

Test Report

Applicant: Simpla Biotech Co., Ltd.
No. 50, Neixi Rd., Luzhu Dist.,
Taoyuan City 338, Taiwan (R.O.C.)

Number : TWNC01077020

Issue Date : May 13, 2022

Sample Description:

One (1) Group of Submitted Samples Said To Be :

Item Name : Kiss Fish Plate 親吻魚盤/Cutting Board 砧板
Material : PLA (Polylactic acid)
Country of Origin : Taiwan
Date Sample Received : Apr 25, 2022
Date Test Started : Apr 26, 2022

Test Conducted:

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

Conclusion:

<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Sample	As per European Commission Regulation (EU) No. 10/2011 and its amendments	
	– Overall Migration Test for Repeated Use Plastic Food Contacting Materials/Articles	Pass (#1)
	– Specific Migration of Heavy Metal Test for Repeated Use Plastic Food Contacting Materials/Articles	Pass (#1)
	Specific Migration of Primary Aromatic Amines Test for Repeated Use Plastic Food Contacting Materials/Articles	Pass (#1)
	– 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	Pass
	– As per applicant's request with reference to EN 14372 : 2004 excluding clause 5.4 & 7	

Authorized By:
On behalf of Intertek Testing Services
Taiwan Limited

Matt Wang
Director



Signed by:

Thomas Chou

Thomas Chou
Manager



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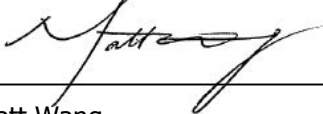
Conclusion:

<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Sample	European Standard On Child Use And Care Articles – Cutlery And Feeding Utensils (EN 14372) – Migration Of Certain Elements	Pass
	– Phthalates	Pass
	Microwave safe test – As per applicant’s request	See Test Conducted

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



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Test Conducted :

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 5: 100°C for 2 hours (For 3%(w/v) acetic acid and 10%(w/v) ethanol)

OM 3: 70°C for 2 hours (For fatty food simulant)

II. Test Result:

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

<u>Tested Sample</u>	<u>Result (mg/kg food)</u>			<u>Limit (mg/kg food)</u>
	<u>1st Test</u>	<u>2nd Test</u>	<u>3rd Test</u>	
White plastic plate	11	9	5	60

Food Simulant: 10%(w/v) ethanol

<u>Tested Sample</u>	<u>Result (mg/kg food)</u>			<u>Limit (mg/kg food)</u>
	<u>1st Test</u>	<u>2nd Test</u>	<u>3rd Test</u>	
White plastic plate	7	5	3	60

Food Simulant: Fatty food simulant

<u>Tested Sample</u>	<u>Result (mg/kg food)</u>			<u>Limit (mg/kg food)</u>
	<u>1st Test</u>	<u>2nd Test</u>	<u>3rd Test</u>	
White plastic plate	11	8	8	60

Remarks:

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.



Test Conducted :

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:
100°C for 2 hours

II. Test Result:
Food simulant: 3% (w/v) acetic acid
Tested Sample: White plastic plate (#2)

Element	Result (mg/kg food)			Detection Limit (mg/kg food)	Limit (mg/kg food)
	1 st Test	2 nd Test	3 rd Test		
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.



Test Conducted :

3. 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:
100°C for 2 hours

II. Test Result:
Food simulant: 3% (w/v) acetic acid
Tested Sample: White plastic plate (#2)

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

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.
^ = Other primary aromatic amines are *p*-Phenyldiamine, Aniline, 2,4-Xylydine, 2,6-Xylydine, 3-Methoxyaniline, 2,6-Toluene-diamine, 1,5-Diaminonaphthalene, 4-Ethoxyaniline, 3-Amino-4-methoxybenzanilide, 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.



Test Conducted :

4. Dishwasher Safe Test

The submitted sample was 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).

Tested sample : Kiss fish plate.

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 one (1) style.

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

5. 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
5.2	General requirements	
5.2.1	Visual and tactile examination	P
5.2.2	Sharp points	P
5.2.3	Sharp edges	P
5.2.4	Small parts	P
5.2.5	Holes (finger traps)	P
5.2.6	Printed decorations	P
5.3	Mechanical requirements	
5.3.1	Tensile strength	P
5.3.2	Torque test	P
5.3.3	Tear resistance	NA
5.3.4	Strength/rigidity	P
5.3.5	Drop test	P
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

Remarks : P = Pass ; NA = Not Applicable



Test Conducted :

6. 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>	<u>Result (mg/kg)</u> <u>White plastic plate</u>	<u>DL</u> <u>(mg/kg)</u>	<u>Limit</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
 ND = Not detected
 DL = Detection limit

7. Phthalate Content

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

<u>Compound</u>	<u>Result (%)</u> <u>White plastic plate</u>	<u>Limit (%)</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

Remarks: % = Percentage based on weight of tested sample
 Detection limit = 0.005% (for each compound)
 ND = Not detected



Test Conducted :

8. Microwave Safe Test

The submitted sample was initially filled with the following stimulant and subject to the following test sequence in the microwave oven. Then the sample was assessed for any crack, breakage and apparent change by naked eye.

Tested sample : Kiss fish plate.

Stimulant used for test : Water 50% of its gross capacity.

Setting of microwave : 1000 Watts

Power of microwave : High.

Number of sample tested: One (1) piece per style plus
One (1) piece as control sample;
total one (1) style.

Sequence :

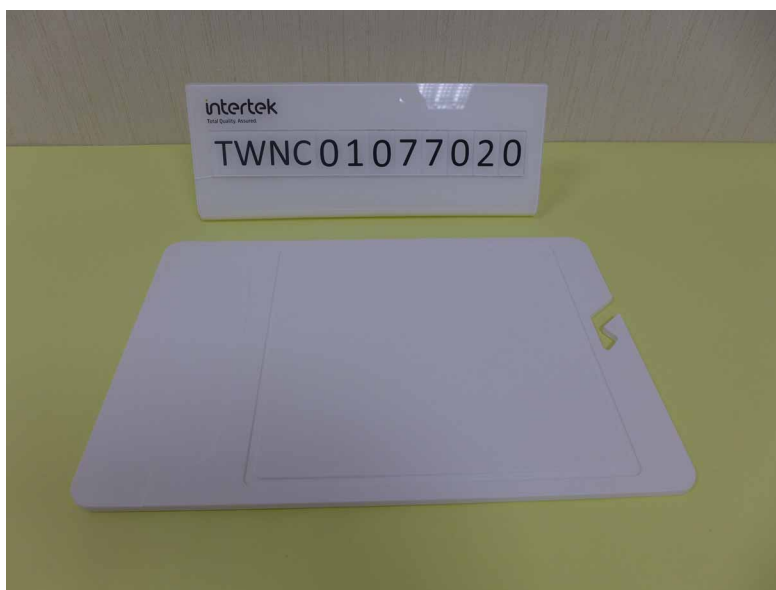
Duration of microwave heating : Five (5) minutes.

Number of cycles : Five (5) cycles.

Result : The tested sample showed no sign of permanent deformation, crack or breakage after testing.



Sample photo:



End of Report

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