

**Test Report No.:** 244461040h 001

Page 1 of 12

**Client:** **XIAMEN MODERN DELTA LTD.**  
Jinxing Road No.61-69, Hubin North Road, Xiamen 361012, P.R.China

**Test item(s):** Feeding Bottle Cap With Handle Wide-neck

**Identification / Model No(s):** EA-502

**Sample obtaining method:** Sending by customer

**Condition at delivery:** Test item complete and undamaged.

**Sample Receiving date:** 2022-11-02

**Testing Period:** No

**Place of testing:** Chemical laboratory Shanghai, Toys laboratory Shanghai



**Test specification:**

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

- Regulation (EC) No 1935/2004

Color Fastness PASS

EN 14350:2020 Child care articles - Drinking equipment - Safety requirements and test methods -Clause 8.6 Migration of certain elements PASS

**Other Information:**

Country of Origin: China

Report Reference No: 244461040a 001

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

2022-12-13

Amy Zhao / Technical Manager

Neo Yang / Assistant Manager

Date

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.

**Test Report No.: 244461040h 001**

Page 2 of 12

**Indication:** Food contact  
**Product:** Commodity, contact with foodstuff

**Description of test specimen**

**Item**  
8 Feeding Bottle Cap With Handle Wide-neck

**1. Material List:**

Sample No.	Material	Color	Location	Refer
8	Whole Product	Multicolor	Feeding Bottle Cap With Handle Wide-neck	
8A	Plastic, PP	Grey	Screw Cap	244461040a 001 1B
8B	Plastic, PP	White	Cap	244461040a 001 1C

**Remark :**

According to client's information 8A and 8B are produced of same material of 244461040a 001 1B and 1C. Tests results refer to 244461040a 001 as indicated.

**Test Report No.: 244461040h 001**

Page 3 of 12

**2. Overall Results:**

Test No.	Tested Item	Conclusion
1	Sensorial examination	Pass
2	Global Migration	Pass
3	Colourfastness	Pass
4	Specific Migration of Metals	Pass
5	Color Fastness	Pass
6	EN 14350:2020 Child care articles - Drinking equipment - Safety requirements and test methods - Clause 8.6 Migration of certain elements	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 = No discernible deviation
  - 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	2 hour(s) / 70 °C

Test No.:	1^
Sample No.:	8A
<b>Parameter:</b>	<b>Result</b>
Transfer of Smell:	0
Transfer of Taste:	0

Test No.:	2^
Sample No.:	8B
<b>Parameter:</b>	<b>Result</b>
Transfer of Smell:	0
Transfer of Taste:	0

**Test Report No.: 244461040h 001**

Page 5 of 12

**3.2 Global Migration**

Test method: The migratory behaviour is examined with reference to Commission Regulation (EU) No 10/2011 and its amendments.

Limit: With reference to 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 %	2 hour(s) / 70 °C
Ethanol 50 %	2 hour(s) / 70 °C

Test No.:	1^					
Sample No.:	8A					
Migration ratio:	1000 ml / 6 dm <sup>2</sup>					
Parameter	Unit	RL	1 <sup>st</sup> Migration Result	2 <sup>nd</sup> Migration Result	3 <sup>rd</sup> Migration Result	Limit
Acetic acid 3 %	mg/dm <sup>2</sup>	2	<RL	<RL	<RL	10
Ethanol 50 %	mg/dm <sup>2</sup>	2	<RL	<RL	<RL	10

Test No.:	2^					
Sample No.:	8B					
Migration ratio:	1000 ml / 6 dm <sup>2</sup>					
Parameter	Unit	RL	1 <sup>st</sup> Migration Result	2 <sup>nd</sup> Migration Result	3 <sup>rd</sup> Migration Result	Limit
Acetic acid 3 %	mg/dm <sup>2</sup>	2	<RL	<RL	<RL	10
Ethanol 50 %	mg/dm <sup>2</sup>	2	2	<RL	<RL	10

Abbreviations:

RL = Reporting Limit

mg/dm<sup>2</sup> = Milligram per square decimetre

ml/dm<sup>2</sup> = Mililitre per square decimetre

< = Less than

Remark:

\*1 Stability test is included in this test parameter.

\*2 The migration results do not show increase between subsequent tests and therefore it meets the stability requirement.

**Test Report No.: 244461040h 001**

Page 6 of 12

**3.3 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.:	8A
<b>Parameter Colourfastness to</b>	<b>Difference between blank and filter paper contacted with sample</b>
Water	No
Acetic acid 3 %	No
Ethanol 50 %	No

Test Report No.: 244461040h 001

Page 7 of 12

### 3.4 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: 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 %	2 hour(s) / 70 °C

Test No.:	1 <sup>^</sup>					
Material No.:	8A					
Migration ratio:	1000 ml / 6 dm <sup>2</sup>					
Parameter	Unit	RL	1 <sup>st</sup> Migration Result	2 <sup>nd</sup> Migration Result	3 <sup>rd</sup> Migration Result	Limit
Aluminium	mg/kg	0.1	<RL	<RL	<RL	1
Antimony	mg/kg	0.01	<RL	<RL	<RL	0.04
Arsenic	mg/kg	0.01	<RL	<RL	<RL	n.d.
Barium	mg/kg	0.1	<RL	<RL	<RL	1
Cadmium	mg/kg	0.002	<RL	<RL	<RL	n.d.
Total Chromium	mg/kg	0.01	<RL	<RL	<RL	n.d.
Cobalt	mg/kg	0.01	<RL	<RL	<RL	0.05
Copper	mg/kg	0.5	<RL	<RL	<RL	5
Iron	mg/kg	5	<RL	<RL	<RL	48
Lead	mg/kg	0.01	<RL	<RL	<RL	n.d.
Lithium	mg/kg	0.1	<RL	<RL	<RL	0.6
Manganese	mg/kg	0.1	<RL	<RL	<RL	0.6
Mercury	mg/kg	0.01	<RL	<RL	<RL	n.d.
Nickel	mg/kg	0.01	<RL	<RL	<RL	0.02
Zinc	mg/kg	1	<RL	<RL	<RL	5
Europium	mg/kg	0.01	<RL	<RL	<RL	--
Gadolinium	mg/kg	0.01	<RL	<RL	<RL	--
Lanthanum	mg/kg	0.01	<RL	<RL	<RL	--
Terbium	mg/kg	0.01	<RL	<RL	<RL	--
Sum of Lanthanide substances	mg/kg	0.01	<RL	<RL	<RL	0.05

Test Report No.: 244461040h 001

Page 8 of 12

Test No.:	2 <sup>^</sup>					
Material No.:	8B					
Migration ratio:	1000 ml / 6 dm <sup>2</sup>					
Parameter	Unit	RL	1 <sup>st</sup> Migration Result	2 <sup>nd</sup> Migration Result	3 <sup>rd</sup> Migration Result	Limit
Aluminium	mg/kg	0.1	<RL	<RL	<RL	1
Antimony	mg/kg	0.01	<RL	<RL	<RL	0.04
Arsenic	mg/kg	0.01	<RL	<RL	<RL	n.d.
Barium	mg/kg	0.1	<RL	<RL	<RL	1
Cadmium	mg/kg	0.002	<RL	<RL	<RL	n.d.
Total Chromium	mg/kg	0.01	<RL	<RL	<RL	n.d.
Cobalt	mg/kg	0.01	<RL	<RL	<RL	0.05
Copper	mg/kg	0.5	<RL	<RL	<RL	5
Iron	mg/kg	5	<RL	<RL	<RL	48
Lead	mg/kg	0.01	<RL	<RL	<RL	n.d.
Lithium	mg/kg	0.1	<RL	<RL	<RL	0.6
Manganese	mg/kg	0.1	<RL	<RL	<RL	0.6
Mercury	mg/kg	0.01	<RL	<RL	<RL	n.d.
Nickel	mg/kg	0.01	<RL	<RL	<RL	0.02
Zinc	mg/kg	1	<RL	<RL	<RL	5
Europium	mg/kg	0.01	<RL	<RL	<RL	--
Gadolinium	mg/kg	0.01	<RL	<RL	<RL	--
Lanthanum	mg/kg	0.01	<RL	<RL	<RL	--
Terbium	mg/kg	0.01	<RL	<RL	<RL	--
Sum of Lanthanide substances	mg/kg	0.01	<RL	<RL	<RL	0.05

## Abbreviations:

RL = Reporting limit

n.d. = Not detected

mg/kg = Milligram per kilogram

ml/dm<sup>2</sup> = Millilitre per square decimetre

&lt; = 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.



**Test Report No.: 244461040h 001**

Page 9 of 12

- \*2 Stability test is included in this test parameter.
- \*3 The migration results do not show increase between subsequent tests and therefore it meets the stability requirement.

**Test Report No.: 244461040h 001**

Page 10 of 12

**3.5 Color Fastness**

**Test Method:** EN 14350:2020 Clause 8.8

**Test result**

Test No.:	1 <sup>^</sup>
Material No.:	8A
<b>Parameter Colourfastness to</b>	<b>Difference between blank and filter paper contacted with sample</b>
3% Acetic acid	No
Coconut fat	No

<sup>^</sup> Test results refer to 244461040a 001

**Test Report No.: 244461040h 001**

Page 11 of 12

**4. EN 14350:2020 Child care articles - Drinking equipment - Safety requirements and test methods - Clause 8.6 Migration of certain elements**

Test Method: EN 14350:2020 Clause 8.6, with reference to EN 71-3:2019

**Test Result:**

				Test No.	T001	T002
				Material No.	8B	8A
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result
Aluminium (Al)	mg/kg	10	6000	< RL		22.9
Antimony (Sb)	mg/kg	5	120	< RL		< RL
Arsenic (As)	mg/kg	5	10	< RL		< RL
Barium (Ba)	mg/kg	2.5	4000	< RL		< RL
Boron (B)	mg/kg	10	3200	< RL		< RL
Cadmium (Cd)	mg/kg	1	3.6	< RL		< RL
Chromium III (Cr(III))	mg/kg	10	100	< RL		< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.002#	< RL		< RL
Cobalt (Co)	mg/kg	2.5	2.8	< RL		< RL
Copper (Cu)	mg/kg	2.5	1660	< RL		< RL
Lead (Pb)	mg/kg	2.5	5.0	< RL		< RL
Manganese (Mn)	mg/kg	2.5	600	< RL		< RL
Mercury (Hg)	mg/kg	2.5	20	< RL		< RL
Nickel (Ni)	mg/kg	2.5	56	< RL		< RL
Selenium (Se)	mg/kg	10	100	< RL		< RL
Strontium (Sr)	mg/kg	2.5	12000	< RL		< RL
Tin (Sn)	mg/kg	0.5	40000	< RL		< RL
Organic Tin <sup>^</sup>	mg/kg	0.2	2.5	-		-
Zinc (Zn)	mg/kg	10	10000	< RL		< RL

- Abbreviation:**
- < less than
  - RL = Reporting Limit
  - mg/kg denotes milligram per kilogram
  - <sup>^</sup> denotes Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (0.72 mg/kg)
  - # According to EN 14350:2020, the limit of Cr(VI) is 0.002 mg/kg. However, the technical specificities were considered and whenever the Cr(VI) level measured in the sample is below the Limit of Quantification of the valid version of EN 71-3, the sample is to be considered passed.

**Remark:**

Cr(VI) content has been performed with reference to EN 71-3:2019, Annex F (analyzed by LC-ICP-MS or IC-ICP-MS/MS). Cr(III) content was confirmed by calculation.

5. Sample picture(s):

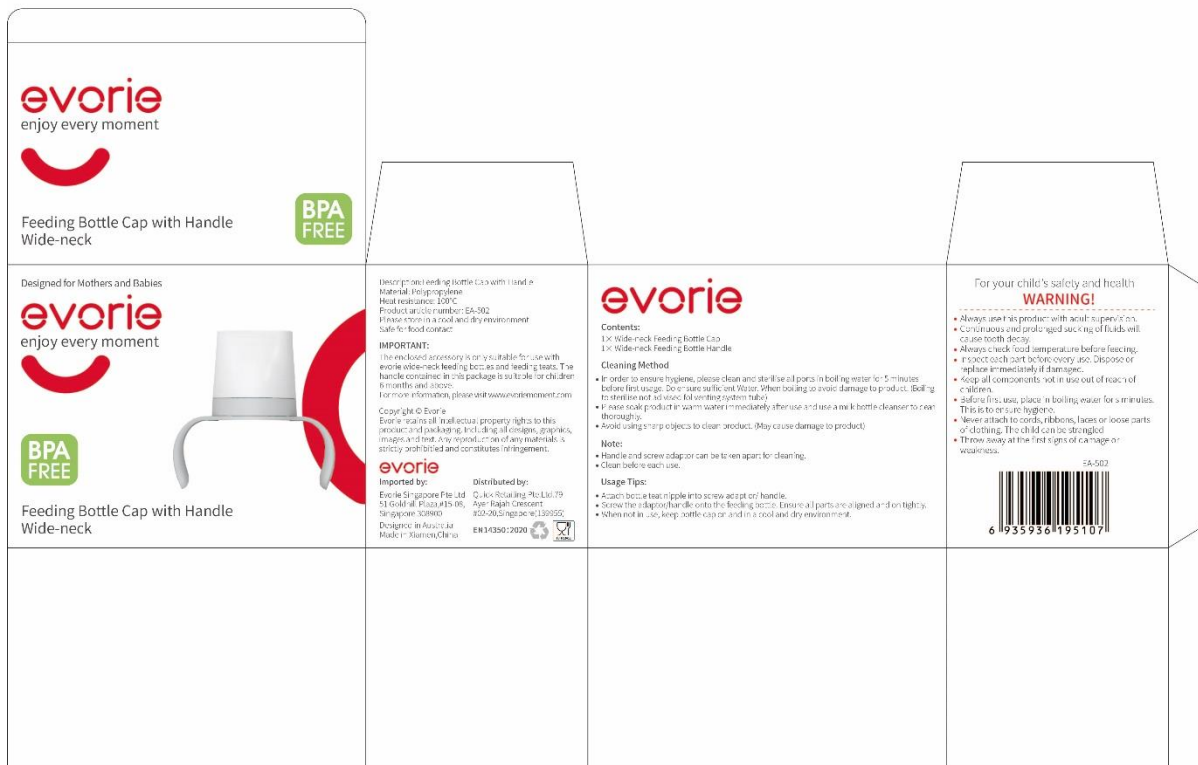


Item 8



Sample 8

尺寸: 105\*65\*85mm



Packaging

The packaging was provided by client.

- END -

