

Test Report

Testing institute : Product Technology Service (Ningbo) Co., Ltd.
6&7F, 59#, Huayu Road,
Yinzhou District, Ningbo 315192 P.R.China

Applicant : KOOPMAN INTERNATIONAL B.V
DISTELWEG 88 AMSTERDAM, THE NETHERLANDS

Product name : Cookie cutters

Order No : 672873

Model No. : 170450200

Sample receive date : Mar.09,2018
Completes date : Mar.15,2018

Testing location : Product Technology Service (Ningbo) Co., Ltd.

Test specification(s)

1. Selected tests for the suitability for contact with foodstuffs in accordance with German § 30 and § 31 LFGB with amendments and Commission Regulation (EU) No 10/2011 with amendments, BfR Recommendation.

1.1-Sensory test

1.2-Overall migration

1.3-Specific release of heavy metals

2. Selected tests for the suitability for contact with foodstuffs in accordance with French Décret n° 2007-766, French DGCCRF Information Notice No.2004-64 and DM/4B/COM/001.

2.1-Metal content for Stainless Steel – Chromium, Tantalum, Niobium, Zirconium, Molybdenum, Titanium, Aluminum and Copper contents

2.2-Contents of undesirable elements – lead, cadmium and arsenic

Conclusion

Pass

Pass

Pass

Pass

Pass

Danyan Wang

Originator:
Danyan Wang

Haifei Ye

Report Verifier:
Haifei Ye

Cui Liang

Authorizer:
Cui Liang

Product Technology Service (Ningbo) Co., Ltd.

Ningbo, Mar.15,2018



The test results exclusively refer to the samples examined. This report shall not be reproduced except in full without written approval and does not authorize the use of Product Technology Service (Ningbo) Co., Ltd. label. The report is invalid without signature and seal of Product Technology Service (Ningbo) Co., Ltd.

Product name

No.	Product name	Part No.	Part name
1	Cookie cutters	1-1	Stainless

1.1. Test specification : Sensory test

Test method : DIN 10955:1983 (2004)
 Test condition: 40°C, 0.5 hour
 Test media: Distilled water
 No. of panelist: 6

Product name: 1-1.Stainless		
Parameter	Maximum permissible Limit	Result
Sensorial examination odour (Point scale)	2.5	0
Sensorial examination taste (Point scale)	2.5	0
Conclusion	--	Pass

Scale evaluation:

- 0: No perceptible
- 1: Just perceptible (still difficult to define)
- 2: Moderate
- 3: Moderately strong
- 4: Strong

1.2. Test specification : Overall migration

Test method : EN1186-1:2002: for selection of conditions and test methods
EN1186-3:2002: aqueous food simulants by total immersion

Requirement : COMMISSION REGULATION (EU) No 10/2011 and its amendments

Product name: 1-1. Stainless					
Simulant used	Test condition	Unit	Maximum permissible Limit*	Detection Limit	Result
3% acetic acid	0.5 hour at 40°C	mg/dm ²	10	3.0	ND
Conclusion	--				Pass

Note:

- 1) mg/dm²=milligram per square decimeter
- 2) ND=Not Detected(<Detection Limit)
- 3) Report the third migration result for repeated use articles.
- 4) *=Dutch requirement for metals

- 1.3. Test specification : Specific release of heavy metals
- Test method : Sample preparation in 0.5%(5 g/L) citric acid at 40°C for 0.5 hour, followed by analysis using ICP-OES/ICP-MS
- Requirement : Council of Europe Resolution CM/Res(2013)9 on metals and alloys used in food contact materials and articles

Product name: 1-1. Stainless						
Test Item(s)	Unit	Detection Limit	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	0.010	ND	0.28	ND	0.04
Chromium (Cr)	mg/kg	0.100	ND	1.75	ND	0.25
Cobalt (Co)	mg/kg	0.010	ND	0.14	ND	0.02
Copper (Cu)	mg/kg	0.5	ND	28	ND	4
Iron (Fe)	mg/kg	5.0	ND	280	ND	40
Magnesium(Mg)	mg/kg	0.1	ND	-	ND	-
Manganese (Mn)	mg/kg	0.50	ND	12.6	ND	1.8
Molybdenum (Mo)	mg/kg	0.050	ND	0.84	ND	0.12
Nickel (Ni)	mg/kg	0.050	ND	0.98	ND	0.14
Silver (Ag)	mg/kg	0.050	ND	0.56	ND	0.08
Tin ^{*3} (Sn)	mg/kg	5.0	ND	700	ND	100
Titanium(Ti)	mg/kg	0.1	ND	-	ND	-
Vanadium (V)	mg/kg	0.005	ND	0.07	ND	0.01
Zinc (Zn)	mg/kg	0.5	ND	35	ND	5
Arsenic (As)	mg/kg	0.0010	ND	0.014	ND	0.002
Barium (Ba)	mg/kg	0.10	ND	8.4	ND	1.2
Beryllium (Be)	mg/kg	0.005	ND	0.07	ND	0.01
Cadmium (Cd)	mg/kg	0.0010	ND	0.035	ND	0.005
Lead (Pb)	mg/kg	0.005	ND	0.07	ND	0.01
Lithium (Li)	mg/kg	0.0050	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
Conclusion	Pass					

Note:

- 1) mg/kg =milligram per kilogram
- 2) SRL = Specific Release Limit
- 3) ND=Not Detected(<Detection Limit)
- 4) *1 Compliance is established on the result from the third migration test for repeated used articles.
- 5) *2 Meantime, the sum of the results of the first and second tests should not exceed 7 times the SRL
- 6) *3 Except in field of application under Regulation (EC) No.1881/2006.(canned food container)

2.1. Test specification : Metal content for Stainless Steel – Chromium, Tantalum, Niobium, Zirconium, Molybdenum, Titanium, Aluminum and Copper contents.

Test method : Acid digestion, followed by analysis using Inductively Coupled Argon Plasma Spectrometry.

Requirement : French Décret n° 2007-766 and French DGCCRF Information Notice No.2004-64, DM/4B/COM/001

Product name: 1-1.Stainless			
Test Item	Unit	Limit (%)	Results(%)
Chromium(Cr)	%(W/W)	Not less than 13	16.49
Tantalum(Ta)	%(W/W)	Maximum 1	0.011
Niobium(Nb)	%(W/W)	Maximum 1	0.022
Zirconium(Zr)	%(W/W)	Maximum 1	<0.001
Molybdenum(Mo)	%(W/W)	Maximum 4	0.013
Titanium(Ti)	%(W/W)	Maximum 4	<0.001
Aluminum(Al)	%(W/W)	Maximum 4	<0.001
Copper(Cu)	%(W/W)	Maximum 4	<0.001
Conclusion		--	Pass

2.2. Test specification : Contents of undesirable elements – lead, cadmium and arsenic.

Test method : Acid digestion, followed by analysis using Inductively Coupled Argon Plasma Spectrometry.

Requirement : French Décret n° 2007-766 and French DGCCRF Information Notice No.2004-64, DM/4B/COM/001

Product name: 1-1. Stainless				
Test Item	Unit	Limit	Detection Limit	Result
Lead (Pb)	mg/kg	500	10.0	ND
Cadmium (Cd)	mg/kg	100	10.0	ND
Arsenic(As)	mg/kg	300	10.0	ND
Conclusion		--		Pass

Note:

- 1) mg/kg=milligram per kilogram
- 2) ND=Not Detected(<Detection Limit)

Main test instruments used for this method:

Instrument	Manufactory	Model / Type
ICP-OES	PerkinElmer	Optima 5300 DV

Sample photo(s), see annex 1

---End---

Product Technology Service

Report No.: NB2018030902

Page 6 of 6

ANNEX 1

Sample photos, consist of 1 page



Cookie cutters