(PYR)	★	mg/kg	0.01	ND
Benzo(a)anthracene(BaA)	★	mg/kg	0.01	ND
Chrysene(CHR)	★	mg/kg	0.01	ND
Benzo(b)fluoranthene(BbF)	★	mg/kg	0.01	ND
Benzo(k)fluoranthene(BkF)	★	mg/kg	0.01	ND
Benzo(a)pyrene(BaP)	★	mg/kg	0.01	ND
Indeno(1,2,3-c,d)pyrene(IPY)	★	mg/kg	0.01	ND
Dibenzo(a,h)anthracene(DBA)	★	mg/kg	0.01	ND
Benzo(g,h,i)perylene(BPE)	★	mg/kg	0.01	ND
Benzo(j)fluoranthene	★	mg/kg	0.01	ND
Benzo(e)pyrene	★	mg/kg	0.01	ND

Sample 001

Simulant Used : 95% Ethanol
 Test Condition : 60 °C 24.0 hr(s)

<u>Test Item(s)</u>	<u>Max. Permissible</u> <u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>Test result</u>
Migration times	-	-	-	1st
Area/volume	-	dm ² /kg	-	6.6
Naphthalene(NAP)	★	mg/kg	0.01	ND
Acenaphthylene(ANY)	★	mg/kg	0.01	ND
Acenaphthene(ANA)	★	mg/kg	0.01	ND
Fluorene(FLU)	★	mg/kg	0.01	ND
Phenanthrene(PHE)	★	mg/kg	0.01	ND
Anthracene(ANT)	★	mg/kg	0.01	ND
Fluoranthene(FLT)	★	mg/kg	0.01	ND
Pyrene(PYR)	★	mg/kg	0.01	ND



Test Report

Date: 02 Dec 2019

Page 7 of 8

Benzo(a)anthracene(BaA)	★	mg/kg	0.01	ND
Chrysene(CHR)	★	mg/kg	0.01	ND
Benzo(b)fluoranthene(BbF)	★	mg/kg	0.01	ND
Benzo(k)fluoranthene(BkF)	★	mg/kg	0.01	ND
Benzo(a)pyrene(BaP)	★	mg/kg	0.01	ND
Indeno(1,2,3-c,d)pyrene(IPY)	★	mg/kg	0.01	ND
Dibenzo(a,h)anthracene(DBA)	★	mg/kg	0.01	ND
Benzo(g,h,i)perylene(BPE)	★	mg/kg	0.01	ND
Benzo(j)fluoranthene	★	mg/kg	0.01	ND
Benzo(e)pyrene	★	mg/kg	0.01	ND

Notes :

- (1) Test condition & simulant were specified by client.

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31 with amendments, European Commission Regulation (EU) No 10/2011 with amendments and BfR recommendations - Specific Migration of Heavy Metal

Test Method : With reference to EN13130-1:2004, analysis was performed by ICP-OES.

Sample 001

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

Test Condition : 100 °C 24.0 hr(s)

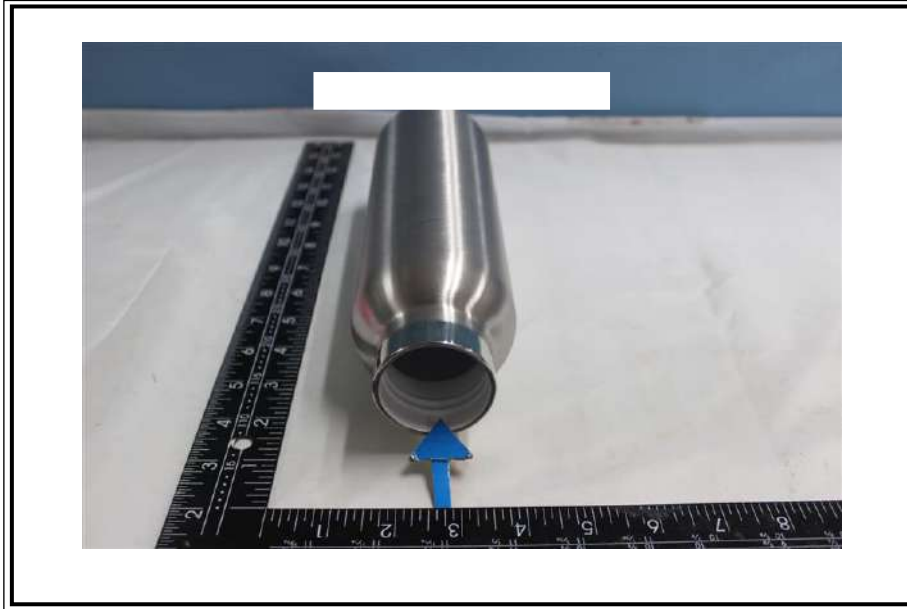
<u>Test Item(s)</u>	<u>Max. Permissible Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>Test result</u>
Migration times	-	-	-	3rd
Area/volume	-	dm ² /kg	-	7.8
Aluminium (Al)	1	mg/kg	0.1	ND
Barium (Ba)	1	mg/kg	0.25	ND
Cobalt (Co)	0.05	mg/kg	0.01	ND
Copper (Cu)	5	mg/kg	0.25	ND
Iron(Fe)	48	mg/kg	0.25	ND
Lithium (Li)	0.6	mg/kg	0.5	ND
Manganese(Mn)	0.6	mg/kg	0.25	ND
Zinc(Zn)	5	mg/kg	0.5	ND
Nickel (Ni)	0.02	mg/kg	0.02	ND

Notes :

- (1) Test condition & simulant were specified by client.



Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

