

Test Report No.: 168487358h 001

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Client: **FLASHBAY ELECTRONICS**
Building 2, Jixun Industrial Park, Xinjiao, Dong'ao Village, Shatian Town, Huiyang District, Huizhou City, Guangdong Province, P. R. China

Test item(s): Foodware

Identification / Model No(s): Tastie / TT

Sample obtaining method: Sending by customer

Condition at delivery: Test item complete and undamaged.

Sample Receiving date: 2024-06-02

Testing Period: 2024-06-04 to 2024-06-20

Place of testing: Chemical laboratory Shenzhen

Test specification:

Performed parameter(s) for the compliance with the following regulations concerning materials in contact with foodstuff:

- Regulation (EC) No 1935/2004

Test conclusion:

PASS

Other Information:

For and on behalf of TÜV Rheinland (Shenzhen) Co., Ltd.

2024-07-08

Date


Steven Yu / Assistant Project Engineer

Name / Position

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.

This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

"Decision Rule" document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.

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1. Sample List:

Sample No.	Material	Color	Location
1	Whole product	Black	Black Foodware
2	Stainless steel	Silvery	Body
3	Plastic (PP)	Black	Lid
4	Silicone rubber	Transparent	Sealing ring

2. Overall Results

Test No.	Tested Item	Conclusion
1	Sensorial examination	Pass
2	Global Migration	Pass
3	Global Migration from Silicone	Pass
4	Colourfastness	Pass
5	Specific Migration of Primary Aromatic Amines	Pass
6	Specific Release of Metals	Pass
7	Specific Migration of Metals	Pass

3. Results

3.1 Sensorial examination

Test method: It is examined to the extent of food simulant being used, which comes into contact with the product, undergoes detectable changes in taste and smell.

For this purpose, the food simulant was stored in the product under the below mentioned time and temperature. Afterwards, the food simulant was examined by an appropriate number of tasters with regard to any divergence in smell and taste. Another test sample, which was used as a reference, was treated by the same way except that it had no contact with the product to be tested.

Before testing, the product had been cleaned according to the product’s instruction manual or in the absence of such manual, by normal household cleaning.

The test is carried out on the basis of ISO 13302 by paired comparison test:

- Evaluation scheme:
- 0 = Evaluation scheme:
 - 1 = Barely discernible deviation
 - 2 = Weak deviation
 - 3 = Clear deviation
 - 4 = Strong deviation
 - Limit: 3 (failed)

The following food simulants and conditions were applied:

Food simulant	Test duration / Temperature
Water	Fill with boiling water and let stand at 40°C for 24 hours

Test No.:	1
Sample No.:	1
Parameter:	Result
Transfer of Smell:	0
Transfer of Taste:	0

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3.2 Global Migration

Test method: The migratory behaviour is examined with reference to Commission Regulation 10/2011 and its amendments.

Limit: Commission Regulation (EU) No 10/2011 and its amendments

The following food simulants and conditions were applied:

Food simulant	Test duration / Temperature
Acetic acid 3%	1 hour(s) / 100 °C
Ethanol 50%	1 hour(s) / 100 °C

Test No.:	1					
Sample No.:	3					
Migration ratio:	167 ml / dm ²					
Parameter	Unit	RL	1 st Migration Result	2 nd Migration Result	3 rd Migration Result	Limit
Acetic acid 3%	mg/dm ²	2	5	4	3	10
Ethanol 50%	mg/dm ²	2	2	<RL	<RL	10

Abbreviations:

RL = Reporting Limit

ml/dm² = Millilitre per square decimetre

mg/dm² = Milligram per square decimetre

< = Less than

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3.3 Global Migration from Silicone

Test method: The migratory behaviour is examined with reference to Chapter V, Article 18 of Commission regulation 10/2011 and its amendments. Deviating to the regulations the following tests were performed as orientating single tests.

Limit: Resolution AP (2004) 5 on silicones used for food contact applications

The following food simulants and conditions were applied:

Food simulant	Test duration / Temperature
Acetic acid 3%	1 hour(s) / 100 °C
Ethanol 50%	1 hour(s) / 100 °C

Test No.:	1		
Sample No.:	4		
Parameter	Unit	Result	Limit
Acetic acid 3%	mg/dm ²	2	10
Ethanol 50%	mg/dm ²	2	10

Abbreviations:

mg/dm² = Milligram per square decimetre

< = Less than

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3.4 Colourfastness

Test method: Resolution AP (89) 1 on the use of colorants in plastic materials coming into contact with food, Appendix III

Limit: Resolution AP (89) 1 on the use of colorants in plastic materials coming into contact with food - *No transfer of colorants to foodstuffs is permitted*

Test No.:	1
Sample No.:	3
Parameter – Colourfastness to	Difference between blank and filter paper contacted with sample
Water	No
Acetic acid 3 %	No
Ethanol 50 %	No
Oil	No

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3.5 Specific Migration of Primary Aromatic Amines

Test method: The migratory behaviour was examined with reference to Commission Regulation (EU) No 10/2011 and its amendments. Determination by LC-MS/MS.

Limit: With reference to Commission Regulation (EU) No 10/2011 and its amendments

The following food simulant and condition were applied:

Food simulant	Test duration / Temperature
Acetic acid 3%	Fill with boiling water and let stand at 40°C for 24 hours

Test No.:		1					
Sample No.:		1					
Migration ratio:		150 ml / dm ²					
Parameter	CAS no.	Unit	RL	1 st Migration Result	2 nd Migration Result	3 rd Migration Result	Limit
2,4-Diaminoanisole	615-05-4	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
2,4-toluediamine	95-80-7	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
4,4'-oxydianiline	101-80-4	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
Benzidine	92-87-5	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
4,4'-methylenedianiline	101-77-9	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
o-anisidine	90-04-0	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
o-Toluidine	95-53-4	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
4,4'-bi-o-toluidine	119-93-7	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
3,3'-Dimethoxybenzidine	119-90-4	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
4-chloroaniline	106-47-8	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
p-cresidine	120-71-8	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
4-chloro-o-toluidine	95-69-2	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
4-aminobiphenyl	92-67-1	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
4,4'-Methylene-di-o-toluidine	838-88-0	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
4,4'-thiodianiline	139-65-1	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
2-Naphthylamine	91-59-8	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
4-aminoazobenzene	60-09-3	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
o-aminoazotoluene	97-56-3	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
2,4,5-Trimethylaniline	137-17-7	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
2-Methyl-5-nitroaniline	99-55-8	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.

m-phenylenediamine	108-45-2	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
Benzoguanamine	91-76-9	mg/kg	0.01	n.d.	n.d.	n.d.	5
4,4'-Methylenebis-(3-cholor-2,6-diethylaniline)	106246-33-7	mg/kg	0.01	n.d.	n.d.	n.d.	0.05
PAAs not listed in entry 43 to Appendix 8 of Annex XVII to Regulation (EC) No 1907/2006 and its amendments							
p-toluidine	106-49-0	mg/kg	0.01	n.d.	n.d.	n.d.	-
p-phenylenediamine	106-50-3	mg/kg	0.01	n.d.	n.d.	n.d.	-
2-Methyl-4-nitroaniline	99-52-5	mg/kg	0.01	n.d.	n.d.	n.d.	-
o-phenylenediamine	95-54-5	mg/kg	0.01	n.d.	n.d.	n.d.	-
1,5-naphthylenediamine	2243-62-1	mg/kg	0.01	n.d.	n.d.	n.d.	-
Aniline	62-53-3	mg/kg	0.01	n.d.	n.d.	n.d.	-
2,4-Dimethylaniline	95-68-1	mg/kg	0.01	n.d.	n.d.	n.d.	-
2,6-Dimethylaniline	87-62-7	mg/kg	0.01	n.d.	n.d.	n.d.	-
5-Chloro-2-methylaniline	95-79-4	mg/kg	0.01	n.d.	n.d.	n.d.	-
2,6-toluenediamine	823-40-5	mg/kg	0.01	n.d.	n.d.	n.d.	-
5-Amino-6-methyl-1,3-dihydro-2H-benzimidazol-2-one	67014-36-2	mg/kg	0.01	n.d.	n.d.	n.d.	-
4-aminobenzamide	2835-68-9	mg/kg	0.01	n.d.	n.d.	n.d.	-
3-Amino-4-methylbenzamide	19406-86-1	mg/kg	0.01	n.d.	n.d.	n.d.	-
m-Anisidine	536-90-3	mg/kg	0.01	n.d.	n.d.	n.d.	-
m-toluidine	108-44-1	mg/kg	0.01	n.d.	n.d.	n.d.	-
4-Ethoxyaniline	156-43-4	mg/kg	0.01	n.d.	n.d.	n.d.	-
2-ethoxyaniline	94-70-2	mg/kg	0.01	n.d.	n.d.	n.d.	-
4-Chloro-3-methoxyaniline	13726-14-2	mg/kg	0.01	n.d.	n.d.	n.d.	-
1,3-Diiminoisindoline	3468-11-9	mg/kg	0.01	n.d.	n.d.	n.d.	-
3-Amino-4-methoxybenzanilide	120-35-4	mg/kg	0.01	n.d.	n.d.	n.d.	-
2,4,5-Trichloroaniline	636-30-6	mg/kg	0.01	n.d.	n.d.	n.d.	-
4-chloro-2,5-dimethoxyaniline	6358-64-1	mg/kg	0.01	n.d.	n.d.	n.d.	-
2-Methoxy-4-nitroaniline	97-52-9	mg/kg	0.01	n.d.	n.d.	n.d.	-
5-Chloro-2-methoxyaniline	95-03-4	mg/kg	0.01	n.d.	n.d.	n.d.	-
3-Chloroaniline	108-42-9	mg/kg	0.01	n.d.	n.d.	n.d.	-
2-Chloroaniline	95-51-2	mg/kg	0.01	n.d.	n.d.	n.d.	-
Dimethyl-2-aminoterephthalate	5372-81-6	mg/kg	0.01	n.d.	n.d.	n.d.	-
Biphenyl-2-ylamine	90-41-5	mg/kg	0.01	n.d.	n.d.	n.d.	-
2,5-Dichloroaniline	95-82-9	mg/kg	0.01	n.d.	n.d.	n.d.	-
2-Nitroaniline	88-74-4	mg/kg	0.01	n.d.	n.d.	n.d.	-
4-Aminotoluene-3-sulfonic acid	88-44-8	mg/kg	0.01	n.d.	n.d.	n.d.	-
2-Aminonaphthalene-1-sulfonic acid	81-16-3	mg/kg	0.01	n.d.	n.d.	n.d.	-

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2,4-Dinitroaniline	97-02-9	mg/kg	0.01	n.d.	n.d.	n.d.	-
2-Chloro-4-nitroaniline	121-87-9	mg/kg	0.01	n.d.	n.d.	n.d.	-
Sum of Primary Aromatic Amines*1	-	mg/kg	0.01	n.d.	n.d.	n.d.	n.d.

Abbreviations:

RL = Reporting Limit

n.d. = Not detected

mg/kg = Milligram per kilogramm

ml/dm² = Millilitre per square decimetre

< = Less than

Remark:

- *1 Sum of Primary Aromatic Amines does not include the value of Benzoguanamine and 4,4'-Methylenebis-(3-chloro-2,6-diethylaniline) as the SML of both substances should refer to EU 10/2011 Union list.

Single components with an amount of less than reporting limit were not considered by the calculation of the sum. In the case of all of Primary Aromatic Amines were not detected, the result is stated n.d.

3.6 Specific Release of Metals

Test method: The sample preparation is performed with reference to “*Technical Guide on Metals and alloys used in food contact materials*”. The migratory behaviour is examined with reference to Chapter V, Article 18 of Commission regulation 10/2011 and its amendments. Presence of elements were detected by means of ICP-MS.

Limit: Technical Guide on Metals and alloys used in food contact materials

The following food simulant and condition was applied:

Food simulant	Test duration / Temperature
Artificial tap water	5 mins for 100°C

Test No.:	1					
Sample No.:	2					
Volume to surface area ratio	170 ml / dm ²					
			Sum 1 st + 2 nd test		3 rd test	
Parameter	Unit	RL	Result	Limits ⁽²⁾	Result	Limits ⁽¹⁾
Silver (Ag)	mg/kg	0.05	<RL	0.56	<RL	0.08
Aluminum (Al)	mg/kg	0.1	<RL	35	<RL	5
Cobalt (Co)	mg/kg	0.01	<RL	0.14	<RL	0.02
Chromium (Cr)	mg/kg	0.01	0.01	1.75	0.09	0.25
Copper (Cu)	mg/kg	0.5	<RL	28	<RL	4
Iron (Fe)	mg/kg	5	<RL	280	<RL	40
Manganese (Mn)	mg/kg	0.1	<RL	12.6	<RL	1.8
Molybdenum (Mo)	mg/kg	0.02	<RL	0.84	<RL	0.12
Nickel (Ni)	mg/kg	0.01	<RL	0.98	<RL	0.14
Tin (Sn)	mg/kg	10	<RL	700	<RL	100
Vanadium (V)	mg/kg	0.01	<RL	0.07	<RL	0.01
Zinc (Zn)	mg/kg	1	<RL	35	<RL	5
Arsenic (As)	mg/kg	0.002	<RL	0.014	<RL	0.002
Barium (Ba)	mg/kg	0.1	<RL	8.4	<RL	1.2
Beryllium (Be)	mg/kg	0.01	<RL	0.07	<RL	0.01
Cadmium (Cd)	mg/kg	0.002	<RL	0.035	<RL	0.005
Mercury (Hg)	mg/kg	0.003	<RL	0.021	<RL	0.003
Lithium (Li)	mg/kg	0.02	<RL	0.336	<RL	0.048
Lead (Pb)	mg/kg	0.01	<RL	0.07	<RL	0.01
Antimony (Sb)	mg/kg	0.01	<RL	0.28	<RL	0.04

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Thallium (Tl)	mg/kg	0.0001	<RL	0.0007	<RL	0.0001
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Abbreviations:

RL = Reporting Limit

mg/kg = Milligram per kilogram

< = Less than

Remark:

- *1 Compliance is established on the findings on the third test for products intended for repeated use.
- *2 In addition, the sum of each metal in the first and second test should not exceed the sevenfold limit.

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3.7 Specific Migration of Metals

Test method: The migratory behaviour was examined with reference to Commission Regulation (EU) No. 10/2011 and its amendments. Determination by ICP-MS.

Limit: Commission Regulation (EU) No 10/2011 and its amendments

The following food simulant and condition were applied:

Food simulant	Test duration / Temperature
Acetic acid 3%	1 hour(s) / 100 °C

Test No.:	1					
Sample No.:	3					
Migration ratio:	167 ml / dm ²					
Parameter	Unit	RL	1st Migration Result	2nd Migration Result	3rd Migration Result	Limit
Aluminium	mg/kg	0.1	n.d.	n.d.	n.d.	1
Antimony	mg/kg	0.01	n.d.	n.d.	n.d.	0.04
Arsenic	mg/kg	0.01	n.d.	n.d.	n.d.	n.d.
Barium	mg/kg	0.1	n.d.	n.d.	n.d.	1
Cadmium	mg/kg	0.002	n.d.	n.d.	n.d.	n.d.
Total Chromium	mg/kg	0.01	n.d.	n.d.	n.d.	n.d.
Cobalt	mg/kg	0.01	n.d.	n.d.	n.d.	0.05
Copper	mg/kg	0.5	n.d.	n.d.	n.d.	5
Iron	mg/kg	5	n.d.	n.d.	n.d.	48
Lead	mg/kg	0.01	n.d.	n.d.	n.d.	n.d.
Lithium	mg/kg	0.1	n.d.	n.d.	n.d.	0.6
Manganese	mg/kg	0.1	n.d.	n.d.	n.d.	0.6
Mercury	mg/kg	0.01	n.d.	n.d.	n.d.	n.d.
Nickel	mg/kg	0.01	n.d.	n.d.	n.d.	0.02
Zinc	mg/kg	1	n.d.	n.d.	n.d.	5
Europium	mg/kg	0.01	n.d.	n.d.	n.d.	--
Gadolinium	mg/kg	0.01	n.d.	n.d.	n.d.	--
Lanthanum	mg/kg	0.01	n.d.	n.d.	n.d.	--
Terbium	mg/kg	0.01	n.d.	n.d.	n.d.	--
Sum of Lanthanide substances	mg/kg	0.01	n.d.	n.d.	n.d.	0.05

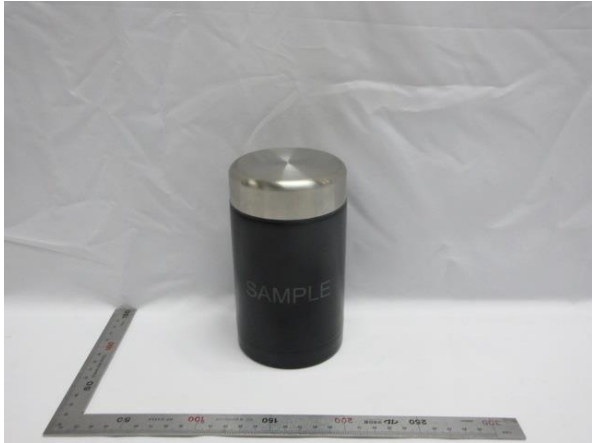
Abbreviations:

- RL = Reporting limit
- n.d. = Not detected
- mg/kg = Milligram per kilogram
- < = Less than

Remark:

- *1 Single component with an amount below reporting limit was not considered by the calculation of the sum. In the case of all lanthanide substances europium, gadolinium, lanthanum and terbium were not detected, the result is stated n.d.

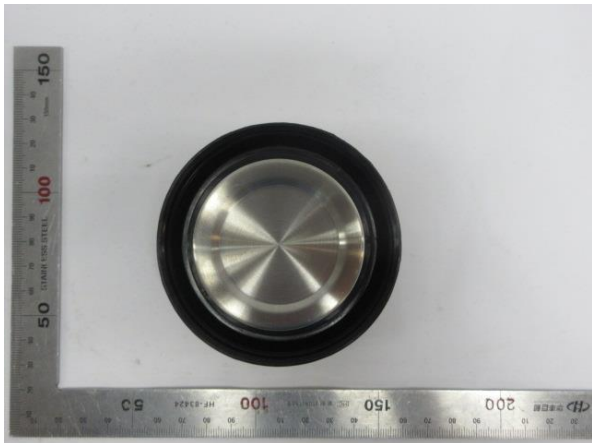
4. Sample picture(s):



Sample No. 1



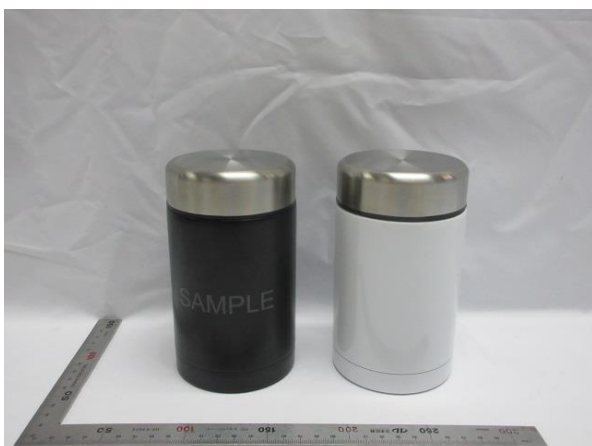
Sample No. 2



Sample No. 3



Sample No. 4



Product

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