



Test Report

Applicant: Taizhou Huangyan Nancheng Kangxin Plastic Factory
Address: No. 21, Zone 6, Diantou, Yuanqiao, Huangyan District, Taizhou City, Zhejiang Province
Manufacturer: Taizhou Huangyan Nancheng Kangxin Plastic Factory
Address: No. 21, Zone 6, Diantou, Yuanqiao, Huangyan District, Taizhou City, Zhejiang Province
Report on the submitted samples said to be:
Product Name: water bottle
Brand Name: N/A
Model Number: 2096
Date of Receipt: May. 20, 2025
Date of Test: May. 20, 2025 ~ May. 26, 2025
Date of Report: May. 27, 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	May. 27, 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 and Its amendments (EU) 2020/1245; 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
14.Specific Migration of - Hexene	Pass
15.Specific Migration of - Octene	Pass
16.Specific Migration of - Bisphenol A (BPA)	Pass
17.Specific Migration of - Terephthalic acid	Pass
18.Specific Migration of - Ethylene glycol	Pass
19.Specific Migration of - Acetaldehyde	Pass

**Test Part Description:**

Specimen No.	Description	Material
01	Pink plastic (cover)	PP
02	Beige plastic (cover)	PP
03	Khaki plastic (cover)	PP
04	Blue plastic (cover)	PP
05	White plastic (filter screen)	PP
06	Pink plastic (cup body)	PC
07	White plastic (cup body)	PC
08	Khaki plastic (cup body)	PC
09	Blue plastic (cup body)	PC
10	White woven rope	plastic
11	Translucent silicone seal ring	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 water, 100°C, 2h

Test Item	01	02	03	04	05	06	Limit
Sensorial examination odour (Point scale)	0	0	0	0	0	0	2.5
Sensorial examination taste (Point scale)	0	0	0	0	0	0	2.5

Test Item	07	08	09	10	11	Limit
Sensorial examination odour (Point scale)	0	0	0	0	1	2.5
Sensorial examination taste (Point scale)	0	0	0	0	1	2.5

Scale evaluation:

Intensity scale (rounded at 0.5):

0: No perceptible difference

1: Just perceptible difference

2: Slight difference



3: Marked difference

4: Strong difference

2. Specific Migration of Heavy Metals

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

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.
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.
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.
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.
Zinc (Zn)	mg/kg	1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Europium (Eu)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Gadolinium (Gd)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lanthanum (La)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Terbium (Tb)	mg/kg	0.01	0.05	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.
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.
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.
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.
Zinc (Zn)	mg/kg	1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Europium (Eu)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Gadolinium (Gd)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lanthanum (La)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Terbium (Tb)	mg/kg	0.01	0.05	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	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.
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.
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.
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.
Zinc (Zn)	mg/kg	1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Europium (Eu)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Gadolinium (Gd)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lanthanum (La)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Terbium (Tb)	mg/kg	0.01	0.05	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.
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.
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.
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.



Zinc (Zn)	mg/kg	1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Europium (Eu)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Gadolinium (Gd)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lanthanum (La)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Terbium (Tb)	mg/kg	0.01	0.05	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.
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.
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.
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.
Zinc (Zn)	mg/kg	1	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Europium (Eu)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Gadolinium (Gd)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lanthanum (La)	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Terbium (Tb)	mg/kg	0.01	0.05	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:Test with reference to AP(89)1;Evaluation reference EN20105-A03.

Simulant Used	Test condition	01	02	03	04	05	06	Limit
Distilled water	50℃,5h	5	5	5	5	5	5	>4.5
3% Acetic acid	50℃,5h	5	5	5	5	5	5	>4.5
15% Ethanol	50℃,5h	5	5	5	5	5	5	>4.5
Olive oil	50℃,5h	5	5	5	5	5	5	>4.5

Simulant Used	Test condition	07	08	09	10	11	Limit
Distilled water	50℃,5h	5	5	5	5	5	>4.5
3% Acetic acid	50℃,5h	5	5	5	5	5	>4.5
15% Ethanol	50℃,5h	5	5	5	5	5	>4.5
Olive oil	50℃,5h	5	5	5	5	5	>4.5

Scale evaluation:

- 1: Severe migration
2: High migration
3: Medium migration
4: Low migration
5: No migration

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℃	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70℃	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
20% Ethanol	2.0h	70℃	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
olive oil	2.0h	70℃	mg/dm ²	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 ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
20% Ethanol	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
olive oil	2.0h	70°C	mg/dm ²	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 ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
20% Ethanol	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
olive oil	2.0h	70°C	mg/dm ²	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 ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
20% Ethanol	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
olive oil	2.0h	70°C	mg/dm ²	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 ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
20% Ethanol	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
olive oil	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Simulant Used	Time	Temperature	Unit	Limit	11		
					1st	2nd	3rd
3% Acetic acid	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.
10% Ethanol	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.
20% Ethanol	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.
olive oil	2.0h	70°C	mg/dm ²	10	N.D.	N.D.	N.D.

Note:

(1) mg/dm² = 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	03	04	05	06	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
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	09	10	11	Limit
Naphthalene	mg/kg	0.1	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.	Absent
Anthracene	mg/kg	0.1	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.	Absent
Pyrene	mg/kg	0.1	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.	Absent



Chrysene	mg/kg	0.1	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.	Absent
Benzo[k]fluoranthene	mg/kg	0.1	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.	Absent
Indeno[1,2,3-cd]pyrene	mg/kg	0.1	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.	Absent
Benzo[g,h,i]pyrene	mg/kg	0.1	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.	Absent
Benzo[e]pyrene	mg/kg	0.1	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.	/

Note:

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

6.VOM-BfR Besummung von fluchtigen 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
200°C, 4h	0.1	0.5	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 (PAA)

Test Method: With reference to BS EN 13130-1: 2004,determined by GC-MS. Test conditions: 3% acetic acid, 70°C, 2h

Test Item	MDL (mg/kg)	Limit (mg/kg)	01			02		
			1st	2nd	3rd	1st	2nd	3rd
4-Aminobiphenyl	0.002	N.D.	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.	N.D.



4-Chloro-o-Toluidine	0.002	N.D.	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.	N.D.
4-amino-2',3-dimethylazobenzene	0.002	N.D.	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.	N.D.
4-Chloroaniline	0.002	N.D.	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.	N.D.
4,4'-Diaminodiphenylmethane	0.002	N.D.	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.	N.D.
3,3'-Dimethoxybenzidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
3,3'-Dimethybenzidine	0.002	N.D.	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.	N.D.
6-methoxy-m-toluidine	0.002	N.D.	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.	N.D.
4,4'-Oxydianiline	0.002	N.D.	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.	N.D.
2-Aminotoluene	0.002	N.D.	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.	N.D.
2,4,5-Trimethylaniline	0.002	N.D.	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.	N.D.
4-Aminoazobenzene	0.002	N.D.	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.	N.D.
Total of other primary aromatic amines	0.01	0.01	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Test Item	MDL (mg/kg)	Limit (mg/kg)	03			04		
			1st	2nd	3rd	1st	2nd	3rd
4-Aminobiphenyl	0.002	N.D.	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.	N.D.
4-Chloro-o-Toluidine	0.002	N.D.	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.	N.D.
4-amino-2',3-dimethylazobenzene	0.002	N.D.	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.	N.D.
4-Chloroaniline	0.002	N.D.	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.	N.D.
4,4'-Diaminodiphenylmethane	0.002	N.D.	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.	N.D.
3,3'-Dimethoxybenzidine	0.002	N.D.	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.	N.D.
4,4'-Methylenedi-o-toluidine	0.002	N.D.	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.	N.D.
4,4'-methylenebis[2-chloroaniline]	0.002	N.D.	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.	N.D.
4,4'-Thiodianiline	0.002	N.D.	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.	N.D.
4-methyl-m-phenylenediamine	0.002	N.D.	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.	N.D.
2-Methoxyaniline	0.002	N.D.	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.	N.D.
1,3 phenylenediamine	0.002	N.D.	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.	N.D.

Test Item	MDL (mg/kg)	Limit (mg/kg)	05			06		
			1st	2nd	3rd	1st	2nd	3rd
4-Aminobiphenyl	0.002	N.D.	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.	N.D.
4-Chloro-o-Toluidine	0.002	N.D.	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.	N.D.
4-amino-2',3-dimethylazobenzene	0.002	N.D.	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.	N.D.
4-Chloroaniline	0.002	N.D.	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.	N.D.
4,4'-Diaminodiphenylmethane	0.002	N.D.	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.	N.D.
3,3'-Dimethoxybenzidine	0.002	N.D.	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.	N.D.



4,4'-Methylenedi-o-toluidine	0.002	N.D.	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.	N.D.
4,4'-methylenebis[2-chloroaniline]	0.002	N.D.	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.	N.D.
4,4'-Thiodianiline	0.002	N.D.	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.	N.D.
4-methyl-m-phenylenediamine	0.002	N.D.	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.	N.D.
2-Methoxyaniline	0.002	N.D.	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.	N.D.
1,3 phenylenediamine	0.002	N.D.	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.	N.D.

Test Item	MDL (mg/kg)	Limit (mg/kg)	07			08		
			1st	2nd	3rd	1st	2nd	3rd
4-Aminobiphenyl	0.002	N.D.	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.	N.D.
4-Chloro-o-Toluidine	0.002	N.D.	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.	N.D.
4-amino-2',3-dimethylazobenzene	0.002	N.D.	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.	N.D.
4-Chloroaniline	0.002	N.D.	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.	N.D.
4,4'-Diaminodiphenylmethane	0.002	N.D.	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.	N.D.
3,3'-Dimethoxybenzidine	0.002	N.D.	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.	N.D.
4,4'-Methylenedi-o-toluidine	0.002	N.D.	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.	N.D.
4,4'-methylenebis[2-chloroaniline]	0.002	N.D.	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.	N.D.
4,4'-Thiodianiline	0.002	N.D.	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.	N.D.
4-methyl-m-phenylenediamine	0.002	N.D.	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.	N.D.
2-Methoxyaniline	0.002	N.D.	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.	N.D.
1,3 phenylenediamine	0.002	N.D.	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.	N.D.

Test Item	MDL (mg/kg)	Limit (mg/kg)	09			10		
			1st	2nd	3rd	1st	2nd	3rd
4-Aminobiphenyl	0.002	N.D.	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.	N.D.
4-Chloro-o-Toluidine	0.002	N.D.	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.	N.D.
4-amino-2',3-dimethylazobenzene	0.002	N.D.	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.	N.D.
4-Chloroaniline	0.002	N.D.	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.	N.D.
4,4'-Diaminodiphenylmethane	0.002	N.D.	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.	N.D.
3,3'-Dimethoxybenzidine	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
3,3'-Dimethybenzidine	0.002	N.D.	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.	N.D.
6-methoxy-m-toluidine	0.002	N.D.	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.	N.D.
4,4'-Oxydianiline	0.002	N.D.	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.	N.D.
2-Aminotoluene	0.002	N.D.	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.	N.D.
2,4,5-Trimethylaniline	0.002	N.D.	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.	N.D.
4-Aminoazobenzene	0.002	N.D.	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)	11		
			1st	2nd	3rd
4-Aminobiphenyl	0.002	N.D.	N.D.	N.D.	N.D.
Benzidine	0.002	N.D.	N.D.	N.D.	N.D.
4-Chloro-o-Toluidine	0.002	N.D.	N.D.	N.D.	N.D.
2-Naphthylamine	0.002	N.D.	N.D.	N.D.	N.D.
4-amino-2',3-dimethylazobenzene	0.002	N.D.	N.D.	N.D.	N.D.
5-Nitro-o-toluidine	0.002	N.D.	N.D.	N.D.	N.D.
4-Chloroaniline	0.002	N.D.	N.D.	N.D.	N.D.
4-Methoxy-m-phenylenediamine	0.002	N.D.	N.D.	N.D.	N.D.
4,4'-Diaminodiphenylmethane	0.002	N.D.	N.D.	N.D.	N.D.
3,3'-Dichlorobenzidine	0.002	N.D.	N.D.	N.D.	N.D.
3,3'-Dimethoxybenzidine	0.002	N.D.	N.D.	N.D.	N.D.
3,3'-Dimethylbenzidine	0.002	N.D.	N.D.	N.D.	N.D.
4,4'-Methylenedi-o-toluidine	0.002	N.D.	N.D.	N.D.	N.D.
6-methoxy-m-toluidine	0.002	N.D.	N.D.	N.D.	N.D.
4,4'-methylenebis[2-chloroaniline]	0.002	N.D.	N.D.	N.D.	N.D.
4,4'-Oxydianiline	0.002	N.D.	N.D.	N.D.	N.D.
4,4'-Thiodianiline	0.002	N.D.	N.D.	N.D.	N.D.
2-Aminotoluene	0.002	N.D.	N.D.	N.D.	N.D.
4-methyl-m-phenylenediamine	0.002	N.D.	N.D.	N.D.	N.D.
2,4,5-Trimethylaniline	0.002	N.D.	N.D.	N.D.	N.D.
2-Methoxyaniline	0.002	N.D.	N.D.	N.D.	N.D.
4-Aminoazobenzene	0.002	N.D.	N.D.	N.D.	N.D.
1,3 phenylenediamine	0.002	N.D.	N.D.	N.D.	N.D.
Total of other primary aromatic amines	0.01	0.01	N.D.	N.D.	N.D.

Note:

(1)1mg/kg=0.0001%;

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

(3)MDL= Method Detection Limit.

address:

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Tel: 400-688-3552 Web:www.dl-cert.com Email: service@dl-cert.com



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
Lead (Pb)	mg/kg	5	100	N.D.
Cadmium (Cd)	mg/kg	5	100	N.D.
Zinc (Zn)	mg/kg	5	100	N.D.
Platinum (Pt)	mg/kg	5	50	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	01	02	03	04	05	06	Conclusion
Peroxides value	Absent	Absent	Absent	Absent	Absent	Absent	Absent	PASS

Test Item	Limit	07	08	09	10	11	Conclusion
Peroxides value	Absent	Absent	Absent	Absent	Absent	Absent	PASS

10.Extractive Substance

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

Simulant Used	Test duration /Temperature	Unit	Limit	11
Distilled water	Reflux for 5 hours	%	0.5	<0.1
3% Acetic acid	Reflux for 5 hours	%	0.5	<0.1
10% Ethanol	Reflux for 5 hours	%	0.5	<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
Dibutyltin (DBT)	mg/kg	0.01	1	N.D.
Tributyltin (TBT)	mg/kg	0.01	1	N.D.
Triphenyltin (TPT)	mg/kg	0.01	1	N.D.
Diocetyltn (DOT)	mg/kg	0.01	1	N.D.
Monobutyltin (MBT)	mg/kg	0.01	1	N.D.
Monooctyltin (MOT)	mg/kg	0.01	1	N.D.
Tetrabutyltin (TTBT)	mg/kg	0.01	1	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			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			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) 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	03	04	05	06
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	09	10	11
Bisphenol A	mg/kg	0.1	Absent	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.

14.Specific Migration of - Hexene

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

Simulant Used	Time	Temperature	Unit	Limit	01			02		
					1st	2nd	3rd	1st	2nd	3rd
3% Acetic acid	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Olive oil	2h	70°C	mg/kg	3	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	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Olive oil	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Simulant Used	Time	Temperature	Unit	Limit	05		
					1st	2nd	3rd
3% Acetic acid	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.
10% Ethanol	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.
Olive oil	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.

Note:

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

15. Specific Migration of - Octene

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

Simulant Used	Time	Temperature	Unit	Limit	01			02		
					1st	2nd	3rd	1st	2nd	3rd
3% Acetic acid	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Olive oil	2h	70°C	mg/kg	3	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	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
10% Ethanol	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Olive oil	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Simulant Used	Time	Temperature	Unit	Limit	05		
					1st	2nd	3rd
3% Acetic acid	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.



10% Ethanol	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.
Olive oil	2h	70°C	mg/kg	3	N.D.	N.D.	N.D.

Note:

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

16. Specific Migration of - Bisphenol A (BPA)

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

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

Test Item	Unit	MDL	Limit	06			07		
				1st	2nd	3rd	1st	2nd	3rd
Bisphenol A	mg/kg	0.01	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Test Item	Unit	MDL	Limit	08			09		
				1st	2nd	3rd	1st	2nd	3rd
Bisphenol A	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.

17. Specific Migration of - Terephthalic acid

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

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

Test Item	Unit	MDL	Limit	10		
				1st	2nd	3rd
Terephthalic acid	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.



18. Specific Migration of - Ethylene glycol

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

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

Test Item	Unit	MDL	Limit	10		
				1st	2nd	3rd
Ethylene glycol	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.

19. Specific Migration of - Acetaldehyde

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

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

Test Item	Unit	MDL	Limit	10		
				1st	2nd	3rd
Acetaldehyde	mg/kg	0.01	0.01	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





Addition Photo



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