



Test Report

No. NGBEC2001593405

Date: 30 Dec 1899

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JIN HUA DA RONG PAINT CO.,LTD

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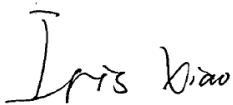
The following sample(s) was/were submitted and identified on behalf of the clients as : CERAMIC COATED

SGS Job No. :	NP20-001485 - NB
Model No. :	DT30C
Date of Sample Received :	27 Apr 2020
Testing Period :	27 Apr 2020 - 15 May 2020
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 and 31 with amendments, BfR recommendation and Council of Europe Resolution AP (2004) 1-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
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, BfR recommendation-Specific migration of chromium (III) and chromium (VI)	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, BfR recommendation-Specific migration of polynuclear 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, BfR recommendation-Specific migration of heavy metal	PASS
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31 with amendments, Council of Europe Resolution CM/Res(2013)9 and BfR recommendation-Specific Migration of Heavy Metal	PASS

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



Iris Xiao
 Approved Signatory

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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description	Material (claimed by the client)
SN1	NGB20-015934.001	Metal with white coating	aluminum+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 and 31 with amendments, BfR recommendation and Council of Europe Resolution AP (2004) 1-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; EN 1186-14:2002 substitute test.

<u>Simulant Used</u>	<u>Time</u>	<u>Temperature</u>	<u>Max. Permissible Limit</u>	<u>Result of 001 Overall Migration</u>
Deionized Water	4.0hr(s)	100°C	10mg/dm ²	<3.0mg/dm ²
3% Acetic Acid (W/V) Aqueous Solution	4.0hr(s)	100°C	10mg/dm ²	<3.0mg/dm ²
50% Ethanol (V/V) Aqueous Solution	4.0hr(s)	100°C	10mg/dm ²	<3.0mg/dm ²
95% Ethanol (V/V) Aqueous Solution (Rectified Olive Oil Substitute)	6.0hr(s)	60°C	10mg/dm ²	<3.0mg/dm ²
Isooctane (Rectified Olive Oil Substitute)	4.0hr(s)	60°C	10mg/dm ²	<3.0mg/dm ²

Notes :

- (1) Analytical tolerance of aqueous simulants is 2 mg/dm².
- (2) Analytical tolerance of fatty food simulants is 3 mg/dm².
- (3) Test condition & simulant were specified by client.

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(4) Report the third migration result.

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: Distilled water
 No. of panelist: 6

<u>Test Item(s)</u>	<u>Limit</u>	<u>001</u>
Test time(hr)	-	4
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	1440	43
2	1440	43
	<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.

(4) mg/L = milligram per litre

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

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, BfR recommendation-Specific migration of chromium (III) and chromium (VI)

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 4 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	-	3.3
Specific migration of chromium (VI)	★	mg/dm ²	0.004	ND*
Specific migration of chromium (III)	0.004	mg/dm ²	0.004	ND*

Notes :

(1) ★= Absent

(2) Test condition & simulant were specified by client.

(3) * = The result of Chromium (VI) and Chromium (III) are considered as "Not Detected" since the total

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chromium content determined is "Not Detected".

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, BfR recommendation-Specific migration of polynuclear 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 4 hr(s)

<u>Test Item(s)</u>	<u>Max. Permissible Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>Test result</u>
Migration times	-	-	-	1st
Area/volume	-	dm ² /kg	-	3.3
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 6.0 hr(s)

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<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	-	3.3
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

Notes :

(1) ★= Absent

(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 , European Commission Regulation (EU) No 10/2011 with amendments, BfR recommendation-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 4.0 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	-	-	-	3rd
Area/volume	-	dm ² /kg	-	3.3

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Aluminium (Al)	1	mg/kg	0.1	0.6
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.

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31 with amendments, Council of Europe Resolution CM/Res(2013)9 and BfR recommendation-Specific Migration of Heavy Metal

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

Sample 001:

Simulant Used : Artificial tap water

Test Condition : 100 °C 4.0 hr(s)

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>1st + 2nd Migration</u>
Aluminium (Al)	35	mg/kg	0.2	ND
Antimony (Sb)	0.28	mg/kg	0.02	ND
Chromium(Cr)	1.75	mg/kg	0.1	ND
Cobalt(Co)	0.14	mg/kg	0.01	ND
Copper(Cu)	28	mg/kg	0.1	ND
Iron(Fe)	280	mg/kg	0.25	ND
Manganese(Mn)	12.6	mg/kg	0.25	ND
Molybdenum(Mo)	0.84	mg/kg	0.02	ND
Nickel(Ni)	0.98	mg/kg	0.05	ND
Silver(Ag)	0.56	mg/kg	0.03	ND
Tin(Sn)	700	mg/kg	5	ND
Vanadium(V)	0.07	mg/kg	0.005	ND
Zinc(Zn)	35	mg/kg	1	ND
Arsenic(As)	0.014	mg/kg	0.001	ND
Barium(Ba)	8.4	mg/kg	0.25	ND
Beryllium(Be)	0.07	mg/kg	0.005	ND
Cadmium(Cd)	0.035	mg/kg	0.002	ND
Lead(Pb)	0.07	mg/kg	0.005	ND

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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>1st + 2nd Migration</u>
Lithium(Li)	0.336	mg/kg	0.02	ND
Mercury(Hg)	0.021	mg/kg	0.002	ND
Thallium(Tl)	0.0007	mg/kg	0.0001	ND
<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>3rd Migration</u>
Aluminium (Al)	5	mg/kg	0.2	ND
Antimony (Sb)	0.04	mg/kg	0.02	ND
Chromium(Cr)	0.25	mg/kg	0.1	ND
Cobalt(Co)	0.02	mg/kg	0.01	ND
Copper(Cu)	4	mg/kg	0.1	ND
Iron(Fe)	40	mg/kg	0.25	ND
Manganese(Mn)	1.8	mg/kg	0.25	ND
Molybdenum(Mo)	0.12	mg/kg	0.02	ND
Nickel(Ni)	0.14	mg/kg	0.05	ND
Silver(Ag)	0.08	mg/kg	0.03	ND
Tin(Sn)	100	mg/kg	5	ND
Vanadium(V)	0.01	mg/kg	0.005	ND
Zinc(Zn)	5	mg/kg	1	ND
Arsenic(As)	0.002	mg/kg	0.001	ND
Barium(Ba)	1.2	mg/kg	0.25	ND
Beryllium(Be)	0.01	mg/kg	0.005	ND
Cadmium(Cd)	0.005	mg/kg	0.002	ND
Lead(Pb)	0.01	mg/kg	0.005	ND
Lithium(Li)	0.048	mg/kg	0.02	ND
Mercury(Hg)	0.003	mg/kg	0.002	ND
Thallium(Tl)	0.0001	mg/kg	0.0001	ND

Notes :

- (1) Test condition & simulant were specified by client.
- (2) Requirement for repeat use article: According to Council of Europe Resolution CM/Res(2013)9, the result from 3rd migration shall comply with the Specific Release Limit (SRL) and the sum of 1st and 2nd migration shall not exceed seven times of SRL for repeated use articles
- (3) The ratio of surface area to volume ratio was 4.6 dm² per 1 kg of foodstuff in contact with.
- (4) Acidic foodstuff is not considered for compliance

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***