

Test Report

Number: TWNC01076520

Simpla Biotech Co., Ltd. Issue Date : May 13, 2022

No. 50, Neixi Rd., Luzhu Dist., Taoyuan City 338, Taiwan (R.O.C.)

Sample Description:

Applicant:

One (1) Groups of Submitted Sample Said To Be:

Item Name : Feeding Bowl-Deep 深碗/Baby Spoon 幼兒湯匙/Baby Fork 幼兒叉子

/Baby Feeding Spoon 幼兒餵食匙/Kids Fork 兒童叉子/Kids Spoon 兒童湯匙/Cup 杯子/Cutting Board 砧板/Feeding bowl-side 淺碗/Bear

paw plate 熊掌盤

Material : PLA (Polylactic acid)

Country of Origin : Taiwan

Date Sample Received : Apr 22, 2022

Date Test Started : Apr 25, 2022

Test Conducted:

As requested by the applicant, for details please refer to attached pages.

Conclusion:

Please see page two to three.

Remarks:

#3 = Results were transferred from report No. TWNC01076516 dated May 11, 2022.

Authorized By:

On behalf of Intertek Testing Services

Taiwan Limited

Matt Wang Director Signed by:

Thomas Chou Manager



Tel: (+886-2) 6602-2888 · 2797-8885

8F., No. 423, Ruiguang Rd., Neihu District, Taipei, 114690, Taiwan, R.O.C. 114690 台北市內湖區瑞光路 423 號 8 樓







Test Report

Number: TWNC01076520

Pass (#1)

Pass

Pass

Conclusion:

<u>Tested Sample</u> Submitted Sample <u>Standard</u> <u>Result</u>

As per European Commission Regulation (EU) No. 10/2011 and its amendments

Overall Migration Test for Repeated Use Plastic Food

Contacting Materials/Articles

Specific Migration of Heavy Metal Test for Repeated Use
 Pass (#1)

Plastic Food Contacting Materials/Articles

Specific Migration of Primary Aromatic Amines Test for Pass (#1)

Specific Migration of Primary Aromatic Amines Test for Repeated Use Plastic Food Contacting Materials/Articles

 As per European Commission Regulation (EU) No. 10/2011 and its amendments and article 3 of (EU) No. 284/2011

Dishwasher test See Test Conducted

As per applicant's request

Child use and care articles - cutlery and feeding utensils -

safety requirements and tests

As per applicant's request with reference to EN 14372 :

2004 excluding clause 5.4 & 7

European Standard On Child Use And Care Articles – Cutlery

And Feeding Utensils (EN 14372)

Migration Of Certain Elements
 Pass (#1)

PhthalatesPass (#1)

Child care articles - Drinking equipment - Safety

requirements and test methods

As per applicant's request with reference to EN 14350 :

2020 excluding clause 8, 9 & 10

Authorized By:

On behalf of Intertek Testing Services

Taiwan Limited

Matt Wang Director Signed by:

Thomas Chou Manager









Test Report

Number : TWNC01076520

Conclusion:

Tested Sample Standard Result

Submitted Sample As per BS EN 14350:2020

> 19 Toxic Element Migration Test **Pass**

> Colour Fastness Test Pass

As requested by the applicant, the test was conducted only on components listed in this report. Remarks: #1 =

Other components were not tested.

Note: The applicant has certified that proper label and marking and instructions will be put on the final product, and

the label and marking and instructions certified meet the requirement of this standard. It is applicant's

responsibility to make sure the final product with the label and marking and instructions as certified.

Authorized By:

On behalf of Intertek Testing Services

Taiwan Limited

Matt Wang Director

Signed by:

Thomas Chou Manager







Number: TWNC01076520

1. Overall Migration Test for Repeated Use Plastic Food Contacting Materials/Articles

As per European Commission regulation (EU) No. 10/2011 and its amendments, the migration test shall be carried out three times on a signal tested sample for repeated use materials and articles.

I. Test Condition:

OM 3: 70°C for 2 hours

II. Test Result:

Food Simulant: 3%(w/v) acetic acid

Result (mg/kg food) **Tested Sample** Limit (mg/kg food) 2nd Test 60 (1)ND

Food Simulant: 10%(w/v) ethanol

Result (mg/kg food) **Tested Sample** Limit (mg/kg food) 3rd Test 2nd Test (1)ND 60

Food Simulant: Fatty food simulant

Result (mg/kg food) **Tested Sample** Limit (mg/kg food) 3rd Test 2nd Test (1)60

Remarks: ND = Not detected

Detection limit = 1 mg/kg food

Solvents & test condition were selected based on applicant's request.

The limit of 60 mg/kg was quoted for samples intended for infants and young children.

According to point 3.3.2 in Annex V to (EU) No. 10/2011 amended by (EU) No. 2020/1245, the overall migration in the second test shall not exceed the level observed in the first test, and the overall migration in the third test shall not exceed the level observed in the second test. Compliance with the overall migration limit shall be verified on the basis of the level of the overall migration found in the third test.









Number: TWNC01076520

2. Specific Migration of Heavy Metal Test for Repeated Use Plastic Food Contacting Materials/Articles

As per Commission Regulation (EU) No. 10/2011 and its amendments, the migration test shall be carried out three times on a signal tested sample for repeated use materials and articles.

I. Test Condition: 70°C for 2 hours

II. Test Result:

Food simulant: 3% (w/v) acetic acid

Tested Sample: (1)(#2)

| Element | Result (mg/kg food) | | | Detection Limit | <u>Limit</u> |
|--------------------------|----------------------|----------------------|----------------------|------------------------|--------------|
| <u>Element</u> | 1 st Test | 2 nd Test | 3 rd Test | (mg/kg food) | (mg/kg food) |
| Aluminium (Al) | ND | ND | ND | 0.1 | 1 |
| Antimony (Sb) | ND | ND | ND | 0.01 | 0.04 |
| Arsenic (As) | ND | ND | ND | 0.01 | ND |
| Barium (Ba) | ND | ND | ND | 0.1 | 1 |
| Cadmium (Cd) | ND | ND | ND | 0.002 | ND |
| Chromium (Cr) | ND | ND | ND | 0.01 | ND |
| Cobalt (Co) | ND | ND | ND | 0.01 | 0.05 |
| Copper (Cu) | ND | ND | ND | 0.5 | 5 |
| Iron (Fe) | ND | ND | ND | 5 | 48 |
| Lead (Pb) | ND | ND | ND | 0.01 | ND |
| Lithium (Li) | ND | ND | ND | 0.1 | 0.6 |
| Manganese (Mn) | ND | ND | ND | 0.1 | 0.6 |
| Mercury (Hg) | ND | ND | ND | 0.01 | ND |
| Nickel (Ni) | ND | ND | ND | 0.01 | 0.02 |
| Zinc (Zn) | ND | ND | ND | 0.5 | 5 |
| Europium (Eu) | ND | ND | ND | 0.01 | |
| Gadolinium (Gd) | ND | ND | ND | 0.01 | |
| Lanthanum (La) | ND | ND | ND | 0.01 | |
| Terbium (Tb) | ND | ND | ND | 0.01 | |
| Sum of Eu, Gd, La and Tb | ND | ND | ND | | 0.05 |

Remarks: ND Not detected

> #2 = The result was expressed in mg/kg applying a surface to volume ratio of 6 dm² per kg, which was quoted for samples that are containers or are comparable to containers or which can be filled, with a capacity of less than 500 milliliters or more than 10 liters.

Solvents & test condition were selected based on applicant's request.

According to point 2.1.6 in Annex V to (EU) No. 10/2011 amended by (EU) No. 2020/1245, the specific migration in the second test shall not exceed the level observed in the first test, and the specific migration in the third test shall not exceed the level observed in the second test. Compliance with the specific migration limit shall be verified on the basis of the level of the specific migration found in the third test.







Number: TWNC01076520

Specific Migration of Primary Aromatic Amines Test for Repeated Use Plastic Food Contacting **Materials/Articles**

As per Commission Regulation (EU) No. 10/2011 and its amendments, the migration test shall be carried out three times on a signal tested sample for repeated use materials and articles.

I. Test Condition: 70°C for 2 hours

II. Test Result:

Food simulant: 3% (w/v) acetic acid

Tested Sample: (1)(#2)

| Compound | CAC No | Result (mg/kg food) | | Detection Limit | <u>Limit</u> | |
|--|---------------------|----------------------|----------------------|------------------------|----------------|--------------|
| <u>Compound</u> | CAS No. | 1 st Test | 2 nd Test | 3 rd Test | (mg/kg food) | (mg/kg food) |
| 4-Aminodiphenyl | 92-67-1 | ND | ND | ND | 0.002 | ND |
| Benzidine ' | 92-87-5 | ND | ND | ND | 0.002 | ND |
| 4-Chloro- <i>o</i> -toluidine | 95-69-2 | ND | ND | ND | 0.002 | ND |
| 2-Naphthylamine | 91-59-8 | ND | ND | ND | 0.002 | ND |
| <i>o</i> -Aminoazotoluene | 97-56-3 | ND | ND | ND | 0.002 | ND |
| 5-Nitro- <i>o</i> -toluidine | 99-55-8 | ND | ND | ND | 0.002 | ND |
| <i>p</i> -Chloraniline | 106-47-8 | ND | ND | ND | 0.002 | ND |
| 2,4-Diaminoanisole | 615-05-4 | ND | ND | ND | 0.002 | ND |
| 4,4-Diaminodiphenylmethane | 101-77-9 | ND | ND | ND | 0.002 | ND |
| 3,3'-Dichlobenzidine | 91-94-1 | ND | ND | ND | 0.002 | ND |
| 3,3'-Dimethoxybenzidine | 119-90-4 | ND | ND | ND | 0.002 | ND |
| 3,3'-Dimethylbenzidine | 119-93-7 | ND | ND | ND | 0.002 | ND |
| 3,3'-Dimethyl-4,4'-diamino diphenylmethane | 838-88-0 | ND | ND | ND | 0.002 | ND |
| <i>p</i> -Cresidine | 120-71-8 | ND | ND | ND | 0.002 | ND |
| 4,4'-Methylen-bis-(2- | 101-14-4 | ND | ND | ND | 0.002 | ND |
| chloroaniline) | | | | | | |
| 4,4'-Oxydianiline | 101-80-4 | ND | ND | ND | 0.002 | ND |
| 4,4'-Thiodianiline | 139-65-1 | ND | ND | ND | 0.002 | ND |
| <i>o</i> -Toluidine | 95-53-4 | ND | ND ND | ND | 0.002 | ND ND |
| 2,4-Toluene-diamine | 95-80-7 | ND | ND | ND | 0.002 0.002 | ND ND |
| 2,4,5-Trimethylaniline | 137-17-7 90-04-0 | ND ND | ND ND | ND ND | 0.002 | ND ND |
| 2-Methoxyaniline 4-Aminoazobenzene | 60-09-3 | ND ND | ND ND | ND ND | 0.002 | ND ND |
| <i>m</i> -Phenylendiamine | 108-45-2 | ND ND | ND ND | ND | 0.002 | ND ND |
| Benzoguanamine | 91-76-9 | ND ND | ND ND | ND | 0.002 | 5 |
| 4,4'-Methylenebis | | | | | | |
| -(3-chloro-2,6-diethylaniline) | 106246-33-7 | ND | ND | ND | 0.01 | 0.05 |
| Sum of other primary aromatic amines^ | | ND | ND | ND | 0.01 | 0.01 |

ND Not detected Remarks:

= The result was expressed in mg/kg applying a surface to volume ratio of 6 dm² per kg, which #2 was quoted for samples that are containers or are comparable to containers or which can be filled, with a capacity of less than 500 milliliters or more than 10 liters.

= Other primary aromatic amines are p-Phenylendiamine, Aniline, 2,4-Xylidine, 2,6-Xylidine, 3-Methoxyaniline, 2,6-Toluene-diamine, 1,5-Diaminonaphthalene, 4-Ethoxyaniline, 3-Amino-4methoxybenzanilide, 3-Amino-4-methylbenzamide and 2-Amino-5-methylbenzoic acid

Solvents & test condition were selected based on applicant's request.

According to point 2.1.6 in Annex V to (EU) No. 10/2011 amended by (EU) No. 2020/1245, the specific migration in the second test shall not exceed the level observed in the first test, and the specific migration in the third test shall not exceed the level observed in the second test. Compliance with the specific migration limit shall be verified on the basis of the level of the specific migration found in the third test.









Number: TWNC01076520

Dishwasher Safe Test

The submitted samples were subjected to the following wash cycles and visual examination by naked eye was made in comparison with the control sample.

Wash condition: Wash / Rinse / Dry normal cycle (Duration approximately 90 minutes / Temperature over 150°F/65°C).

Samples located: Top rack

Number of cycle: Ten (10) cycles.

Detergent: Cascade (90 gram).

Dishwasher: Whirlpool quiet wash plus.

Number of sample tested: One (1) piece per style; Total ten (10) styles.

Result: No visible damage or change was observed after washing.

Child Use And Care Articles - Cutlery And Feeding Utensils - Safety Requirements And Tests

As per applicant's request with reference to EN 14372: 2004

| Clauses | Test items | Assessment |
|---------|--------------------------------|------------|
| 5 | Requirements | · |
| 5.1 | General | P#3 |
| 5.2 | General requirements | |
| 5.2.1 | Visual and tactile examination | P#3 |
| 5.2.2 | Sharp points | P#3 |
| 5.2.3 | Sharp edges | P#3 |
| 5.2.4 | Small parts | P#3 |
| 5.2.5 | Holes (finger traps) | P#3 |
| 5.2.6 | Printed decorations | P#3 |
| 5.3 | Mechanical requirements | · |
| 5.3.1 | Tensile strength | P#3 |
| 5.3.2 | Torque test | P#3 |
| 5.3.3 | Tear resistance | NA |
| 5.3.4 | Strength/rigidity | P#3 |
| 5.3.5 | Drop test | P#3 |
| 7 | Product information | · |
| 7.1 | General | See Note |
| 7.2 | Purchase information | See Note |
| 7.3 | Instruction for use | See Note |
| 7.4 | Warnings | See Note |

P = Pass; NA = Not ApplicableRemarks:







Number: TWNC01076520

Migration Of Certain Elements

As per EN 14372: 2004 - Child Use And Care Articles - Cutlery And Feeding Utensils clause 5.4.2.2 and the analytical method specified in EN71-3:2019+A1:2021 for 8 heavy elements, acid extraction method was used and toxic elements content were determined by Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES).

| <u>Element</u> | Result (mg/kg) | <u>DL</u> | <u>Limit</u> |
|--------------------|----------------|----------------|----------------|
| | (1) | <u>(mg/kg)</u> | <u>(mg/kg)</u> |
| Sol. Antimony (Sb) | ND | 10 | 15 |
| Sol. Arsenic (As) | ND | 10 | 10 |
| Sol. Barium (Ba) | ND | 10 | 100 |
| Sol. Cadmium (Cd) | ND | 5 | 20 |
| Sol. Lead (Pb) | ND | 10 | 25 |
| Sol. Chromium (Cr) | ND | 10 | 10 |
| Sol. Mercury (Hg) | ND | 10 | 10 |
| Sol. Selenium (Se) | ND | 10 | 100 |

Remarks: mg/kg =Milligram per kilogram based on dry weight of sample

> Sol. Soluble = Not detected ND = **Detection limit** DL

7. Phthalate Content

As per EN 14372: 2004, by solvent extraction and determined by Gas Chromatography-Mass Spectrometer (GC-MS) analysis.

| Compound | Result (%) | <u>Limit (%)</u> |
|---------------------------------|------------|------------------|
| | <u>(1)</u> | |
| Dibutyl Phthalate (DBP) | ND | |
| Diethyl Hexyl Phthalate (DEHP) | ND | |
| Di-(Iso-Nonyl) Phthalate (DINP) | ND | |
| Benzyl Butyl Phthalate (BBP) | ND | |
| Di-(N-Octyl) Phthalate (DNOP) | ND | |
| Di-(Iso-Decyl) Phthalate (DIDP) | ND | |
| | | |
| Total: | ND | 0.1 |

= Percentage based on weight of tested sample Remarks:

Detection limit = 0.005% (for each compound)

ND = Not detected









Number: TWNC01076520

8. Child care articles - Drinking equipment - Safety requirements and test methods

As per applicant's request with reference to EN 14350: 2020

| <u>Clauses</u> | <u>Test items</u> | <u>Assessment</u> | |
|----------------|--|-------------------|--|
| 1 | Scope | | |
| 2 | Normative references | | |
| 3 | Terms and definitions | | |
| 4 | Description | | |
| 5 | Test equipment and tolerances | | |
| 6 | Construction and mechanical properties – General and sample preparat | ion | |
| 7 | Construction and mechanical requirements and tests | | |
| 7.1 | Order of testing for construction and mechanical properties | | |
| 7.2 | Decoration, inscription and decals | P#3 | |
| 7.3 | Visual and tactile examination | P#3 | |
| 7.4 | Small parts | P#3 | |
| 7.5 | Sealing discs | NA | |
| 7.6 | Containers | NA | |
| 7.7 | Drinking accessories | NA | |
| 7.8 | Protective covers | NA | |
| 7.9 | Handles and clips | P#3 | |
| 7.10 | Finger traps | P#3 | |
| 7.11 | Protruding parts | NA | |
| 7.12 | Cords and loops | NA | |
| 9 | Consumer packaging | See Note | |
| 10 | Product information | | |
| 10.1 | General | See Note | |
| 10.2 | Purchase information | See Note | |
| 10.3 | Warnings | See Note | |
| 10.4 | Instructions for use | See Note | |
| 10.5 | Supply chain information for products that contain vulcanised rubber | See Note | |
| 11 | Test report | | |

Remarks: P = Pass ; NA = Not Applicable







Number: TWNC01076520

Toxic Elements Analysis

As per BS EN 14350:2020 Child care articles - Drinking equipment - Safety requirements and test methods and followed by High Performance Liquid Chromatography-Photodiode Array Detector (HPLC-DAD), Liquid Chromatography /Inductively Coupled Plasma Mass Spectrometer (LC/ICP-MS), Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES), Inductively Coupled Plasma Mass Spectrometer (ICP-MS) and Gas Chromatography-Mass Spectrometer (GC-MS), if necessary.

| Element | Result (mg/kg) | Detection limit | <u>Limit</u> |
|--------------------------|----------------|------------------------|--------------|
| Liement | <u>(2)</u> | <u>(mg/kg)</u> | (mg/kg) |
| Aluminium (Al) | ND | 100 | 6000 |
| Antimony (Sb) | ND | 10 | 120 |
| Arsenic (As) | ND | 1.0 | 10 |
| Barium (Ba) | ND | 10 | 4000 |
| Boron (B) | ND | 50 | 3200 |
| Cadmium (Cd) | ND | 0.5 | 3.6 |
| Chromium (III) (Cr(III)) | ND | 5.0 | 100 |
| Chromium (VI) (Cr(VI)) | ND | 0.025 | 0.0265 |
| Cobalt (Co) | ND | 1.0 | 28 |
| Copper (Cu) | ND | 10 | 1660 |
| Lead (Pb) | ND | 1.0 | 5.0 |
| Manganese (Mn) | ND | 10 | 600 |
| Mercury (Hg) | ND | 1.0 | 20 |
| Nickel (Ni) | ND | 10 | 56 |
| Selenium (Se) | ND | 5.0 | 100 |
| Strontium (Sr) | ND | 100 | 12000 |
| Tin (Sn) | ND | 10 | 40000 |
| Organic tin | NDΔ | 2.0 | 2.5 |
| Zinc (Zn) | ND | 100 | 10000 |

= Not detected Remarks: ND

> = Due to the screening result exceeded the limit, the test result was directly determined for Δ organic tin.

- If the result of chromium (VI) is below the limit of quantification of EN 71-3, the sample is to be considered passed limit of element migration from drinking equipment.
- Organic tin test result was expressed as tributyl tin.
- According to the annex F to EN 71-3: 2019, the content of chromium (III) from the migration solution was calculated through the formula: chromium (III) = total chromium - chromium(VI).
- The scope of confirmation test for organic tin includes methyl tin, butyl tin, dibutyl tin, tributyl tin, tetrabutyl tin, n-octyl tin, di-n-octyl tin, di-n-propyl tin, diphenyl tin, triphenyl tin, trimethyltin, dimethyltin, tricyclohexyltin and trioctyltin and reports the total value after converted to tributyl tin.







Number: TWNC01076520

10. Colour Fastness Test

As per BS EN 14350:2020 Child care articles - Drinking equipment - Safety requirements and test methods (Physical and Mechanical tests) - Clause 8.8 Colour Fastness

Number of samples tested: Two (2) pieces

Tested samples were conditioned as per Clause 6 prior to testing:

- Immersed in boiling water for 10 min.
- Conditioned in a standard atmosphere of 23±2 °C / 50±5% RH for 40 hours.

Tested sample: (2)

| Clause | Requirement | Assessment |
|--------|-----------------|------------|
| 8.8 | Colour Fastness | Р |

Abbreviation : P = Pass

Tested Components:

- (1) Pink plastic bowl
- (2) Pink plastic cup







Number: TWNC01076520

Sample photo:











End of Report

Except where explicitly agreed in writing, all work and services performed by Intertek is subject to our standard Terms and Conditions which can be obtained at our website: http://www.intertek-twn.com/terms/ . Intertek's responsibility and liability are limited to the terms and conditions of the agreement.

This report is made solely on the basis of your instructions and / or information and materials supplied by you and provide no warranty on the tested sample(s) be truly representative of the sample source. The report is not intended to be a recommendation for any particular course of action, you are responsible for acting as you see fit on the basis of the report results. Intertek is under no obligation to refer to or report upon any facts or circumstances which are outside the specific instructions received and accepts no responsibility to any parties whatsoever, following the issue of the report, for any matters arising outside the agreed scope of the works. This report does not discharge or release you from your legal obligations and duties to any other person. You are the only in its entirety). Any such third parties to whom this report may be circulated rely on the content of the report solely at their own risk

Reporting Statements of Conformity: Please note that the test results contain statement of conformity with the decision rules which are based on the specifications of customers, regulations and standards, and does not consider measurement uncertainty.



