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GERMANY

Report No.:	**06772-3 SHA19**
Date:	17.06.19
Order No.:	SHA-07572-19
Date of order:	16.05.19
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Test Report

Order description: **Food Contact Test for LFGB**

Article Name	NICER DICER CHEF
Colour	KIWI GREEN, WHITE
Condition of sample at delivery	no defects
Arrival date	17.05.19
Test start date	17.05.19
Test end date	14.06.19

Limit lists	
Chem.	Limit values according to legal requirements

Final conclusion: PASS

Test results and evaluation are only related to tested items and to performed methods. Detailed information regarding measurement uncertainties are available on request.

All previous versions of this report are no longer valid.

Jacky Sun
Report Reviewer

Summary

19-025067-01 - NICER DICER CHEF

Destination Country:WORLDWIDE

All test results comply with the requirements according to the scope of analysis.

Remark:
(1)The test items (Extractable component, Specific migration of 1,3-butadiene, Specific migration of Bisphenol-A) were conducted by an accredited subcontractor.
(2)* = Volatile substances (VOM) content of component 01 copies from 07486-1 SHA19 (component 01) as per client's request.

Test specification	***Test conclusion***
Food Contact Test for German Food, Commodities and Feed Code (LFGB) of September 1, 2005, Section 30&31.	PASS

Overview of Chem. testing

Sample no	Type / Style
19-025067-01	-

Component list	
No	**Components**
01	Kiwi Green ABS Frame Cover, Upper Handle Pusher, Pusher, Grinder Body (Detachable Frame)*
02	White ABS Slicer, Bottom Handle Pusher, Push Button, Frames
03	Milky White Silicone Gasket
04	Transparent PS Cleaning Grid
05	Transparent Kiwi PP Lid
06	Kiwi Green PP (T30S) Safety Holder (Sliding Holder Base)
07	Stainless Steel 420J2 Blades
08	Stainless Steel 304 Blades, Pins
09	Transparent Kiwi Green PCTG Grinder Frame
10	Transparent Glass Container
11	Whole Product
12	White PP (T30S) Safety Holder (Sliding Holder Pusher)

Customer requirements evaluation

	Components			
	Tested	**Result**	**Failed**	**Not tested**
Colour release	01, 05, 06, 09	PASS		
Extractable component	03	PASS		
Leachable heavy metals	10	PASS		
Peroxide value	01, 02, 03, 04	PASS		
Sensory test	11	PASS		
Specific migration of 1,3-butadiene	01, 02	PASS		
Specific migration of Acrylonitrile	01, 02	PASS		
Specific migration of Bisphenol-A	09	PASS		
Specific migration of Heavy metals	01, 02, 04, 05, 06, 09, 12	PASS		
Specific migration of Heavy metals(metals and alloys)	07, 08	PASS		
Specific migration of Primary aromatic amine	01, 02, 04, 05, 06, 09, 12	PASS		
Total Butadiene	01, 02	PASS		
Total chromium, vanadium, zirconium and hafnium contents (Catalyst residue)	05, 06, 12	PASS		
Total migration	01, 02, 04, 05, 06, 09, 12	PASS		
Volatile substances (VOM)	01, 02, 04	PASS		
Volatile substances in silicon (VOM)	03	PASS		

Legend: Chem.: chemical tests, Phys.: physical tests, m.s.: composite sample, n.d.: not determined, n.a.: not applicable, n.t.: not tested, i.m.: insufficient material, sum: see summary, s.c.: see component, pos: positive, neg: negative, min: minimum limit, max: maximum limit, BL: below limit, IN: inconclusive

Detailed results of Chem. testing

Sample no: 19-025067-01

Colour release

Sample type: Chem.

Norm: BfR - Empfehlung B II IX Ausgabe 07/1972

			01	05	06	09
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
staining on 3% acetic acid	PASS/FAIL	-	**pass**	**pass**	**pass**	**pass**
staining on olive oil	PASS/FAIL	-	**pass**	**pass**	**pass**	**pass**
Evaluation			**-**	**-**	**-**	**-**

Extractable component

Sample type: Chem.

Norm: § 30 and 31 of Food and Feed Code (LFGB) BfR recommendation XV

			03
Parameter	**Unit**	**Limit**	**Result**
extractable components: deionized water	%	0.5	<0.1
extractable components: 10% ethanol	%	0.5	<0.1
extractable components: 3% acetic acid	%	0.5	<0.1
Evaluation			**PASS**

Leachable heavy metals

Sample type: Chem.

Norm: EN 1388-1

			10
Parameter	**Unit**	**Limit**	**Result**
Simulant volume	L	-	**3.0**
Cadmium release	mg/l	0.1	<0.05
lead release	mg/l	1.5	<0.2
Cobalt release	mg/l	0.1	<0.05
Evaluation			**PASS**

Peroxide value

Sample type: Chem.

			01	02	03	04
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
content of peroxide		-	**absent**	**absent**	**absent**	**absent**
Evaluation			**-**	**-**	**-**	**-**

Sensory test

Sample type: Chem.

Norm: DIN 10955

			11
Parameter	**Unit**	**Limit**	**Result**
Simulation agent		-	**deionized water**
Contact temperature	°C	-	**40**
Contact time	h	-	**2**
Odour	grade	2.5	0
Taste	grade	2.5	0
Evaluation			**PASS**

Specific migration of 1,3-butadiene

Sample type: Chem.

Norm: EN 13130-1

			01	02
Parameter	**Unit**	**Limit**	**Result**	**Result**
Simulation agent		-	**3% acetic acid**	**3% acetic acid**
Contact temperature	°C	-	**40**	**40**
Contact time	h	-	**2**	**2**
Simulant volume	L	-	**1.83**	**1.83**
Contact area	dm²	-	**10.96**	**11**
specific migration 1,3-butadiene	mg/kg	0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**

Specific migration of Acrylonitrile

Sample type: Chem.

Norm: EN 13130-1

			01	02
Parameter	**Unit**	**Limit**	**Result**	**Result**
Simulation agent		-	**3% acetic acid**	**3% acetic acid**
Contact temperature	°C	-	**40**	**40**
Contact time	h	-	**2**	**2**
Contact area	dm²	-	**10.96**	**11**
Simulant volume	L	-	**1.83**	**1.83**
specific migration acrylonitrile	mg/kg	0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**

Specific migration of Bisphenol-A

Sample type: Chem.

Norm: EN 13130-1

			09
Parameter	**Unit**	**Limit**	**Result**
Simulation agent		-	**3% acetic acid**
Contact temperature	°C	-	**40**
Contact time	h	-	**2**
Contact area	dm²	-	**2.43**
Simulant volume	L	-	**0.405**
Bisphenol A	mg/kg	0.05	<0.01
Evaluation			**PASS**

Specific migration of Heavy metals

Sample type: Chem.

Norm: EN 13130-1

			01	02	04	05
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Contact temperature	°C	-	**40**	**40**	**40**	**40**
Contact time	h	-	**2**	**2**	**2**	**240**
Simulation agent		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Simulant volume	L	-	**1.83**	**1.83**	**0.295**	**2.86**
Barium (Ba)	mg/kg	1	<0.5	<0.5	<0.5	<0.5
Copper (Cu)	mg/kg	5	<5	<5	<5	<5
Cobalt (Co)	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
Iron (Fe)	mg/kg	48	<5	<5	<5	<5
Lithium (Li)	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6
Manganese (Mn)	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6
Zinc (Zn)	mg/kg	5	<5	<5	<5	<5
Aluminium (Al)	mg/kg	1	<0.5	<0.5	<0.5	<0.5
Nickel (Ni)	mg/kg	0.02	<0.01	<0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

			06	09	12
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**
Contact temperature	°C	-	**40**	**40**	**40**
Contact time	h	-	**2**	**2**	**2**
Simulation agent		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Simulant volume	L	-	**0.4**	**0.405**	**0.12**
Barium (Ba)	mg/kg	1	<0.5	<0.5	<0.5
Copper (Cu)	mg/kg	5	<5	<5	<5
Cobalt (Co)	mg/kg	0.05	<0.05	<0.05	<0.05
Iron (Fe)	mg/kg	48	<5	<5	<5
Lithium (Li)	mg/kg	0.6	<0.6	<0.6	<0.6
Manganese (Mn)	mg/kg	0.6	<0.6	<0.6	<0.6
Zinc (Zn)	mg/kg	5	<5	<5	<5
Aluminium (Al)	mg/kg	1	<0.5	<0.5	<0.5
Nickel (Ni)	mg/kg	0.02	<0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**	**PASS**

Specific migration of Heavy metals(metals and alloys)

Sample type: Chem.

Norm: EN 13130-1

07. Stainless Steel 420J2 Blades

Parameter	Condition	Unit
Simulant volume	0.6	L
Assessment of appearance 1	pass	
Simulation agent 1	0,5% citric acid	
Contact time 1	2	h
Contact temperature 1	40	°C

Parameter	SRL in mg/kg	1st Migration	2nd Migration	Mig. 1 + Mig. 2 < 7SRL	3rd Migration
Aluminum (Al)	5	<5	<5	PASS	<5
Antimony (Sb)	0.04	<0.04	<0.04	PASS	<0.04
Arsenic (As)	0.002	<0.002	<0.002	PASS	<0.002
Barium (Ba)	1.2	<1.2	<1.2	PASS	<1.2
Beryllium (Be)	0.01	<0.01	<0.01	PASS	<0.01
Cadmium (Cd)	0.005	<0.005	<0.005	PASS	<0.005
Chromium (Cr)	0.25	<0.25	<0.25	PASS	<0.25
Cobalt (Co)	0.02	<0.02	<0.02	PASS	<0.02
Copper (Cu)	4	<4	<4	PASS	<4
Iron (Fe)	40	<5	<5	PASS	<5
Lead (Pb)	0.01	<0.01	<0.01	PASS	<0.01
Lithium (Li)	0.048	<0.048	<0.048	PASS	<0.048
Manganese (Mn)	1.8	<1.8	<1.8	PASS	<1.8
Mercury (Hg)	0.003	<0.003	<0.003	PASS	<0.003
Molybdenum (Mo)	0.12	<0.12	<0.12	PASS	<0.12
Nickel (Ni)	0.14	<0.14	<0.14	PASS	<0.14
Silver (Ag)	0.08	<0.08	<0.08	PASS	<0.08
Thallium (Tl)	0.0001	<0.0001	<0.0001	PASS	<0.0001
Tin (Sn)	100	<5	<5	PASS	<5
Vanadium (V)	0.01	<0.01	<0.01	PASS	<0.01
Zinc (Zn)	5	<5	<5	PASS	<5
Evaluation					**PASS**

Key:
The evaluation of the migration of metals occurs in 2 steps:
1. The sum of the first and second migration must not exceed the seven-time limit (SRL)
2. The third migration must not exceed the limit (SRL)

08. Stainless Steel 304 Blades, Pins

Parameter	Condition	Unit
Simulant volume	0.125	L
Assessment of appearance 1	pass	
Simulation agent 1	0,5% citric acid	
Contact time 1	2	h
Contact temperature 1	40	°C

Parameter	SRL in mg/kg	1st Migration	2nd Migration	Mig. 1 + Mig. 2 < 7SRL	3rd Migration
Aluminum (Al)	5	<5	<5	PASS	<5
Antimony (Sb)	0.04	<0.04	<0.04	PASS	<0.04
Arsenic (As)	0.002	<0.002	<0.002	PASS	<0.002
Barium (Ba)	1.2	<1.2	<1.2	PASS	<1.2
Beryllium (Be)	0.01	<0.01	<0.01	PASS	<0.01
Cadmium (Cd)	0.005	<0.005	<0.005	PASS	<0.005
Chromium (Cr)	0.25	<0.25	<0.25	PASS	<0.25
Cobalt (Co)	0.02	<0.02	<0.02	PASS	<0.02
Copper (Cu)	4	<4	<4	PASS	<4
Iron (Fe)	40	<5	<5	PASS	<5
Lead (Pb)	0.01	<0.01	<0.01	PASS	<0.01
Lithium (Li)	0.048	<0.048	<0.048	PASS	<0.048
Manganese (Mn)	1.8	<1.8	<1.8	PASS	<1.8
Mercury (Hg)	0.003	<0.003	<0.003	PASS	<0.003
Molybdenum (Mo)	0.12	<0.12	<0.12	PASS	<0.12
Nickel (Ni)	0.14	<0.14	<0.14	PASS	<0.14
Silver (Ag)	0.08	<0.08	<0.08	PASS	<0.08
Thallium (Tl)	0.0001	<0.0001	<0.0001	PASS	<0.0001
Tin (Sn)	100	<5	<5	PASS	<5
Vanadium (V)	0.01	<0.01	<0.01	PASS	<0.01
Zinc (Zn)	5	<5	<5	PASS	<5
Evaluation					**PASS**

Key:
The evaluation of the migration of metals occurs in 2 steps:
1. The sum of the first and second migration must not exceed the seven-time limit (SRL)
2. The third migration must not exceed the limit (SRL)

Specific migration of Primary aromatic amine

Sample type: Chem.

Norm: EN 13130-1

			01	02	04	05
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Simulation agent		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Contact temperature	°C	-	**40**	**40**	**40**	**40**
Contact time	h	-	**2**	**2**	**2**	**240**
Simulant volume	L	-	**1.83**	**1.83**	**0.295**	**2.86**
Contact area	dm²	-	**10.96**	**11**	**1.77**	**17.2**
sum primary aromatic amines	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

			06	09	12
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**
Simulation agent		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Contact temperature	°C	-	**40**	**40**	**40**
Contact time	h	-	**2**	**2**	**2**
Simulant volume	L	-	**0.4**	**0.405**	**0.12**
Contact area	dm²	-	**2.4**	**2.43**	**0.73**
sum primary aromatic amines	mg/kg	0.01	<0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**	**PASS**

Total Butadiene

Sample type: Chem.

Norm: EN 13130-4

			01	02
Parameter	**Unit**	**Limit**	**Result**	**Result**
1,3-butadiene	mg/kg	1	<0.1	<0.1
Evaluation			**PASS**	**PASS**

Total chromium, vanadium, zirconium and hafnium contents(Catalyst residue)

Sample type: Chem.

Norm: BfR VII

			05	06	12
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**
Chromium (Cr): total content	mg/kg	10	<10	<10	<10
Vanadium (V): total content	mg/kg	20	<10	<10	<10
Zirconium (Zr): total content	mg/kg	100	<10	<10	<10
Hafnium (Hf): total content	mg/kg	100	<10	<10	<10
Evaluation			**PASS**	**PASS**	**PASS**

Total migration

Sample type: Chem.

Norm: EN 1186-1

			01	02	04	05
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Contact temperature 1	°C	-	**40**	**40**	**40**	**40**
Contact time 1	h	-	**2**	**2**	**2**	**240**
Simulation agent 1		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Simulant volume 1	L	-	**1.83**	**1.83**	**0.295**	**2.86**
Contact area 1	dm²	-	**10.96**	**11**	**1.77**	**17.2**
Total migration 1 area	mg/dm²	10	<1	<1	<1	<1
Contact temperature 2	°C	-	**40**	**40**	**40**	**40**
Contact time 2	h	-	**2**	**2**	**2**	**240**
Simulation agent 2		-	**10% ethanol**	**10% ethanol**	**10% ethanol**	**10% ethanol**
Contact area 2	dm²	-	**10.96**	**11**	**1.77**	**17.2**
Simulant volume 2	L	-	**1.83**	**1.83**	**0.295**	**2.86**
Total migration 2 area	mg/dm²	10	<1	<1	<1	<1
Contact temperature 3	°C	-	**20**	**20**	**20**	**20**
Contact time 3	h	-	**0.5**	**0.5**	**0.5**	**48**
Simulation agent 3		-	**isooctane**	**isooctane**	**isooctane**	**isooctane**
Simulant volume 3	L	-	**1.83**	**1.83**	**0.295**	**2.86**
Contact area 3	dm²	-	**10.96**	**11**	**1.77**	**17.2**
Total migration 3 area	mg/dm²	10	<1	<1	<1	<1
Contact temperature 4	°C	-	**40**	**40**	**40**	**40**
Contact time 4	h	-	**2**	**2**	**2**	**240**
Simulation agent 4		-	**95% ethanol**	**95% ethanol**	**95% ethanol**	**95% ethanol**
Simulant volume 4	L	-	**1.83**	**1.83**	**0.295**	**2.86**
Contact area 4	dm²	-	**10.96**	**11**	**1.77**	**17.2**
Total migration 4 area	mg/dm²	10	<1	<1	<1	<1
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

			06	09	12
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**
Contact temperature 1	°C	-	**40**	**40**	**40**
Contact time 1	h	-	**2**	**2**	**2**
Simulation agent 1		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Simulant volume 1	L	-	**0.4**	**0.405**	**0.12**
Contact area 1	dm²	-	**2.4**	**2.43**	**0.73**
Total migration 1 area	mg/dm²	10	<1	<1	<1
Contact temperature 2	°C	-	**40**	**40**	**40**
Contact time 2	h	-	**2**	**2**	**2**
Simulation agent 2		-	**10% ethanol**	**10% ethanol**	**10% ethanol**
Contact area 2	dm²	-	**2.4**	**2.43**	**0.73**
Simulant volume 2	L	-	**0.4**	**0.405**	**0.12**
Total migration 2 area	mg/dm²	10	<1	<1	**1.6**
Contact temperature 3	°C	-	**20**	**20**	**20**
Contact time 3	h	-	**0.5**	**0.5**	**0.5**
Simulation agent 3		-	**isooctane**	**isooctane**	**isooctane**
Simulant volume 3	L	-	**0.4**	**0.405**	**0.12**
Contact area 3	dm²	-	**2.4**	**2.43**	**0.73**
Total migration 3 area	mg/dm²	10	<1	<1	<1
Contact temperature 4	°C	-	**40**	**40**	**40**
Contact time 4	h	-	**2**	**2**	**2**
Simulation agent 4		-	**95% ethanol**	**95% ethanol**	**95% ethanol**
Simulant volume 4	L	-	**0.4**	**0.405**	**0.12**
Contact area 4	dm²	-	**2.4**	**2.43**	**0.73**
Total migration 4 area	mg/dm²	10	<1	<1	**1.4**
Evaluation			**PASS**	**PASS**	**PASS**

Volatile substances (VOM)

Sample type: Chem.

Norm: Kunststoffe im Lebensmittelverkehr BII/VI(BfR)

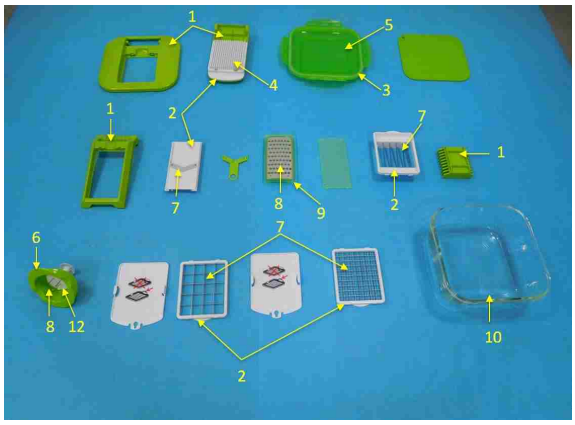
			01	02	04
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**
Volatile substances in plastic	mg/dm²	15	**13**	**13**	**8.2**
Evaluation			**PASS**	**PASS**	**PASS**

Volatile substances in silicon (VOM)

Sample type: Chem.

Norm: Kunststoffe im Lebensmittelverkehr BII/XV (BfR)

			03
Parameter	**Unit**	**Limit**	**Result**
Volatile substances in silicon	%	0.5	<0.1
Contact time	h	-	**240**
Contact temperature	°C	-	**40**
Evaluation			**PASS**


1
5
4
3
1
2
7
1
7
8
9
2
6
7
8
12
2
10

The tested item was selected by the client. Remaining test material is disposed after 3 months. The report must not be reproduced except in full content without the written approval of the testing laboratory. The report is signed digitally and password protected. For printing use the print option -document and comments-. The amount of minor components may be insufficient to perform the announced tests. In this case the test report will carry the mark: component insufficient for lab test. If testing of all components is required we need a sufficient amount of all minor components.

Extractable component

Test method: § 30 and 31 of Food and Feed Code (LFGB) BfR recommendation XV

standardized method

With reference to 61st communication on testing of plastice in Bundesgesundheitsbl 46(2003)362

Leachable heavy metals

Test method: EN 1388-1

standardized method

The test item is kept in contact with 4% acetic acid for 24 hours,

Parameter	*CAS No*	*Parameter*	*CAS No*
Cadmium release	7440-43-9	Cobalt (Co)	7440-48-4
Cobalt (Co)	7440-48-4	Contact area	
		lead release	7439-92-1
		lead release drinking seam	7439-92-1
		Simulant volume	

Peroxide value

standardized method

With reference to European pharmacopoeia,2005 Appendix XF.Peroxide Balue method A

Parameter	*CAS No*	*Parameter*	*CAS No*
content of peroxide			

Sensory test

Test method: DIN 10955

standardized method

A sensory panel test (with min. 6 test persons) is performed with the sample. The consumer product is brought in contact with a testing foodstuff which is chosen by the adviseable use of the product. The taste abnormality were detected by an triangle test. A organoleptic analysis is performed regarding the deviation of odour and taste, grade 0 (no deviation) to max. of grade 4, from at least grade 3 on the evaluation is FAIL according to § 31 LFGB.
Notes: Scale evaluation:
0: No perceptible odour
1: Odour just perceptible (still difficult to define)
2: Moderate odour
3: Moderately strong odour
4: Strong odour

Specific migration of 1,3-butadiene

Test method: EN 13130-1

standardized method

With reference to EN 13130-1:2004 with selection of stimulant and condition,followed by analysis by HS-GC/MS

Parameter	*CAS No*	*Parameter*	*CAS No*
1,3-butadiene	106-99-0		

Specific migration of Acrylonitrile

Test method: EN 13130-1

standardized method

With reference to EN 13130-1:2004 with selection of stimulant and condition,followed by analysis by HS-GC/MS

Parameter	*CAS No*	*Parameter*	*CAS No*
acrylonitrile	107-13-1		

Specific migration of Bisphenol-A

Test method: EN 13130-1

standardized method

Sample preparation with reference to BS EN 13130-1:2004 with selection of simulants and condition. analysis by LC-MS-MS.

Specific migration of Heavy metals

Test method: EN 13130-1

standardized method

With reference to EN 13130-1,analysis was performed by ICP-OES.

Parameter	*CAS No*	*Parameter*	*CAS No*
Aluminium (Al)	7429-90-5	Lithium (Li)	7439-93-2
Barium (Ba)	7440-39-3	Manganese (Mn)	7439-96-5
Cobalt (Co)	7440-48-4	Nickel (Ni)	7440-02-0
Copper (Cu)	7440-50-8	Zinc (Zn)	7440-66-6
Iron (Fe)	7439-89-6		

Specific migration of Heavy metals(metals and alloys)

Test method: EN 13130-1

standardized method

With reference to EN 13130-1,analysis was performed by ICP-MS.

Parameter	*CAS No*	*Parameter*	*CAS No*
Aluminum (Al)	7429-90-5	Iron (Fe)	7439-89-6
Antimony (Sb)	7440-36-0	Lead (Pb)	7439-92-1
Arsenic (As)	7440-38-2	Lithium (Li)	7439-93-2
Barium (Ba)	7440-39-3	Manganese (Mn)	7439-96-5
Beryllium (Be)	7440-41-7	Mercury (Hg)	7439-97-6
Cadmium (Cd)	7440-43-9	Molybdenum (Mo)	7439-98-7
Chromium (Cr)	7440-47-3	Nickel (Ni)	7440-02-0
Cobalt (Co)	7440-48-4	Silver (Ag)	7440-22-4
Contact area		Thallium (Tl)	7440-28-0
Contact temperature		Tin (Sn)	7440-31-5
Contact time		Vanadium (V)	7440-62-2
Copper (Cu)	7440-50-8	Zinc (Zn)	7440-66-6

Specific migration of Primary aromatic amine

Test method: EN 13130-1

standardized method

Total Butadiene

Test method: EN 13130-4

standardized method

Determination of Butadiene total content in plastic material acc.to DIn 13130-4

Parameter	*CAS No*	*Parameter*	*CAS No*
1,3-butadiene	106-99-0		

Total chromium, vanadium, zirconium and hafnium contents(Catalyst residue)

Test method: BfR VII

validated in house method

Analysis by ICP-OES.

Parameter	*CAS No*	*Parameter*	*CAS No*
Chromium (Cr): total content	7440-47-3	Vanadium (V): total content	
Hafnium (Hf)	7440-58-6	Zirconium (Zr): total content	

Total migration

Test method: EN 1186-1

standardized method

With reference to EN1186-1 for selection of conditions and test methods.

Volatile substances (VOM)

Test method: Kunststoffe im Lebensmittelverkehr BII/VI(BfR)

standardized method

Volatile substances in silicon (VOM)

Test method: Kunststoffe im Lebensmittelverkehr BII/XV (BfR)

standardized method

Parameter	*CAS No*	*Parameter*	*CAS No*
Volatile substances in silicon			

Colour release

Test method: BfR - Empfehlung B II IX Ausgabe 07/1972

standardized method