# Test Report



**APPLICANT:** Hallpack(Heshan) Packaging Products Co., Ltd.

**ADDRESS:** The 3rd floor, Building 2, No. 128 Xinyuan Third Road,Taoyuan Town, Heshan City, Guangdong PRC 529700

The following test sample information is provided and confirmed by the applicant:

**Sample name:** Sushi Tube

**Use condition:** One time use

**TEST SPECIFICATION:** As specified by client, to test the specified items of submitted sample according to (EC) 1935/2004 and its amendments, German Food & Feed Acts (LFGB),Section 30 & 31, and Italy DM21/3/73, and Regulation (EU) No.10/2011, BFR Recommendation, and Resolution CM Res(2020)9.

1. **For PS Material (001)**
2. **For PE Material (002)**
3. **For PP Material (003,004)**
4. **For Aluminum Foil Material (005)**

**CONCLUSION(s):**

| | | |
|---|---|---|
| 1. | Sensory analysis(001,002,003,004) | **PASS** |
| 2. | Overall Migration(001,002,003,004) | **PASS** |
| 3. | Specific migration of 19 heavy Metals(001,002,003,004) | **PASS** |
| 4. | Specific migration of 1,3-Butadiene(001) | **PASS** |
| 5. | Volatile Organic Matters(VOM)(001) | **PASS** |
| 6. | Peroxide(001,002) | **PASS** |
| 7. | Specific migration of 29 Primary Aromatic Amines (PAAs) (002,003,004) | **PASS** |
| 8. | Catalyst residues(002,003,004) | **PASS** |
| 9. | Visible migration (002,004) | **PASS** |
| 10. | Specific release of heavy metal(005) | **PASS** |

**Remark(s):**

1. The result only relates to the items tested.
2. "Pass" denotes the measured result is within limit, "Fail" denotes the measured result is beyond limit, "inconclusive" denotes the measured result can be within or beyond limit,and the confidence level of the expended uncertainty for "Pass", "Fail" and "Inconclusive" is 95%.

**Date of test sample(s) receipt:** Jan.27,2026

**Date of Test Period:** Jan.27,2026 ~ Feb.03,2026

**Date of Report:** Feb.03,2026

NAP Testing Technology Service (Zhongshan) Co., LTD

Luo Xiao Yan
Authorized Signatory

新亚太检测技术服务(中山)有限公司 NAP Testing Technology Service (Zhongshan) Co.,LTD 检验检测专用章 Inspection&Testing Services

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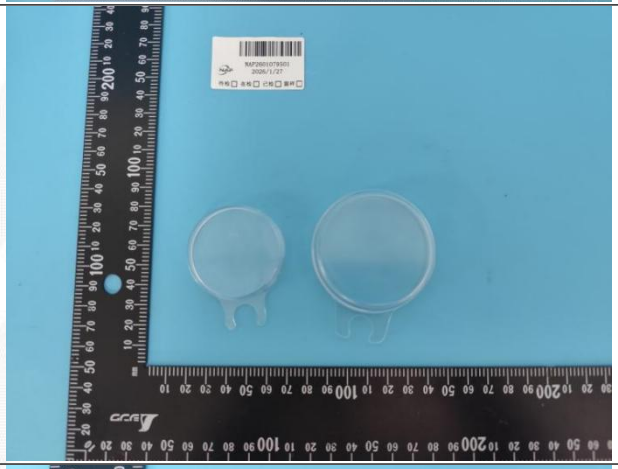
# Test Report



## SAMPLE DESCRIPTION:

| Sample No. | Description(Material) | Picture(s) |
|---|---|---|
| 000 | Whole Product |  |
| 001 | Transparent plastic (PS) |  |
| 002 | White plastic (PE) |  |

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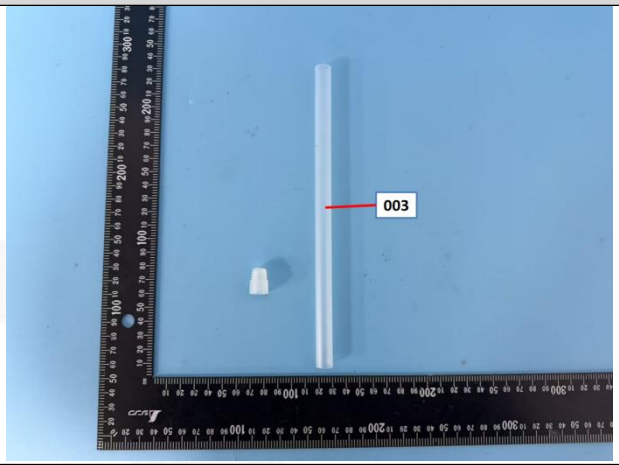
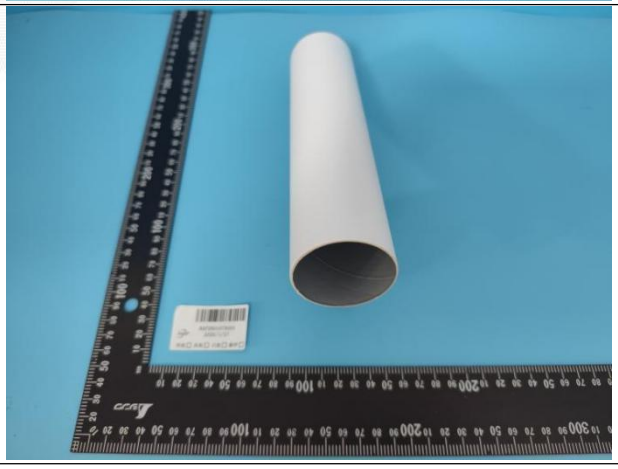
# Test Report



| Sample No. | Description(Material) | Picture(s) |
|---|---|---|
| 003 | Transparent plastic (PP) |   |
| 004 | Black plastic (PP) |   |
| 005 | Aluminum Foil (Aluminium) |  |

**Remark(s):**

1. The sample material type is specified by client.

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## TEST RESULT(S):

**1. Sensory analysis[German Food & Feed Acts of September 1, 2005(LFGB),Section 30 and 31]^**

Test Method: with reference to DIN 10955:2024-01.

| Test Item(s) | | Result(s) | Limit |
|---|---|---|---|
| | | 001 | |
| Sensory analysis | Odour (Screening test,40°C, 24h) | 1 | ≤2.5 |
| | Off-flavour(taint) (Deionized water,40°C, 48h) | 0 | ≤2.5 |
| Conclusion | | PASS | — |

| Test Item(s) | | Result(s) | Limit |
|---|---|---|---|
| | | 002 | |
| Sensory analysis | Odour (Screening test,40°C, 24h) | 1 | ≤2.5 |
| | Off-flavour(taint) (Deionized water,40°C, 48h) | 0 | ≤2.5 |
| Conclusion | | PASS | — |

| Test Item(s) | | Result(s) | Limit |
|---|---|---|---|
| | | 003 | |
| Sensory analysis | Odour (Screening test,40°C, 24h) | 0 | ≤2.5 |
| | Off-flavour(taint) (Deionized water,40°C, 48h) | 0 | ≤2.5 |
| Conclusion | | PASS | — |

| Test Item(s) | | Result(s) | Limit |
|---|---|---|---|
| | | 004 | |
| Sensory analysis | Odour (Screening test,40°C, 24h) | 1 | ≤2.5 |
| | Off-flavour(taint) (Deionized water,40°C, 48h) | 0 | ≤2.5 |
| Conclusion | | PASS | — |

**Remark(s):**

1. Available grading (point scale) are listed as follow:
   0—no perceptible difference in odour/Off-flavour(taint)
   1—just perceptible difference in odour/Off-flavour(taint)
   2—slight difference in odour/Off-flavour(taint)
   3—marked difference in odour/Off-flavour(taint)
   4—strong difference in odour/Off-flavour(taint)

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2. “＜” denotes“less than”.
3. The test conditions and test items were specified by the client.

**2. Overall Migration [Regulation(EU)No.10/2011 and its amendments ]**

Test method:with reference to EN1186-3:2022.

| Test Item(s) | RL ($mg/dm^2$) | Test result(s) 001 1st migration | OML ($mg/dm^2$) |
|---|---|---|---|
| Overall Migration (3% acetic acid, 20℃, 48h) | 1.0 | ＜1.0 | ≤10 |
| Overall Migration (20% ethanol,20℃, 48h) | 1.0 | ＜1.0 | ≤10 |
| **Conclusion** | | **PASS** | — |

| Test Item(s) | RL ($mg/dm^2$) | Test result(s) 002 1st migration | OML ($mg/dm^2$) |
|---|---|---|---|
| Overall Migration (3% acetic acid, 20℃, 48h) | 1.0 | ＜1.0 | ≤10 |
| Overall Migration (20% ethanol,20℃, 48h) | 1.0 | ＜1.0 | ≤10 |
| **Conclusion** | | **PASS** | — |

| Test Item(s) | RL ($mg/dm^2$) | Test result(s) 003 1st migration | OML ($mg/dm^2$) |
|---|---|---|---|
| Overall Migration (3% acetic acid, 20℃, 48h) | 1.0 | ＜1.0 | ≤10 |
| Overall Migration (20% ethanol,20℃, 48h) | 1.0 | 1.5 | ≤10 |
| **Conclusion** | | **PASS** | — |

| Test Item(s) | RL ($mg/dm^2$) | Test result(s) 004 | OML ($mg/dm^2$) |
|---|---|---|---|
| Overall Migration (3% acetic acid, 20℃, 48h) | 1.0 | ＜1.0 | ≤10 |
| Overall Migration (20% ethanol,20℃, 48h) | 1.0 | ＜1.0 | ≤10 |
| **Conclusion** | | **PASS** | — |

**Remark(s):**

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1. RL=Report Limit, "＜"means "less than";1 mg/kg = 0.0001%; "—"=Not applicable
2. "*"means that the compliance is determined based on the results of the first test
3. The migration conditions of the submitted samples are specified by the client.
4. The samples migration are carried out using the full immersion method.
5. The migration results were expressed as the values obtained by the migration test with S/V = 6 $dm^2$/L.
6. SML=Specific migration Limit,SML(T)= Total Specific migration Limit,OML=Overall migration Limit.

### 3. Specific Migration of 19 heavy Metals [Regulation(EU)No.10/2011 and (EU)2020/1245]^

Test method: With reference to EN13130-1, analyzed byICP-OES.

| Test Item(s) | RL (mg/kg) | Test Result(s)(mg/kg) | SML (mg/kg) | |
|---|---|---|---|---|
| | | 001 | | |
| | | 3% Acetic acid, 40℃, 48h | | |
| | | 1st migration | | |
| Aluminum (Al) | 0.3 | ＜0.3 | ≤1 | |
| Antimony (Sb) | 0.01 | ＜0.01 | ≤0.04 | |
| Arsenic (As) | 0.003 | ＜0.003 | ≤0.01 | |
| Barium (Ba) | 0.3 | ＜0.3 | ≤1 | |
| Cadmium (Cd) | 0.0005 | ＜0.0005 | ≤0.002 | |
| Chromium (Cr) | 0.003 | ＜0.003 | ≤0.01 | |
| Cobalt (Co) | 0.01 | ＜0.01 | ≤0.05 | |
| Copper (Cu) | 1 | ＜1 | ≤5 | |
| Iron (Fe) | 5 | ＜5 | ≤48 | |
| Lead (Pb) | 0.003 | ＜0.003 | ≤0.01 | |
| Lithium (Li) | 0.2 | ＜0.2 | ≤0.6 | |
| Manganese (Mn) | 0.2 | ＜0.2 | ≤0.6 | |
| Mercury (Hg) | 0.003 | ＜0.003 | ≤0.01 | |
| Nickel (Ni) | 0.005 | ＜0.005 | ≤0.02 | |
| Zinc (Zn) | 1 | ＜1 | ≤5 | |
| Europium(Eu) | 0.01 | ＜0.01 | ≤0.05 | ≤0.05 |
| Gadolinium(Gd) | 0.01 | ＜0.01 | ≤0.05 | |
| Lanthanum(La) | 0.01 | ＜0.01 | ≤0.05 | |
| Terbium(Tb) | 0.01 | ＜0.01 | ≤0.05 | |
| **Conclusion** | | **PASS** | — | |

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# Test Report



| Test Item(s) | RL (mg/kg) | Test Result(s)(mg/kg) | SML (mg/kg) | |
|---|---|---|---|---|
| | | 002 | | |
| | | 3% Acetic acid, 40℃, 48h | | |
| | | 1st migration | | |
| Aluminum (Al) | 0.3 | ＜0.3 | ≤1 | |
| Antimony (Sb) | 0.01 | ＜0.01 | ≤0.04 | |
| Arsenic (As) | 0.003 | ＜0.003 | ≤0.01 | |
| Barium (Ba) | 0.3 | ＜0.3 | ≤1 | |
| Cadmium (Cd) | 0.0005 | ＜0.0005 | ≤0.002 | |
| Chromium (Cr) | 0.003 | ＜0.003 | ≤0.01 | |
| Cobalt (Co) | 0.01 | ＜0.01 | ≤0.05 | |
| Copper (Cu) | 1 | ＜1 | ≤5 | |
| Iron (Fe) | 5 | ＜5 | ≤48 | |
| Lead (Pb) | 0.003 | ＜0.003 | ≤0.01 | |
| Lithium (Li) | 0.2 | ＜0.2 | ≤0.6 | |
| Manganese (Mn) | 0.2 | ＜0.2 | ≤0.6 | |
| Mercury (Hg) | 0.003 | ＜0.003 | ≤0.01 | |
| Nickel (Ni) | 0.005 | ＜0.005 | ≤0.02 | |
| Zinc (Zn) | 1 | ＜1 | ≤5 | |
| Europium(Eu) | 0.01 | ＜0.01 | ≤0.05 | ≤0.05 |
| Gadolinium(Gd) | 0.01 | ＜0.01 | ≤0.05 | |
| Lanthanum(La) | 0.01 | ＜0.01 | ≤0.05 | |
| Terbium(Tb) | 0.01 | ＜0.01 | ≤0.05 | |
| **Conclusion** | | **PASS** | — | |

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# Test Report



| Test Item(s) | RL (mg/kg) | Test Result(s)(mg/kg) | SML (mg/kg) | |
|---|---|---|---|---|
| | | 003 | | |
| | | 3% Acetic acid, 40℃, 48h | | |
| | | 1st migration | | |
| Aluminum (Al) | 0.3 | ＜0.3 | ≤1 | |
| Antimony (Sb) | 0.01 | ＜0.01 | ≤0.04 | |
| Arsenic (As) | 0.003 | ＜0.003 | ≤0.01 | |
| Barium (Ba) | 0.3 | ＜0.3 | ≤1 | |
| Cadmium (Cd) | 0.0005 | ＜0.0005 | ≤0.002 | |
| Chromium (Cr) | 0.003 | ＜0.003 | ≤0.01 | |
| Cobalt (Co) | 0.01 | ＜0.01 | ≤0.05 | |
| Copper (Cu) | 1 | ＜1 | ≤5 | |
| Iron (Fe) | 5 | ＜5 | ≤48 | |
| Lead (Pb) | 0.003 | ＜0.003 | ≤0.01 | |
| Lithium (Li) | 0.2 | ＜0.2 | ≤0.6 | |
| Manganese (Mn) | 0.2 | ＜0.2 | ≤0.6 | |
| Mercury (Hg) | 0.003 | ＜0.003 | ≤0.01 | |
| Nickel (Ni) | 0.005 | ＜0.005 | ≤0.02 | |
| Zinc (Zn) | 1 | ＜1 | ≤5 | |
| Europium(Eu) | 0.01 | ＜0.01 | ≤0.05 | ≤0.05 |
| Gadolinium(Gd) | 0.01 | ＜0.01 | ≤0.05 | |
| Lanthanum(La) | 0.01 | ＜0.01 | ≤0.05 | |
| Terbium(Tb) | 0.01 | ＜0.01 | ≤0.05 | |
| **Conclusion** | | **PASS** | — | |

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# Test Report



| Test Item(s) | RL (mg/kg) | Test Result(s)(mg/kg) | SML (mg/kg) | |
|---|---|---|---|---|
| | | 004 | | |
| | | 3% Acetic acid, 40℃, 48h | | |
| | | 1st migration | | |
| Aluminum (Al) | 0.3 | ＜0.3 | ≤1 | |
| Antimony (Sb) | 0.01 | ＜0.01 | ≤0.04 | |
| Arsenic (As) | 0.003 | ＜0.003 | ≤0.01 | |
| Barium (Ba) | 0.3 | ＜0.3 | ≤1 | |
| Cadmium (Cd) | 0.0005 | ＜0.0005 | ≤0.002 | |
| Chromium (Cr) | 0.003 | ＜0.003 | ≤0.01 | |
| Cobalt (Co) | 0.01 | ＜0.01 | ≤0.05 | |
| Copper (Cu) | 1 | ＜1 | ≤5 | |
| Iron (Fe) | 5 | ＜5 | ≤48 | |
| Lead (Pb) | 0.003 | ＜0.003 | ≤0.01 | |
| Lithium (Li) | 0.2 | ＜0.2 | ≤0.6 | |
| Manganese (Mn) | 0.2 | ＜0.2 | ≤0.6 | |
| Mercury (Hg) | 0.003 | ＜0.003 | ≤0.01 | |
| Nickel (Ni) | 0.005 | ＜0.005 | ≤0.02 | |
| Zinc (Zn) | 1 | ＜1 | ≤5 | |
| Europium(Eu) | 0.01 | ＜0.01 | ≤0.05 | ≤0.05 |
| Gadolinium(Gd) | 0.01 | ＜0.01 | ≤0.05 | |
| Lanthanum(La) | 0.01 | ＜0.01 | ≤0.05 | |
| Terbium(Tb) | 0.01 | ＜0.01 | ≤0.05 | |
| **Conclusion** | | **PASS** | — | |

**Remark(s):**

1. RL=Report Limit, "＜"means "less than";1 mg/kg = 0.0001%； "—"=Not applicable
2. "*"means that the compliance is determined based on the results of the first test.
3. The migration conditions of the submitted samples are specified by the client.
4. The samples were fully immersed in food simulants.
5. The migration results was calculated as S/V= 6 $dm^2$/L(kg),and expressed as the concentration content in the sample migration solution.
6. SML=Specific migration Limit,SML(T)= Total Specific migration Limit,OML=Overall migration Limit.

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**4. Specific migration of 1,3-Butadiene [Regulation (EU)No 10/2011 and its amendments]^**

Test Method: with reference to EN 13130-1:2004 & CEN/TS 13130-15:2005, analyzed by GC-MS.

| Test Item(s) | RL (mg/kg) | Test result(s)(mg/kg) | SML (mg/kg) |
|---|---|---|---|
| | | 001 | |
| | | 1st migration | |
| 1,3-Butadiene (3% acetic acid, 40℃, 48h) | 0.01 | ＜0.01 | Not Detected (DL=0.01) |
| 1,3-Butadiene (20% ethanol,40℃, 48h) | 0.01 | ＜0.01 | Not Detected (DL=0.01) |

**Remark(s):**

1. RL=Report Limit, "＜"means "less than";1 mg/kg = 0.0001%; "—"=Not applicable
2. "*"means that the compliance is determined based on the results of the first test.
3. The migration conditions of the submitted samples are specified by the client.
4. The samples were fully immersed in food simulants.
5. The migration results was calculated as S/V= 6 $dm^2$/L(kg),and expressed as the concentration content in the sample migration solution.
6. SML=Specific migration Limit,SML(T)= Total Specific migration Limit,OML=Overall migration Limit.

**5. Volatile Organic Matters(VOM)[BfR Recommendation XV]^**

Test Method: with reference to the 48th Communication on the testing of plastics, Bundesgesundheitsblatt 25 (1982) 334

| Test Item(s) | RL ($mg/dm^2$) | Test result(s) ($mg/dm^2$) | Limit ($mg/dm^2$) |
|---|---|---|---|
| | | 001 | |
| Volatile Organic Matters (90℃ , 24h) | 5 | ＜5 | ≤15 |
| **Conclusion** | | **PASS** | — |

**Remark(s):**

1. RL=Report Limit, "＜"means "less than";"—"=Not applicable.
2. The result was expressed as mass percentage(% w/w).

**6. Peroxide [BfR Recommendation XV]^**

Test Method: with reference to 58th Communication on testing of plastics, Bundesgesundheitsblatt 40 (1997) 412.

| Test Item(s) | Test result(s) | | Limit |
|---|---|---|---|
| | 001 | 002 | |
| Peroxide | Absent | Absent | Absent |
| **Conclusion** | **PASS** | **PASS** | — |

**Remark(s):**

1. Absent denotes not positively.

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**7. Specific migration of 29 Primary Aromatic Amines(PAAs) [Regulation(EU)No.10/2011 and (EU)2020/1245]^**

Test Method: with reference to EN 13130-1, analyzed byLC-MS/MS.

| Test Item(s) | CAS No. | RL (mg/kg) | Test result(s) 002 3% acetic acid, 40℃, 48h 1st migration | SML (mg/kg) |
|---|---|---|---|---|
| 4-Aminobiphenyl | 92-67-1 | 0.001 | ＜0.001 | ≤0.002 |
| Benzidine | 92-87-5 | 0.001 | ＜0.001 | ≤0.002 |
| 4-Chloro-2-methylaniline | 95-69-2 | 0.001 | ＜0.001 | ≤0.002 |
| 2-naphthylamine | 91-59-8 | 0.001 | ＜0.001 | ≤0.002 |
| 4-Amino-2′,3-dimethylazobenzene | 97-56-3 | 0.001 | ＜0.001 | ≤0.002 |
| 2-Methyl-5-nitroaniline | 99-55-8 | 0.001 | ＜0.001 | ≤0.002 |
| 4-chloroaniline | 106-47-8 | 0.001 | ＜0.001 | ≤0.002 |
| 2,4-Diaminoanisole | 615-05-4 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-methylenedianiline | 101-77-9 | 0.001 | ＜0.001 | ≤0.002 |
| 3,3'-Dichlorobenzidine | 91-94-1 | 0.001 | ＜0.001 | ≤0.002 |
| 3,3'-Dimethoxybenzidine | 119-90-4 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-bi-o-toluidine | 119-93-7 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-Methylene-di-o-toluidine | 838-88-0 | 0.001 | ＜0.001 | ≤0.002 |
| p-cresidine | 120-71-8 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-methylene-bis-(2-chloro-anilin e) | 101-14-4 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-oxydianiline | 101-80-4 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-thiodianiline | 139-65-1 | 0.001 | ＜0.001 | ≤0.002 |
| o-Toluidine | 95-53-4 | 0.001 | ＜0.001 | ≤0.002 |
| 2,4-toluenediamine | 95-80-7 | 0.001 | ＜0.001 | ≤0.002 |
| 2,4,5-Trimethylaniline | 137-17-7 | 0.001 | ＜0.001 | ≤0.002 |
| o-anisidine | 90-04-0 | 0.001 | ＜0.001 | ≤0.002 |
| 4-aminoazobenzene | 60-09-3 | 0.001 | ＜0.001 | ≤0.002 |
| Aniline | 62-53-3 | 0.001 | ＜0.001 | ≤0.01 |
| 2,4-Dimethylaniline | 95-68-1 | 0.001 | ＜0.001 | |
| 2,6-Dimethylaniline | 87-62-7 | 0.001 | ＜0.001 | |
| p-phenylenediamine | 106-50-3 | 0.001 | ＜0.001 | |
| m-phenylenediamine | 108-45-2 | | ＜0.001 | |
| 2,6-toluenediamine | 823-40-5 | 0.001 | ＜0.001 | |
| 1,5-naphthylenediamine | 2243-62-1 | 0.001 | ＜0.001 | |
| **Conclusion** | — | — | **PASS** | — |

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# Test Report



| Test Item(s) | CAS No. | RL (mg/kg) | Test result(s) | SML (mg/kg) |
|---|---|---|---|---|
| | | | 003 | |
| | | | 3% acetic acid, 40°C, 48h | |
| | | | 1st migration | |
| 4-Aminobiphenyl | 92-67-1 | 0.001 | <0.001 | ≤0.002 |
| Benzidine | 92-87-5 | 0.001 | <0.001 | ≤0.002 |
| 4-Chloro-2-methylaniline | 95-69-2 | 0.001 | <0.001 | ≤0.002 |
| 2-naphthylamine | 91-59-8 | 0.001 | <0.001 | ≤0.002 |
| 4-Amino-2′,3-dimethylazobenzene | 97-56-3 | 0.001 | <0.001 | ≤0.002 |
| 2-Methyl-5-nitroaniline | 99-55-8 | 0.001 | <0.001 | ≤0.002 |
| 4-chloroaniline | 106-47-8 | 0.001 | <0.001 | ≤0.002 |
| 2,4-Diaminoanisole | 615-05-4 | 0.001 | <0.001 | ≤0.002 |
| 4,4'-methylenedianiline | 101-77-9 | 0.001 | <0.001 | ≤0.002 |
| 3,3'-Dichlorobenzidine | 91-94-1 | 0.001 | <0.001 | ≤0.002 |
| 3,3'-Dimethoxybenzidine | 119-90-4 | 0.001 | <0.001 | ≤0.002 |
| 4,4'-bi-o-toluidine | 119-93-7 | 0.001 | <0.001 | ≤0.002 |
| 4,4'-Methylene-di-o-toluidine | 838-88-0 | 0.001 | <0.001 | ≤0.002 |
| p-cresidine | 120-71-8 | 0.001 | <0.001 | ≤0.002 |
| 4,4'-methylene-bis-(2-chloro-aniline) | 101-14-4 | 0.001 | <0.001 | ≤0.002 |
| 4,4'-oxydianiline | 101-80-4 | 0.001 | <0.001 | ≤0.002 |
| 4,4'-thiodianiline | 139-65-1 | 0.001 | <0.001 | ≤0.002 |
| o-Toluidine | 95-53-4 | 0.001 | <0.001 | ≤0.002 |
| 2,4-toluenediamine | 95-80-7 | 0.001 | <0.001 | ≤0.002 |
| 2,4,5-Trimethylaniline | 137-17-7 | 0.001 | <0.001 | ≤0.002 |
| o-anisidine | 90-04-0 | 0.001 | <0.001 | ≤0.002 |
| 4-aminoazobenzene | 60-09-3 | 0.001 | <0.001 | ≤0.002 |
| Aniline | 62-53-3 | 0.001 | <0.001 | ≤0.01 |
| 2,4-Dimethylaniline | 95-68-1 | 0.001 | <0.001 | |
| 2,6-Dimethylaniline | 87-62-7 | 0.001 | <0.001 | |
| p-phenylenediamine | 106-50-3 | 0.001 | <0.001 | |
| m-phenylenediamine | 108-45-2 | | <0.001 | |
| 2,6-toluenediamine | 823-40-5 | 0.001 | <0.001 | |
| 1,5-naphthylenediamine | 2243-62-1 | 0.001 | <0.001 | |
| **Conclusion** | — | — | **PASS** | — |

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# Test Report



| Test Item(s) | CAS No. | RL (mg/kg) | Test result(s) 004 3% acetic acid, 40°C, 48h 1st migration | SML (mg/kg) |
|---|---|---|---|---|
| 4-Aminobiphenyl | 92-67-1 | 0.001 | ＜0.001 | ≤0.002 |
| Benzidine | 92-87-5 | 0.001 | ＜0.001 | ≤0.002 |
| 4-Chloro-2-methylaniline | 95-69-2 | 0.001 | ＜0.001 | ≤0.002 |
| 2-naphthylamine | 91-59-8 | 0.001 | ＜0.001 | ≤0.002 |
| 4-Amino-2′,3-dimethylazobenzene | 97-56-3 | 0.001 | ＜0.001 | ≤0.002 |
| 2-Methyl-5-nitroaniline | 99-55-8 | 0.001 | ＜0.001 | ≤0.002 |
| 4-chloroaniline | 106-47-8 | 0.001 | ＜0.001 | ≤0.002 |
| 2,4-Diaminoanisole | 615-05-4 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-methylenedianiline | 101-77-9 | 0.001 | ＜0.001 | ≤0.002 |
| 3,3'-Dichlorobenzidine | 91-94-1 | 0.001 | ＜0.001 | ≤0.002 |
| 3,3'-Dimethoxybenzidine | 119-90-4 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-bi-o-toluidine | 119-93-7 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-Methylene-di-o-toluidine | 838-88-0 | 0.001 | ＜0.001 | ≤0.002 |
| p-cresidine | 120-71-8 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-methylene-bis-(2-chloro-aniline) | 101-14-4 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-oxydianiline | 101-80-4 | 0.001 | ＜0.001 | ≤0.002 |
| 4,4'-thiodianiline | 139-65-1 | 0.001 | ＜0.001 | ≤0.002 |
| o-Toluidine | 95-53-4 | 0.001 | ＜0.001 | ≤0.002 |
| 2,4-toluenediamine | 95-80-7 | 0.001 | ＜0.001 | ≤0.002 |
| 2,4,5-Trimethylaniline | 137-17-7 | 0.001 | ＜0.001 | ≤0.002 |
| o-anisidine | 90-04-0 | 0.001 | ＜0.001 | ≤0.002 |
| 4-aminoazobenzene | 60-09-3 | 0.001 | ＜0.001 | ≤0.002 |
| Aniline | 62-53-3 | 0.001 | ＜0.001 | ≤0.01 |
| 2,4-Dimethylaniline | 95-68-1 | 0.001 | ＜0.001 | |
| 2,6-Dimethylaniline | 87-62-7 | 0.001 | ＜0.001 | |
| p-phenylenediamine | 106-50-3 | 0.001 | ＜0.001 | |
| m-phenylenediamine | 108-45-2 | | ＜0.001 | |
| 2,6-toluenediamine | 823-40-5 | 0.001 | ＜0.001 | |
| 1,5-naphthylenediamine | 2243-62-1 | 0.001 | ＜0.001 | |
| **Conclusion** | — | — | **PASS** | — |

**Remark(s):**

1. RL=Report Limit, "＜"means "less than";1 mg/kg = 0.0001%； "—"=Not applicable
2. "*"means that the compliance is determined based on the results of the first test.
3. The migration conditions of the submitted samples are specified by the client.
4. The samples were fully immersed in food simulants.
5. The migration results was calculated as S/V= 6 $dm^2$/L(kg),and expressed as the concentration content in the sample migration solution.
6. SML=Specific migration Limit,SML(T)= Total Specific migration Limit,OML=Overall migration Limit.

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**8. Catalyst residues[BfR Recommendation XII]^**

Test Method: Microwave digestion, and analyzed by ICP-OES.

| Test Item(s) | RL (mg/kg) | Test result(s) (mg/kg) | Limit (mg/kg) |
|---|---|---|---|
| | | 002 | |
| Chromium (Cr) | 1 | 5 | ≤10 |
| Vanadium (V) | 1 | ＜1 | ≤20 |
| Zirconium (Zr) | 10 | ＜10 | ≤100 |
| Hafnium (Hf) | 10 | ＜10 | ≤100 |
| **Conclusion** | | **PASS** | — |

| Test Item(s) | RL (mg/kg) | Test result(s) (mg/kg) | Limit (mg/kg) |
|---|---|---|---|
| | | 003 | |
| Chromium (Cr) | 1 | 4 | ≤10 |
| Vanadium (V) | 1 | ＜1 | ≤20 |
| Zirconium (Zr) | 10 | ＜10 | ≤100 |
| Hafnium (Hf) | 10 | ＜10 | ≤100 |
| **Conclusion** | | **PASS** | — |

| Test Item(s) | RL (mg/kg) | Test result(s) (mg/kg) | Limit (mg/kg) |
|---|---|---|---|
| | | 004 | |
| Chromium (Cr) | 1 | 5 | ≤10 |
| Vanadium (V) | 1 | ＜1 | ≤20 |
| Zirconium (Zr) | 10 | ＜10 | ≤100 |
| Hafnium (Hf) | 10 | ＜10 | ≤100 |
| **Conclusion** | | **PASS** | — |

**Remark(s):**

1. RL=Report Limit, “＜”means “less than”; 1 mg/kg = 0.0001% ,“—”=Not applicable

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**9. Visible migration [Res AP(89)1 & BfR Recommendation XV]**

Test Method: the 24th Communication on the Examination of Plastics,Bundesgesundheitsblatt 15(1972)285.

| Test Item(s) | Test result(s) | Limit |
|---|---|---|
| | 002 | |
| Visible migration (3% acetic acid, 20℃, 48h) | No bleeding | Absent |
| Visible migration (20% ethanol,20℃, 48h) | No bleeding | Absent |
| **Conclusion** | **PASS** | — |

| Test Item(s) | Test result(s) | Limit |
|---|---|---|
| | 004 | |
| Visible migration (3% acetic acid, 20℃, 48h) | No bleeding | Absent |
| Visible migration (20% ethanol,20℃, 48h) | No bleeding | Absent |
| **Conclusion** | **PASS** | — |

**Remark(s):**

1. No bleeding means that the sample meet the requirements if comparison of test strips and blank strips reveals no difference,and bleeding means that staining was found from sample

**10. Specific release of heavy metal [Resolution CM/Res(2020)9 and its technical guide ]^**

Test Method: Refer to Resolution CM/Res(2020)9 and its technical guide , analyzed byICP-MS.

| Test Item(s) | RL (mg/kg) | Test result(s) (mg/kg) | SML (mg/kg) |
|---|---|---|---|
| | | 005 | |
| | | Artificial tap water,40℃ ,48h | |
| | | 1st migration | |
| Silver | 0.1 | ＜0.1 | ≤0.56 |
| Aluminium | 10 | ＜10 | ≤35 |
| Cobalt | 0.4 | ＜0.4 | ≤0.14 |
| Chromium | 2 | ＜2 | ≤7 |
| Copper | 5 | ＜5 | ≤28 |
| Iron | 80 | ＜80 | ≤280 |
| Magnesium | 10 | ＜10 | — |
| Manganese | 1 | ＜1 | ≤3.85 |
| Molybdenum | 0.2 | ＜0.2 | ≤0.84 |
| Nickel | 0.3 | ＜0.3 | ≤0.98 |
| Tin | 50 | ＜50 | ≤700 |

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# Test Report



| Test Item(s) | RL (mg/kg) | Test result(s) (mg/kg) | SML (mg/kg) |
|---|---|---|---|
| | | 005 | |
| | | Artificial tap water,40°C ,48h | |
| | | 1st migration | |
| Titanium | 10 | ＜10 | — |
| Vanadium | 0.02 | ＜0.02 | ≤0.07 |
| Zinc | 5 | ＜5 | ≤35 |
| Arsenic | 0.04 | ＜0.04 | ≤0.014 |
| Barium | 2 | ＜2 | ≤8.4 |
| Beryllium | 0.02 | ＜0.02 | ≤0.07 |
| Cadmium | 0.01 | ＜0.01 | ≤0.035 |
| Mercury | 0.007 | ＜0.007 | ≤0.021 |
| Lithium | 0.1 | ＜0.1 | ≤0.336 |
| Lead | 0.02 | ＜0.02 | ≤0.07 |
| Antimony | 0.08 | ＜0.08 | ≤0.28 |
| Thallium | 0.002 | ＜0.002 | ≤0.007 |
| Zirconium | 4 | ＜4 | ≤14 |
| **Conclusion** | | **PASS** | — |

**Remark(s):**

1. RL=Report Limit, “＜”means “less than”;1 mg/kg = 0.0001%； “—”=Not applicable
2. “*”means that the compliance is determined based on the results of the first test.
3. The migration conditions of the submitted samples are specified by the client.
4. The sample is a hollow product, filled with food simulants to a distance of 1cm from the overflow edge..
5. The migration results was calculated as S/V= 6 $dm^2$/L(kg),and expressed as the concentration content in the sample migration solution.
6. SML=Specific migration Limit,SML(T)= Total Specific migration Limit,OML=Overall migration Limit.

********** End of Report ***********

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