



# Test Report

**Applicant:** Shantou Nanbeixiang Plastic Products Co.,Ltd  
**Address:** No.294 Shanzhang Road, Jinping District, Shantou City, Guangdong Province, China(Mainland)  
**Manufacturer:** Shantou Nanbeixiang Plastic Products Co.,Ltd  
**Address:** No.294 Shanzhang Road, Jinping District, Shantou City, Guangdong Province, China(Mainland)  
**Report on the submitted samples said to be:**  
**Product Name:** Lunch box  
**Brand Name:** N/A  
**Model Number:** N932  
N932-1, N932-4, N932-6, N932-8, N930, N933, N937  
**Date of Receipt:** Mar. 12, 2025  
**Date of Test:** Mar. 12, 2025 ~ Mar. 18, 2025  
**Date of Report:** Mar. 19, 2025  
**Test Method:** Please refer to next page.  
**Test Result:** Please refer to next page.

**Prepared (Engineer):** Slien Wang

**Reviewer (Supervisor):** Xiaoshan Ni



*This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.*

**Version**

Version No.	Date	Description
00	Mar. 19, 2025	Original

**Test Requested:****Conclusion**

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB) Section 30 and 31 With amendments, Regulation 1935/2004/EC on materials and articles intended to come into contact with food, European Commission Regulation (EU) No. 10/2011 with amendments and BfR recommendation, European Commission Regulation AP(89)1, European Commission Regulation AP(2004)5, European Commission Regulation CM/Res(2020)9.

1.Sensory test-taste and odour to the integrate product	Pass
2.Specific Migration of Heavy Metal	Pass
3.Visible Color Migration	Pass
4.Overall Migration Test	Pass
5.Polycyclic Aromatic Hydrocarbons (PAHs)	Pass
6.Volatile Organic Matter (VOM)	Pass
7.Specific Migration of Primary aromatic amines (PAA)	Pass
8.Total Lead (Pb)、Cadmium (Cd)、Zinc (Zn)、Platinum (Pt)	Pass
9.Peroxides Value	Pass
10.Extractive Substance	Pass
11.Organic Tin content	Pass
12.Specific Migration of Polycyclic Aromatic Hydrocarbons (PAHs)	Pass
13.Total BPA content	Pass

**Test Part Description:**

Specimen No.	Description	Material
01	Transparent plastic	plastic
02	White plastic	plastic
03	Grey blue + brick red plastic	plastic
04	Deep blue + blue plastic	plastic
05	Brown + grey plastic	plastic
06	Beige + beige white plastic	plastic
07	Yellow green + light green plastic	plastic
08	Deep green + green plastic	plastic
09	Deep pink + pink plastic	plastic
10	Black + rose red plastic	plastic
11	Beige + beige white silicone	silicone
12	Light green + light pink silicone	silicone
13	Gray-blue silicone	silicone

**Test Results:****1.Sensory test-taste and odour to the integrate product**

Test Method: With reference to Robinson's test with reference to DIN 10955:2004.

Test conditions: Distilled wate, 100°C, 2h

Test Item	01	02	03	04	05	06	07	Limit
Sensorial examination odour (Point scale)	0	0	0	0	0	0	0	3
Sensorial examination taste (Point scale)	0	0	0	0	0	0	0	3

Test Item	08	09	10	11	12	13	Limit
Sensorial examination odour (Point scale)	0	0	0	1	1	1	3
Sensorial examination taste (Point scale)	0	0	0	1	1	1	3

**Scale evaluation:**

0: No perceptible odour and taste

1: Odour and taste just perceptible (still difficult to define)

2: Moderate odour and taste

3: Moderate strong odour and taste



4: Strong odour and taste

## 2. Specific Migration of Heavy Metals

Test Method: With reference to BS EN 13130-1: 2004, determined by ICP-MS&amp;IC.

Test conditions: 3% acetic acid, 70°C, 2h

Test Item	Unit	MDL	Limit	01			02		
				1st	2nd	3rd	1st	2nd	3rd
Aluminum (Al)	mg/kg	0.1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ammonium (NH <sub>4</sub> <sup>+</sup> )	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Antimony (Sb)	mg/kg	0.02	0.04	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Arsenic (As)	mg/kg	0.002	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Barium (Ba)	mg/kg	0.1	1.2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium (Cd)	mg/kg	0.005	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Calcium (Ca)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium (Cr)	mg/kg	0.1	1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cobalt (Co)	mg/kg	0.01	0.02	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Copper (Cu)	mg/kg	0.1	4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Iron (Fe)	mg/kg	1	40	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lithium (Li)	mg/kg	0.02	0.048	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Magnesium (Mg)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Manganese (Mn)	mg/kg	0.1	0.55	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	mg/kg	0.003	0.003	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	mg/kg	0.05	0.14	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Potassium (K)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sodium (Na)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Zinc (Zn)	mg/kg	1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Silver (Ag)	mg/kg	0.05	0.08	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tin (Sn)	mg/kg	1	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Molybdenum (Mo)	mg/kg	0.02	0.12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Vanadium (V)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Thallium (Tl)	mg/kg	0.001	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Beryllium (Be)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tungsten (W)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Selenium (Se)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

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Zirconium (Zr)	mg/kg	0.1	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum (Ln)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Test Item	Unit	MDL	Limit	03			04		
				1st	2nd	3rd	1st	2nd	3rd
Aluminum (Al)	mg/kg	0.1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ammonium (NH4 <sup>+</sup> )	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Antimony (Sb)	mg/kg	0.02	0.04	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Arsenic (As)	mg/kg	0.002	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Barium (Ba)	mg/kg	0.1	1.2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium (Cd)	mg/kg	0.005	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Calcium (Ca)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium (Cr)	mg/kg	0.1	1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cobalt (Co)	mg/kg	0.01	0.02	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Copper (Cu)	mg/kg	0.1	4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Iron (Fe)	mg/kg	1	40	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lithium (Li)	mg/kg	0.02	0.048	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Magnesium (Mg)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Manganese (Mn)	mg/kg	0.1	0.55	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	mg/kg	0.003	0.003	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	mg/kg	0.05	0.14	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Potassium (K)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sodium (Na)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Zinc (Zn)	mg/kg	1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Silver (Ag)	mg/kg	0.05	0.08	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tin (Sn)	mg/kg	1	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Molybdenum (Mo)	mg/kg	0.02	0.12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Vanadium (V)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Thallium (Tl)	mg/kg	0.001	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Beryllium (Be)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tungsten (W)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Selenium (Se)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Zirconium (Zr)	mg/kg	0.1	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum (Ln)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

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Test Item	Unit	MDL	Limit	05			06		
				1st	2nd	3rd	1st	2nd	3rd
Aluminum (Al)	mg/kg	0.1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ammonium (NH4 <sup>+</sup> )	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Antimony (Sb)	mg/kg	0.02	0.04	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Arsenic (As)	mg/kg	0.002	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Barium (Ba)	mg/kg	0.1	1.2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium (Cd)	mg/kg	0.005	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Calcium (Ca)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium (Cr)	mg/kg	0.1	1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cobalt (Co)	mg/kg	0.01	0.02	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Copper (Cu)	mg/kg	0.1	4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Iron (Fe)	mg/kg	1	40	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lithium (Li)	mg/kg	0.02	0.048	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Magnesium (Mg)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Manganese (Mn)	mg/kg	0.1	0.55	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	mg/kg	0.003	0.003	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	mg/kg	0.05	0.14	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Potassium (K)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sodium (Na)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Zinc (Zn)	mg/kg	1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Silver (Ag)	mg/kg	0.05	0.08	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tin (Sn)	mg/kg	1	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Molybdenum (Mo)	mg/kg	0.02	0.12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Vanadium (V)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Thallium (Tl)	mg/kg	0.001	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Beryllium (Be)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tungsten (W)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Selenium (Se)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Zirconium (Zr)	mg/kg	0.1	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum (Ln)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.



Test Item	Unit	MDL	Limit	07			08		
				1st	2nd	3rd	1st	2nd	3rd
Aluminum (Al)	mg/kg	0.1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ammonium (NH4 <sup>+</sup> )	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Antimony (Sb)	mg/kg	0.02	0.04	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Arsenic (As)	mg/kg	0.002	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Barium (Ba)	mg/kg	0.1	1.2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium (Cd)	mg/kg	0.005	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Calcium (Ca)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium (Cr)	mg/kg	0.1	1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cobalt (Co)	mg/kg	0.01	0.02	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Copper (Cu)	mg/kg	0.1	4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Iron (Fe)	mg/kg	1	40	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lithium (Li)	mg/kg	0.02	0.048	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Magnesium (Mg)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Manganese (Mn)	mg/kg	0.1	0.55	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	mg/kg	0.003	0.003	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	mg/kg	0.05	0.14	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Potassium (K)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sodium (Na)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Zinc (Zn)	mg/kg	1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Silver (Ag)	mg/kg	0.05	0.08	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tin (Sn)	mg/kg	1	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Molybdenum (Mo)	mg/kg	0.02	0.12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Vanadium (V)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Thallium (Tl)	mg/kg	0.001	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Beryllium (Be)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tungsten (W)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Selenium (Se)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Zirconium (Zr)	mg/kg	0.1	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum (Ln)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.



Test Item	Unit	MDL	Limit	09			10		
				1st	2nd	3rd	1st	2nd	3rd
Aluminum (Al)	mg/kg	0.1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ammonium (NH <sub>4</sub> <sup>+</sup> )	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Antimony (Sb)	mg/kg	0.02	0.04	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Arsenic (As)	mg/kg	0.002	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Barium (Ba)	mg/kg	0.1	1.2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium (Cd)	mg/kg	0.005	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Calcium (Ca)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium (Cr)	mg/kg	0.1	1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cobalt (Co)	mg/kg	0.01	0.02	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Copper (Cu)	mg/kg	0.1	4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Iron (Fe)	mg/kg	1	40	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lithium (Li)	mg/kg	0.02	0.048	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Magnesium (Mg)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Manganese (Mn)	mg/kg	0.1	0.55	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	mg/kg	0.003	0.003	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	mg/kg	0.05	0.14	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Potassium (K)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sodium (Na)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Zinc (Zn)	mg/kg	1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Silver (Ag)	mg/kg	0.05	0.08	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tin (Sn)	mg/kg	1	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Molybdenum (Mo)	mg/kg	0.02	0.12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Vanadium (V)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Thallium (Tl)	mg/kg	0.001	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Beryllium (Be)	mg/kg	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tungsten (W)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Selenium (Se)	mg/kg	0.1	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Zirconium (Zr)	mg/kg	0.1	2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum (Ln)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Note:

(1) 1mg/kg=0.0001%;

(2) N.D. = Not Detected (<MDL);



(3) MDL= Method Detection Limit;

(4) Ln:La、Ce、Pr、Nd、Pm、Sm、Eu、Gd、Tb、Dy、Ho、Er、Tm、Yb、Lu.

### 3.Visible Color Migration

Test Method :With reference to LFGB 30&31, BfR IX Visible Color Migration.

Test Items	Test condition	01	02	03	04	Limit
Visible Color Migration	3% Acetic Acid Aqueous solution (70°C, 2hours)	Absent	Absent	Absent	Absent	Absent
Visible Color Migration	10% Ethanol Aqueous solution (70°C, 2hours)	Absent	Absent	Absent	Absent	Absent

Test Items	Test condition	05	06	07	08	Limit
Visible Color Migration	3% Acetic Acid Aqueous solution (70°C, 2hours)	Absent	Absent	Absent	Absent	Absent
Visible Color Migration	10% Ethanol Aqueous solution (70°C, 2hours)	Absent	Absent	Absent	Absent	Absent

Test Items	Test condition	09	10	11	12	Limit
Visible Color Migration	3% Acetic Acid Aqueous solution (70°C, 2hours)	Absent	Absent	Absent	Absent	Absent
Visible Color Migration	10% Ethanol Aqueous solution (70°C, 2hours)	Absent	Absent	Absent	Absent	Absent

Test Items	Test condition	13	Limit
Visible Color Migration	3% Acetic Acid Aqueous solution (70°C, 2hours)	Absent	Absent
Visible Color Migration	10% Ethanol Aqueous solution (70°C, 2hours)	Absent	Absent

### 4.Overall Migration Test

Test Method: With reference to EN 1186-1: 2002 and EN 1186-3: 2022.

Simulant Used	Time	Temperature	Unit	Limit	01			02		
					1st	2nd	3rd	1st	2nd	3rd
3% Acetic acid	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
95% ethanol	2.0h	60°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Isooctane	0.5h	40°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.



Simulant Used	Time	Temperature	Unit	Limit	03			04		
					1st	2nd	3rd	1st	2nd	3rd
3% Acetic acid	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
95% ethanol	2.0h	60°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Isooctane	0.5h	40°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Simulant Used	Time	Temperature	Unit	Limit	05			06		
					1st	2nd	3rd	1st	2nd	3rd
3% Acetic acid	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
95% ethanol	2.0h	60°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Isooctane	0.5h	40°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Simulant Used	Time	Temperature	Unit	Limit	07			08		
					1st	2nd	3rd	1st	2nd	3rd
3% Acetic acid	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
95% ethanol	2.0h	60°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Isooctane	0.5h	40°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Simulant Used	Time	Temperature	Unit	Limit	09			10		
					1st	2nd	3rd	1st	2nd	3rd
3% Acetic acid	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
95% ethanol	2.0h	60°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Isooctane	0.5h	40°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Simulant Used	Time	Temperature	Unit	Limit	11			12		
					1st	2nd	3rd	1st	2nd	3rd
3% Acetic acid	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
95% ethanol	2.0h	60°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Isooctane	0.5h	40°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.



Simulant Used	Time	Temperature	Unit	Limit	13		
					1st	2nd	3rd
3% Acetic acid	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.
95% ethanol	2.0h	60°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.
Isooctane	0.5h	40°C	mg/dm <sup>2</sup>	10	N.D.	N.D.	N.D.

Note:

(1) mg/dm<sup>2</sup> = milligram per square decimeter;

(2) < =less than;

(3) N.D. = Not Detected (<Limit).

### 5.Polycyclic Aromatic Hydrocarbons (PAHs)

Test Method: With reference to AfPS GS 2019:01 PAK, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

Item	Unit	MDL	01			02			Limit
			1st	2nd	3rd	1st	2nd	3rd	
Naphthalene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Phenanthrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Chrysene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[b]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[k]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Indeno[1,2,3-cd]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Dibenzo[a,h]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[g,h,i]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[j]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[e]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Total of 15 PAHs	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	/

Item	Unit	MDL	03			04			Limit
			1st	2nd	3rd	1st	2nd	3rd	



Naphthalene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Phenanthrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Chrysene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[b]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[k]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Indeno[1,2,3-cd]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Dibenzo[a,h]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[g,h,i]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[j]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[e]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Total of 15 PAHs	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	/

Item	Unit	MDL	05			06			Limit
			1st	2nd	3rd	1st	2nd	3rd	
Naphthalene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Phenanthrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Chrysene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[b]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[k]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Indeno[1,2,3-cd]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Dibenzo[a,h]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[g,h,i]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[j]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent



Benzo[e]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Total of 15 PAHs	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	/

Item	Unit	MDL	07			08			Limit
			1st	2nd	3rd	1st	2nd	3rd	
Naphthalene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Phenanthrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Chrysene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[b]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[k]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Indeno[1,2,3-cd]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Dibenzo[a,h]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[g,h,i]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[j]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[e]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Total of 15 PAHs	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	/

Item	Unit	MDL	09			10			Limit
			1st	2nd	3rd	1st	2nd	3rd	
Naphthalene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Phenanthrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Chrysene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[b]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[k]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent



Benzo[a]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Indeno[1,2,3-cd]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Dibenzo[a,h]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[g,h,i]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[j]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[e]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Total of 15 PAHs	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	/

Item	Unit	MDL	11			12			Limit
			1st	2nd	3rd	1st	2nd	3rd	
Naphthalene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Phenanthrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Chrysene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[b]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[k]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Indeno[1,2,3-cd]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Dibenzo[a,h]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[g,h,i]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[j]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[e]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Total of 15 PAHs	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	/

Item	Unit	MDL	13			Limit
			1st	2nd	3rd	
Naphthalene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Phenanthrene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent



Pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Benzo[a]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Chrysene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Benzo[b]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Benzo[k]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Benzo[a]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Indeno[1,2,3-cd]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Dibenzo[a,h]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Benzo[g,h,i]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Benzo[j]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Benzo[e]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	Absent
Total of 15 PAHs	mg/kg	/	N.D.	N.D.	N.D.	/

Note:

- (1) 1mg/kg=0.0001%;
- (2) < =less than;
- (3) N.D. = Not Detected (<MDL);
- (4) MDL= Method Detection Limit.

## 6.VOM-BfR Bestimmung von flüchtigen Verbindungen in Bedarfsgegenständen aus silicone Version2 Stand: 09/2023

Test Method: With reference to 19. Mitteilung über die Untersuchung von Kunststoffen.

Bundesgesundheitsblatt 14(1971)265

Test condition	MDL (%)	Limit (%)	11	12	13
200°C, 4h	0.1	0.5	0.3	0.4	0.3

Note:

- (1) 1mg/kg=0.0001%;
- (2) < =less than;
- (3) N.D. = Not Detected (<MDL);
- (4) MDL= Method Detection Limit.

## 7.Specific Migration of Primary aromatic amines

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

Test conditions: 3% Acetic acid, 70°C, 2h

Test Item	MDL (mg/kg)	Limit (mg/kg)	01	02	03	04	05
4-Aminobiphenyl	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzdine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-Chloro-o-Toluidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.



2-Naphthylamine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-amino-2',3-dimethylazobenzene	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
5-Nitro-o-toluidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-Chloroaniline	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-Methoxy-m-phenylenediamine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4,4'-Diaminodiphenylmethane	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
3,3'-Dichlorobenzidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
3,3'-Dimethoxybenzidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
3,3'-Dimethylbenzidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4,4'-Methylenedi-o-toluidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
6-methoxy-m-toluidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4,4'-methylenebis[2-chloroaniline]	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4,4'-Oxydianiline	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4,4'-Thiodianiline	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
2-Aminotoluene	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-methyl-m-phenylenediamine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
2,4,5-Trimethylaniline	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
2-Methoxyaniline	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-Aminoazobenzene	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,3 phenylenediamine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total of other primary aromatic amines	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.

Test Item	MDL (mg/kg)	Limit (mg/kg)	06	07	08	09	10
4-Aminobiphenyl	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-Chloro-o-Toluidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
2-Naphthylamine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-amino-2',3-dimethylazobenzene	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
5-Nitro-o-toluidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-Chloroaniline	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-Methoxy-m-phenylenediamine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4,4'-Diaminodiphenylmethane	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
3,3'-Dichlorobenzidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
3,3'-Dimethoxybenzidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.



3,3'-Dimethylbenzidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4,4'-Methylenedi-o-toluidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
6-methoxy-m-toluidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4,4'-methylenebis[2-chloroaniline]	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4,4'-Oxydianiline	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4,4'-Thiodianiline	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
2-Aminotoluene	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-methyl-m-phenylenediamine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
2,4,5-Trimethylaniline	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
2-Methoxyaniline	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-Aminoazobenzene	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,3 phenylenediamine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total of other primary aromatic amines	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.

Note:

(1)1mg/kg=0.0001%;

(2)N.D. = Not Detected (<MDL);

(3)MDL= Method Detection Limit.

### 8.Total Lead (Pb)、Cadmium (Cd)、Zinc (Zn)、Platinum (Pt)

Test Method:With reference to EPA METHOD 3052:1996, analyzed by ICP-OES.

Test Item	Unit	MDL	Limit	11	12	13
Lead (Pb)	mg/kg	5	100	N.D.	N.D.	N.D.
Cadmium (Cd)	mg/kg	5	100	N.D.	N.D.	N.D.
Zinc (Zn)	mg/kg	5	100	N.D.	N.D.	N.D.
Platinum (Pt)	mg/kg	5	50	N.D.	N.D.	N.D.

Note:

(1)1mg/kg=0.0001%;

(2)N.D. = Not Detected (<MDL);

(3)MDL= Method Detection Limit.

### 9.Peroxides Value

Test Method:With reference to European Pharmacopeia, Ph.Eur.Method 2.5.5

Test Item	Limit	11			12			Conclusion
		1st	2nd	3rd	1st	2nd	3rd	
Peroxides value	Absent	Absent	Absent	Absent	Absent	Absent	Absent	PASS



Test Item	Limit	13			Conclusion
		1st	2nd	3rd	
Peroxides value	Absent	Absent	Absent	Absent	PASS

### 10.Extractive Substance

Test Method:The test was performed according to the 61st Communication on testing of plastics Bundesgesundheitsbl.46(2003)362

Simulant Used	Test duration /Temperature	Unit	Limit	11			12		
				1st	2nd	3rd	1st	2nd	3rd
Distilled water	Reflux for 5 hours	%	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3% Acetic acid	Reflux for 5 hours	%	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10% Ethanol	Reflux for 5 hours	%	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Simulant Used	Test duration /Temperature	Unit	Limit	13		
				1st	2nd	3rd
Distilled water	Reflux for 5 hours	%	0.5	<0.1	<0.1	<0.1
3% Acetic acid	Reflux for 5 hours	%	0.5	<0.1	<0.1	<0.1
10% Ethanol	Reflux for 5 hours	%	0.5	<0.1	<0.1	<0.1

Note:

- (1) 1mg/kg=0.0001%;
- (2) < =less than.

### 11.Organic Tin content

Test method :With reference to ISO 17353 :2004, analysis was performed by GC-MS.

Test Item	Unit	MDL	Limit	11	12	13
Dibutyltin ( DBT)	mg/kg	0.01	1	N.D.	N.D.	N.D.
Tributyltin ( TBT )	mg/kg	0.01	1	N.D.	N.D.	N.D.
Triphenyltin ( TPT )	mg/kg	0.01	1	N.D.	N.D.	N.D.
Dioctyltin ( DOT)	mg/kg	0.01	1	N.D.	N.D.	N.D.
Monobutyltin (MBT)	mg/kg	0.01	1	N.D.	N.D.	N.D.
Monooctyltin (MOT)	mg/kg	0.01	1	N.D.	N.D.	N.D.
Tetrabutyltin (TTBT)	mg/kg	0.01	1	N.D.	N.D.	N.D.

Note:

- (1) 1mg/kg=0.0001%;
- (2) N.D. = Not Detected (<MDL);
- (3) MDL= Method Detection Limit.



## 12. Specific Migration of Polycyclic Aromatic Hydrocarbons (PAHs)

Test Method: With reference to BS EN 13130-1: 2004, determined by GC-MS.

Test conditions: 3% acetic acid, 70°C, 2h

Item	Unit	MDL	01	02	03	04	05	06	07	Limit
Naphthalene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Phenanthrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Chrysene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[b]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[k]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Indeno[1,2,3-cd]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Dibenzo[a,h]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[g,h,i]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[j]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[e]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Total of 15 PAHs	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	/

Item	Unit	MDL	08	09	10	11	12	13	Limit
Naphthalene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Phenanthrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Chrysene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[b]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[k]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[a]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Indeno[1,2,3-cd]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Dibenzo[a,h]anthracene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[g,h,i]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Benzo[j]fluoranthene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent

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Benzo[e]pyrene	mg/kg	0.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Absent
Total of 15 PAHs	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	/

Note:

- (1) 1mg/kg=0.0001%;
- (2) N.D. = Not Detected (<MDL);
- (3) MDL= Method Detection Limit.

### 13.Total BPA content

Test Method: With reference to EN 14350-2, determined by LC-MS.

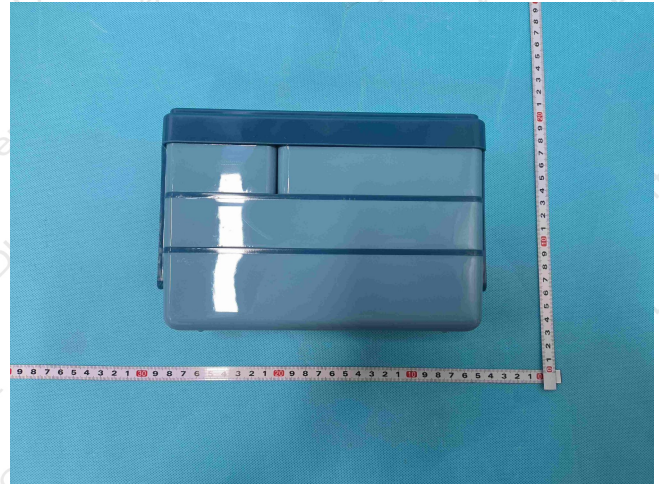
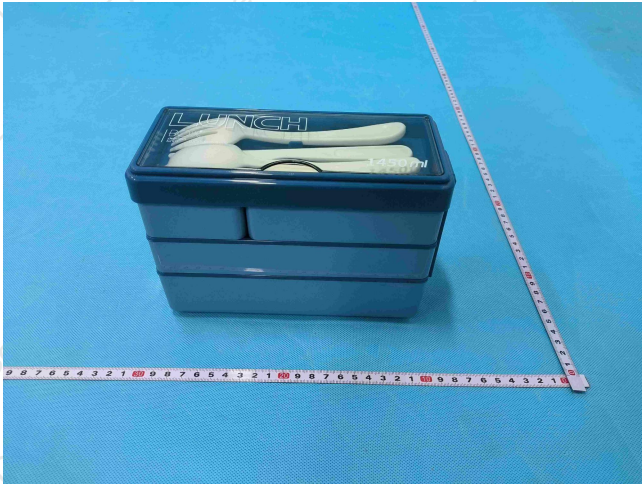
Test Item	Unit	MDL	Limit	01			02		
				1st	2nd	3rd	1st	2nd	3rd
Bisphenol A	mg/kg	0.1	Absent	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item	Unit	MDL	Limit	03			04		
				1st	2nd	3rd	1st	2nd	3rd
Bisphenol A	mg/kg	0.1	Absent	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item	Unit	MDL	Limit	05			06		
				1st	2nd	3rd	1st	2nd	3rd
Bisphenol A	mg/kg	0.1	Absent	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item	Unit	MDL	Limit	07			08		
				1st	2nd	3rd	1st	2nd	3rd
Bisphenol A	mg/kg	0.1	Absent	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item	Unit	MDL	Limit	09			10		
				1st	2nd	3rd	1st	2nd	3rd
Bisphenol A	mg/kg	0.1	Absent	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item	Unit	MDL	Limit	11			12		
				1st	2nd	3rd	1st	2nd	3rd
Bisphenol A	mg/kg	0.1	Absent	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item	Unit	MDL	Limit	13					
				1st	2nd	3rd			
Bisphenol A	mg/kg	0.1	Absent	N.D.	N.D.	N.D.			

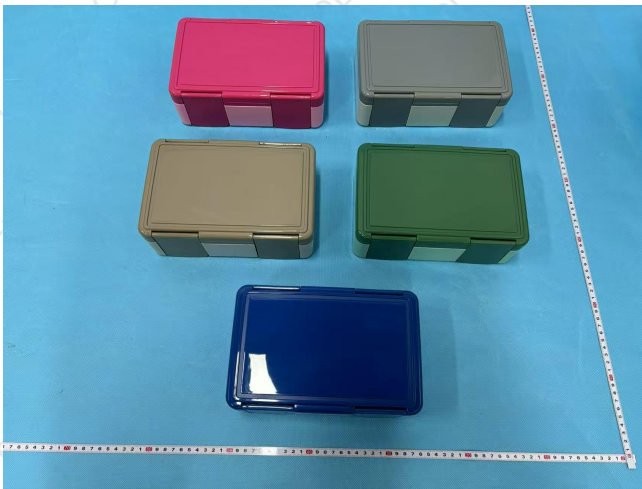
Note:

- (1) 1mg/kg=0.0001%;
- (2) N.D. = Not Detected (<MDL);
- (3) MDL= Method Detection Limit.



### Photograph of Sample







\*\*\*\*\* END OF REPORT \*\*\*\*\*