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Report No.:	**08679-3 SHA18**
Date:	11.01.19
Order No.:	SHA-08196-18
Date of order:	29.05.18
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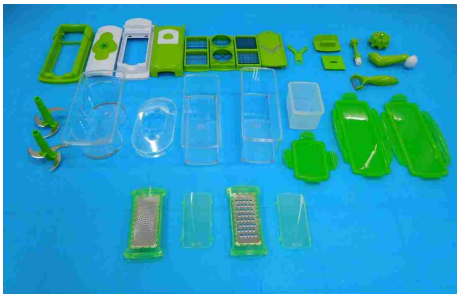
Test Report

Order description: **Food Contact Test for LFGB, DGCCRF and Italy**

Article Name	NICER DICER PLUS
Colour	KIWI GREEN
Condition of sample at delivery	no defects
Arrival date	08.06.18
Test start date	08.06.18
Test end date	07.01.19



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All previous versions of this report are no longer valid.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

18-028134-01 - NICER DICER PLUS

Destination Country: WORLDWIDE

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

Remark: The test items (Color migration, Extractable component, Metals composition, Migration of organotin, Total Butadiene, Specific migration of 1,3-butadiene and Total migration-Simulation agent:poly(2,6-diphenylene oxide)) were conducted by an accredited subcontractor.

Test specification:	***Test conclusion:***
Food Contact Test for Italian Ministry of Health Decree of 21 Mar 1973 and amendments.	*PASS*
Food Contact Test for German Food, Commodities and Feed Code (LFGB) of September 1, 2005, Section 30&31.	*PASS*
Food Contact Test for French Décret n°2007-766, dated 10 May 2007 and amendments. French DGCCRF DM/4B/COM/001(V02), Rules related to metals and alloys intended to come into contact with food, dated 01 April 2017. French DGCCRF DM/4B/COM/002, Rules related to inorganic materials (excluding metals and alloys) intended to come into contact with food, dated 01 May 2016. French DGCCRF DM/4B/COM/003, Rules related to organic materials based on synthetic material intended to come into contact with food, dated 01 May 2016.	*PASS*

Overview of Chem. testing

Sample no	Type / Style
18-028134-01	-

Component list	
No	**Components**
01	White ABS Pusher Handle, Double Cutter, Main Body
02	Kiwi Green ABS Body, Double Cutter, Pusher Handle, Frames, Base/Plug-in Cutting Stamp, Peeler, Safety Holder
03	Transparent Green ABS Grater Frames
04	Transparent PS Containers, Cover Barrier, Grid
05	Milky White PP Container
06	Transparent Green PP Lids
07	Milky White Silicone Gasket
08	Kiwi Green POM Cutting Axis
09	Stainless Steel 304 Blades, Pins
10	Stainless Steel 420J2 Blades
11	Whole Product

Customer requirements evaluation

	Components			
	Tested	**Result**	**Failed**	**Not tested**
Bisphenol-A (BPA) Content	01, 02, 03, 04, 05, 06, 07, 08	PASS		
Color migration	02, 03, 06, 08	PASS		
Colour release	02, 03, 06, 08	PASS		
Extractable component	07	PASS		
Metals composition	09, 10	PASS		
Migration of organotin	07	PASS		
Peroxide value	01, 02, 03, 04, 07	PASS		
Sensory test	11	PASS		
Specific migration of 1,3-butadiene	01, 02, 03	PASS		
Specific migration of Acrylonitrile	01, 02, 03	PASS		
Specific migration of Formaldehyde	08	PASS		
Specific migration of Heavy metals	01, 02, 03, 04, 05, 06, 08	PASS		
Specific migration of Heavy metals in metal	09, 10	PASS		
Specific migration of Heavy metals(metals and alloys)	09, 10	PASS		
Specific migration of Primary aromatic amine	01, 02, 03, 04, 05, 06, 07, 08	PASS		
Total Butadiene	01, 02, 03	PASS		
Total metal content (Catalyst residue)	05, 06	PASS		
Total migration	01, 02, 03, 04, 05, 06, 07, 08, 09, 10	PASS		
Volatile substances (VOM)	01, 02, 03, 04	PASS		
Volatile substances in silicon(VOM)	07	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

Detailed results of Chem. testing

Sample no: 18-028134-01

Bisphenol-A (BPA) Content

Sample type: Chem.

Norm: ASTM D 7574

			01	02	03	04
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Bisphenol A (2,2-Bis(4-hydroxyphenyl) propane)	mg/kg	n.d.	<0.1	<0.1	<0.1	<0.1
Evaluation			-	-	-	-

			05	06	07	08
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Bisphenol A (2,2-Bis(4-hydroxyphenyl) propane)	mg/kg	n.d.	<0.1	<0.1	<0.1	<0.1
Evaluation			-	-	-	-

Color migration

Sample type: Chem.

Norm: Italian Ministerial Decree 21/3/1973, title II heading I - Articles made of plastic

			02	03	06	08
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Contact time 1	h	-	**2**	**2**	**2**	**2**
Contact time 2	h	-	**2**	**2**	**2**	**2**
Contact time 3	h	-	**2**	**2**	**2**	**2**
Contact temperature 2	°C	-	**40**	**40**	**40**	**40**
Contact temperature 3	°C	-	**40**	**40**	**40**	**40**
Contact temperature 1	°C	-	**40**	**40**	**40**	**40**
Color Migration 1	%	95	**>=95**	**>=95**	**>=95**	**>=95**
Color Migration 3	%	95	**>=95**	**>=95**	**>=95**	**>=95**
Color Migration 2	%	95	**>=95**	**>=95**	**>=95**	**>=95**
Simulation agent 1		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Simulation agent 2		-	**50% ethanol**	**50% ethanol**	**50% ethanol**	**50% ethanol**
Simulation agent 3		-	**sunflower oil**	**sunflower oil**	**sunflower oil**	**sunflower oil**
Simulant volume 1	L	-	**0.345**	**0.33**	**0.735**	**0.225**
Simulant volume 2	L	-	**0.345**	**0.33**	**0.735**	**0.225**
Simulant volume 3	L	-	**0.345**	**0.33**	**0.735**	**0.225**
Contact area 1	dm²	-	**2.07**	**1.98**	**4.4**	**1.34**
Contact area 2	dm²	-	**2.07**	**1.98**	**4.4**	**1.34**
Contact area 3	dm²	-	**2.07**	**1.98**	**4.4**	**1.34**
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

Colour release

Sample type: Chem.

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

			02	03	06	08
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

			07
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**

Metals composition

Sample type: Chem.

			09	10
Parameter	**Unit**	**Limit**	**Result**	**Result**
Nickel (Ni)	%	8 - 10.5	**8.02**	
Chromium (Cr)	%	17 - 19.5	**18.10**	
Chromium (Cr)	%	13 - 14		**13.06**
Sulphur (S)	%	0.015	**0.007**	**0.004**
Silicon (Si)	%	1	**0.34**	**0.49**
Phosphorus (P)	%	0.045	**0.040**	
Phosphorus (P)	%	0.04		**0.038**
Carbon (C)	%	0.07	**0.060**	
Carbon (C)	%	0.26 - 0.35		**0.311**
Manganese (Mn)	%	2	**0.84**	
Manganese (Mn)	%	1.5		**0.40**
Nitrogen (N)	%	0.11	**0.081**	
Evaluation			**PASS**	**PASS**

Migration of organotin

Sample type: Chem.

Norm: EN 13130-1

			07
Parameter	**Unit**	**Limit**	**Result**
Tin (Sn)	mg/kg	0.1	<0.01
Simulation agent		-	**3% acetic acid**
Contact temperature	°C	-	**40**
Contact time	h	-	**2**
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			**-**	**-**	**-**	**-**

			07
Parameter	**Unit**	**Limit**	**Result**
content of peroxide		-	**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	03
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	-	**0.25**	**0.25**	**0.33**
Contact area	dm²	-	**1.5**	**1.5**	**1.98**
specific migration 1,3-butadiene	mg/kg	0.01	<0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**	**PASS**

Specific migration of Acrylonitrile

Sample type: Chem.

Norm: EN 13130-1

			01	02	03
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**
Contact area	dm²	-	**1.5**	**1.5**	**1.98**
Simulant volume	L	-	**0.25**	**0.25**	**0.33**
specific migration acrylonitrile	mg/kg	0.01	<0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**	**PASS**

Specific migration of Formaldehyde

Sample type: Chem.

Norm: EN 13130-1 / EUR 24815 EN 2011

			08
Parameter	**Unit**	**Limit**	**Result**
Contact area	dm²	-	**1.34**
Contact temperature	°C	-	**40**
Contact time	h	-	**2**
Simulant volume	L	-	**0.225**
Simulation agent		-	**3% acetic acid**
Formaldehyde food contact	mg/kg	15	<3
Evaluation			**PASS**

Specific migration of Heavy metals

Sample type: Chem.

Norm: EN 13130-1

			01	02	03	04
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Contact temperature	°C	-	**40**	**40**	**40**	**40**
Contact time	h	-	**2**	**2**	**2**	**2**
Simulation agent		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Simulant volume	L	-	**0.25**	**0.25**	**0.33**	**0.75**
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**

			05	06	08	06
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	-	**0.565**	**0.735**	**0.225**	**0.7**
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**

			05	04
Parameter	**Unit**	**Limit**	**Result**	**Result**
Contact temperature	°C	-	**40**	**40**
Contact time	h	-	**240**	**240**
Simulation agent		-	**3% acetic acid**	**3% acetic acid**
Simulant volume	L	-	**0.9**	**3.9**
Barium (Ba)	mg/kg	1	<0.5	<0.5
Copper (Cu)	mg/kg	5	<5	<5
Cobalt (Co)	mg/kg	0.05	<0.05	<0.05
Iron (Fe)	mg/kg	48	<5	<5
Lithium (Li)	mg/kg	0.6	<0.6	<0.6
Manganese (Mn)	mg/kg	0.6	<0.6	<0.6
Zinc (Zn)	mg/kg	5	<5	<5
Aluminium (Al)	mg/kg	1	<0.5	<0.5
Nickel (Ni)	mg/kg	0.02	<0.01	<0.01
Evaluation			**PASS**	**PASS**

Specific migration of Heavy metals in metal

Sample type: Chem.

Norm: EN 13130-1

			09	10
Parameter	**Unit**	**Limit**	**Result**	**Result**
Contact temperature	°C	-	**100**	**100**
Contact time	h	-	**0.5**	**0.5**
Simulation agent		-	**3% acetic acid**	**3% acetic acid**
Nickel (Ni)	mg/kg	0.1	<0.01	<0.01
Chromium (Cr)	mg/kg	0.1	<0.1	<0.1
Manganese (Mn)	mg/kg	0.1	<0.1	<0.1
Evaluation			**PASS**	**PASS**

Specific migration of Heavy metals(metals and alloys)

Sample type: Chem.

Norm: EN 13130-1

09. Stainless Steel 304 Blades, Pins

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)

10. Stainless Steel 420J2 Blades

Parameter	Condition	Unit
Simulant volume	0.2	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	03	04
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**	**2**
Simulant volume	L	-	**0.25**	**0.25**	**0.33**	**0.75**
Contact area	dm²	-	**1.5**	**1.5**	**1.98**	**3.84**
sum primary aromatic amines	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

			05	06	07	08
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**	**2**
Simulant volume	L	-	**0.565**	**0.735**	**0.21**	**0.225**
Contact area	dm²	-	**3.38**	**4.4**	**1.26**	**1.34**
sum primary aromatic amines	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

			06	05	04	07
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	-	**240**	**240**	**240**	**240**
Simulant volume	L	-	**0.7**	**0.9**	**3.9**	**0.205**
Contact area	dm²	-	**4.2**	**4.6**	**12.76**	**1.21**
sum primary aromatic amines	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

Total Butadiene

Sample type: Chem.

Norm: EN 13130-4

			01	02	03
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**
1,3-butadiene	mg/kg	1	<1	<1	<1
Evaluation			**PASS**	**PASS**	**PASS**

Total metal content (Catalyst residue)

Sample type: Chem.

Norm: BfR VII

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

Total migration

Sample type: Chem.

Norm: EN 1186-1

			01	02	03	04
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Contact temperature 1	°C	-	**40**	**40**	**40**	**40**
Contact time 1	h	-	**2**	**2**	**2**	**2**
Simulation agent 1		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Simulant volume 1	L	-	**0.25**	**0.25**	**0.33**	**0.75**
Contact area 1	dm²	-	**1.5**	**1.5**	**1.98**	**3.84**
Total migration 1 area	mg/dm²	8	<1	<1	<1	<1
Contact temperature 2	°C	-	**40**	**40**	**40**	**40**
Contact time 2	h	-	**2**	**2**	**2**	**2**
Simulation agent 2		-	**10% ethanol**	**10% ethanol**	**10% ethanol**	**10% ethanol**
Contact area 2	dm²	-	**1.5**	**1.5**	**1.98**	**3.84**
Simulant volume 2	L	-	**0.25**	**0.25**	**0.33**	**0.75**
Total migration 2 area	mg/dm²	8	<1	<1	**2.8**	<1
Contact temperature 3	°C	-	**20**	**20**	**20**	**20**
Contact time 3	h	-	**0.5**	**0.5**	**0.5**	**0.5**
Simulation agent 3		-	**isooctane**	**isooctane**	**isooctane**	**isooctane**
Simulant volume 3	L	-	**0.25**	**0.25**	**0.33**	**0.75**
Contact area 3	dm²	-	**1.5**	**1.5**	**1.98**	**3.84**
Total migration 3 area	mg/dm²	8	<1	<1	<1	<1
Simulation agent 4		-	**95% ethanol**	**95% ethanol**	**95% ethanol**	**95% ethanol**
Contact temperature 4	°C	-	**40**	**40**	**40**	**40**
Contact time 4	h	-	**2**	**2**	**2**	**2**
Simulant volume 4	L	-	**0.25**	**0.25**	**0.33**	**0.75**
Contact area 4	dm²	-	**1.5**	**1.5**	**1.98**	**3.84**
Total migration 4 area	mg/dm²	8	<1	<1	**1.9**	<1
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

			05	06	07	08
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Contact temperature 1	°C	-	**40**	**40**	**40**	**40**
Contact time 1	h	-	**2**	**2**	**2**	**2**
Simulation agent 1		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Simulant volume 1	L	-	**0.565**	**0.735**	**0.21**	**0.225**
Contact area 1	dm²	-	**3.38**	**4.4**	**1.26**	**1.34**
Total migration 1 area	mg/dm²	8	<1	<1	**4.2**	<1
Contact temperature 2	°C	-	**40**	**40**	**40**	**40**
Contact time 2	h	-	**2**	**2**	**2**	**2**
Simulation agent 2		-	**10% ethanol**	**10% ethanol**	**10% ethanol**	**10% ethanol**
Contact area 2	dm²	-	**3.38**	**4.4**	**1.26**	**1.34**
Simulant volume 2	L	-	**0.565**	**0.735**	**0.21**	**0.225**
Total migration 2 area	mg/dm²	8	<1	<1	<1	<1
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	-	**0.565**	**0.735**		**0.225**
Contact area 3	dm²	-	**3.38**	**4.4**		**1.34**
Total migration 3 area	mg/dm²	8	<1	<1		<1
Simulation agent 4		-	**95% ethanol**	**95% ethanol**		**95% ethanol**
Contact temperature 4	°C	-	**40**	**40**		**40**
Contact time 4	h	-	**2**	**2**		**2**
Simulant volume 4	L	-	**0.565**	**0.735**		**0.225**
Contact area 4	dm²	-	**3.38**	**4.4**		**1.34**
Total migration 4 area	mg/dm²	8	<1	<1		<1
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

			09	10
Parameter	**Unit**	**Limit**	**Result**	**Result**
Contact temperature 1	°C	-	**100**	**100**
Contact time 1	h	-	**0.5**	**0.5**
Simulation agent 1		-	**3% acetic acid**	**3% acetic acid**
Simulant volume 1	L	-	**0.21**	**0.04**
Contact area 1	dm²	-	**1.28**	**0.22**
Total migration 1 area	mg/dm²	8	<1	<1
Evaluation			**PASS**	**PASS**

			06	05	04	07
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Contact temperature 1	°C	-	**40**	**40**	**40**	**40**
Contact time 1	h	-	**240**	**240**	**240**	**240**
Simulation agent 1		-	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**	**3% acetic acid**
Simulant volume 1	L	-	**0.7**	**0.9**	**3.9**	**0.205**
Contact area 1	dm²	-	**4.2**	**4.6**	**12.76**	**1.21**
Total migration 1 area	mg/dm²	8	<1	<1	<1	<1
Contact temperature 2	°C	-	**40**	**40**	**40**	**40**
Contact time 2	h	-	**240**	**240**	**240**	**240**
Simulation agent 2		-	**95% ethanol**	**95% ethanol**	**95% ethanol**	**50% ethanol**
Contact area 2	dm²	-	**4.2**	**4.6**	**12.76**	**1.21**
Simulant volume 2	L	-	**0.7**	**0.9**	**3.9**	**0.205**
Total migration 2 area	mg/dm²	8	<1	<1	<1	**4.0**
Contact temperature 3	°C	-	**20**	**20**	**20**	**100**
Contact time 3	h	-	**48**	**48**	**48**	**2**
Simulation agent 3		-	**isooctane**	**isooctane**	**isooctane**	**poly(2,6-diphenylene oxide)**
Mass	g	-				**4**
Simulant volume 3	L	-	**0.7**	**0.9**	**3.9**	
Contact area 3	dm²	-	**4.2**	**4.6**	**12.76**	**1**
Total migration 3 area	mg/dm²	8	<1	<1	<1	<3
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

Volatile substances (VOM)

Sample type: Chem.

Norm: Kunststoffe im Lebensmittelverkehr BII/VI(BfR)

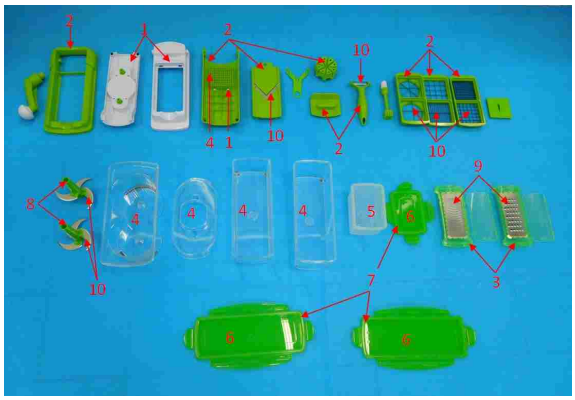
			01	02	03	04
Parameter	**Unit**	**Limit**	**Result**	**Result**	**Result**	**Result**
Volatile substances	mg/dm²	15	**13**	**13**	**13.8**	<5
Evaluation			**PASS**	**PASS**	**PASS**	**PASS**

Volatile substances in silicon(VOM)

Sample type: Chem.

Norm: 25/11/1992, annex III, section 2

			07
Parameter	**Unit**	**Limit**	**Result**
Volatile substances in silicon	%	0.5	**0.48**
Contact time	h	-	**4**
Contact temperature	°C	-	**200**
Evaluation			**PASS**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6

Bisphenol-A (BPA) Content

Test method: ASTM D 7574

standardized method

With reference to ASTM D7574, Analysis was performed by LC-MS-MS.

Parameter	*CAS No*	*Parameter*	*CAS No*
Bisphenol A (2,2-Bis(4-hydroxyphenyl)propane)	80-05-7		

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

Migration of organotin

Test method: EN 13130-1

standardized method

EN 1186-1 with ICP screening method.

Parameter	*CAS No*	*Parameter*	*CAS No*
Tin (Sn)	7440-31-5		

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 Formaldehyde

Test method: EN 13130-1 / EUR 24815 EN 2011

standardized method

Parameter	*CAS No*	*Parameter*	*CAS No*
Formaldehyde food contact			

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 in metal

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 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

Parameter	CAS No	Parameter	CAS No
sum primary aromatic amines			

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 metal content (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

Parameter	CAS No	Parameter	CAS No
Volatile substances			

Volatile substances in silicon(VOM)

Test method: 25/11/1992, annex III, section 2

standardized method

Parameter	CAS No	Parameter	CAS No
Volatile substances in silicon			

Color migration

Test method: Italian Ministerial Decree 21/3/1973, title II heading I - Articles made of plastic

standardized method

As per Italian Ministerial Decree 21/3/1973, title II heading I - Articles made of plastic, migration test on the submitted sample was carried out at specified time and temperature and the test solutions were then measured for transmittance between 400nm and 750nm using UV/Vis Spectrophotometer.

Colour release

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

standardized method

Metals composition

Acid digestion, followed by analysis using Inductively Coupled Argon Plasma Spectrometer.