

TEST REPORT

DEKRA Testing and Certification (Shanghai) Ltd

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Test Report No.	:	6147081.50QS
Project no.	:	6147081

Client

 Hangzhou Tianye Packaging Technology Co., Ltd
2-509, Eastern Science and Innovation Park, No.26 Wuzhou Road, Donghu Street, Linping District, Hangzhou City 311100, Zhejiang Province, China

Date sample received	:	2022.11.30
Product	:	Plastic tube
Product description	:	Please refer to next page(s).
Test Requested	:	EU 10/2011 and its amendments
Test Method	:	Please refer to next page(s).
Result	:	Please refer to next page(s).
Conclusion	:	/
Testing Period	:	2022.11.30—2022.12.19

Signed for and on behalf of DEKRA Testing and Certification (Shanghai) Ltd



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Wu Xiang(吴翔) Test Engineer

Wu Jialei(吴嘉雷) Project Manager



TEST RESULTS

1: Sensory test

Test Method: Sensory test with reference to DIN 10955: 2004.

Test procedure:

1. Wash the sample with distilled water and dry it at room temperature;

2. Total immersion the appliance with the food simulant (drinking water) and keep it at room temperature for 10days;

- 3. Cool to room temperature;
- 4. Degust the taste and evaluate;

5. Test the Blank as the steps 1~4.

Comment:	PASS	
Sensorial examination taste (Point scale)	2.5	0.5
Sensorial examination odour (Point scale)	2.5	0
TESTITEM		001
TESTITEM	Maximum Parmissible Limit	TEST RESULT

Scale evaluation:

1: Odour and taste just perceptible (still difficult to define)

- 2: Moderate odour and taste
- 3: Moderately strong odour and taste
- 4: Strong odour and taste

2: Overall migration

Test Method: With reference to EN 1186 Part 3, Part 9:2002, overall migration by aqueous food simulants.

Test Condition: 40℃, 10days

20% ethanoi ing/dit² 3 10 <3	TEST ITEM	UNIT	MDL		001
		Comment:	5	10	PASS

1) MDL = Method Detection Limit.

^{0:} No perceptible odour and taste



3: Specific migration of heavy metals

Test Method: With reference to EN13130-1:2004, analysis was performed by ICP-OES. **Test condition:** 3% acetic acid, 60°C, 10days

TEST ITEM	UNIT	MDL	LIMIT	Test Result 001
Aluminium (Al)	mg/kg	0.5	1	N.D.
Antimony (Sb)	mg/kg	0.01	0.04	N.D.
Arsenic (As)	mg/kg	0.01	N.D.	N.D.
Barium (Ba)	mg/kg	0.1	1	N.D.
Cadmium (Cd)	mg/kg	0.002	N.D.	N.D.
Chromium (Cr)	mg/kg	0.01	N.D.	N.D.
Cobalt (Co)	mg/kg	0.03	0.05	N.D.
Copper (Cu)	mg/kg	0.5	5	N.D.
Europium (Eu)	mg/kg	0.01	0.05	N.D.
Gadolinium (Gd)	mg/kg	0.01	0.05	N.D.
Iron (Fe)	mg/kg	5	48	N.D.
Lanthanum (La)	mg/kg	0.01	0.05	N.D.
Lead (Pb)	mg/kg	0.01	N.D.	N.D.
Lithium (Li)	mg/kg	0.01	0.6	N.D.
Manganese (Mn)	mg/kg	0.1	0.6	N.D.
Mercury (Hg)	mg/kg	0.01	N.D.	N.D.



		PASS			
	Wolfram (W)	mg/kg	0.01	0.05	N.D.
	Zinc (Zn)	mg/kg	1	5	N.D.
	Terbium (Tb)	mg/kg	0.01	0.05	N.D.
	Nickel (Ni)	mg/kg	0.01	0.02	N.D.
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1) MDL = Method Detection Limit.

2) N.D. = Not detected, less than MDL.



4: Specific migration of primary aromatic amine

Test Method: Sample preparation with reference to EN 13130-1: 2004 with selection of simulant and condition, followed by analysis by LC/MS/MS & UV.

Test Condition: 3% acetic acid, 60°C, 10days

		Maximum	Test	
TEST ITEM	UNIT	Permissible Limit	Result	
			001	
4-aminobiphenyl	mg/kg	0.002	<0.002	
benzidine	mg/kg	0.002	<0.002	
4-chloro-o-toluidine	mg/kg	0.002	<0.002	
2-naphthylamine	mg/kg	0.002	<0.002	
o-aminoazotoluene	mg/kg	0.002	<0.002	
5-nitro-o-toluidine	mg/kg	0.002	<0.002	
4-chloroaniline	mg/kg	0.002	<0.002	
4-methoxy-m-phenylenediamine	mg/kg	0.002	<0.002	
4,4'-methylenedianiline	mg/kg	0.002	<0.002	
3,3'-dichlorobenzidine	mg/kg	0.002	<0.002	
3,3'-dimethoxybenzidine	mg/kg	0.002	<0.002	
3,3'-dimethylbenzidine	mg/kg	0.002	<0.002	
4,4'-methylenedi-o-toluidine	mg/kg	0.002	<0.002	
6-methoxy-m-toluidine	mg/kg	0.002	<0.002	
4,4'-methylene-bis-(2-chloro-aniline)	mg/kg	0.002	<0.002	
4,4'-oxydianiline	mg/kg	0.002	<0.002	
4,4'-thiodianiline	mg/kg	0.002	<0.002	
o-toluidine	mg/kg	0.002	<0.002	
4-methyl-m-phenylenediamine	mg/kg	0.002	<0.002	
2,4,5-trimethylaniline	mg/kg	0.002	<0.002	
o-anisidine	mg/kg	0.002	<0.002	
4-amino azobenzene	mg/kg	0.002	<0.002	
1,3-phenylenediamine	mg/kg	0.002	<0.002	
Other Primary Aromatic Amine	mg/kg	Sum≤0.01	<0.01	
Comment:				



5: Specific migration of bisphenol A

Test Method: With reference to EN 13130-1:2004, analysis was performed by HPLC.

Test Condition: 3% acetic acid, 60°C, 10days

TEST ITEM	UNIT	MDL	LIMIT	Test Result 001
migration of BPA	mg/kg	0.05	0.05	N.D.
C	PASS			

1) MDL = Method Detection Limit.

2) N.D. = Not detected, less than MDL.

6: Specific migration of melamine

Test Method:With reference to EN13130-1:2004, analysis was performed by HPLC-FLD. **Test Condition:** 3% acetic acid, 60[°]C, 10days

TEST ITEM	UNIT	MDL	LIMIT	Test Result 001
migration of Melamine	mg/kg	2	2.5	N.D.
Comn	PASS			

1) MDL = Method Detection Limit.

2) N.D. = Not detected, less than MDL.

7: Specific migration of Extractable formaldehyde

Test Method: With reference to EN 13130-1:2004, followed by analysis by UV-vis.

Test condition: 3%acetic acid, 60°C, 10days

TEST ITEM	UNIT	MDL	LIMIT	Test Result 001
migration of Formaldehyde	mg/kg	3	15	N.D.
	PASS			

1) MDL = Method Detection Limit.

2) N.D. = Not detected, less than MDL.



8: Specific migration of BADGE, BFDGE&NOGE

Test Method: Bisphenol-A Diglycidyl Ether (BADGE) and some of its derivatives:

Refer to EN 15136:2006.

Bisphenol-F Diglycidyl Ether (BFDGE): Refer to EN 15137:2006.

Novolac Glycidyl Ethers (NOGE): Refer to EN 15137:2006.

Test Condition: 3% acetic acid, 60°C, 10days

Test Item	CAS No.	Unit	Detection limit	Limit	
					001%
BADGE and some of its		ma a /C alma ²	0.00	(4)	
derivatives		mg/6 am²	0.06	(^)	N.D.
BFDGE	039817-09-9	mg/6 dm ²	0.06	N.D.	N.D.
NOGE		mg/6 dm ²	0.06	N.D.	N.D.

1) mg/6 dm² = milligram per 6 square decimetre

2) N.D. = Not detected

3) "---" = Not Regulated.

4) (^) According to Commission Regulation (EC) No 1895/2005, the permissible limit of BADGE is as follow:

Parameter	CAS No.	Limit According to Directive 1895/2005/EC
(a) BADGE	001675-54-3	
(b) BADGE.H ₂ O	076002-91-0	Sum:9 mg/6 dm ²
(c) BADGE.2H ₂ O	005581-32-8	
(a) BADGE.HCI	013836-48-1	
(b) BADGE.2HCI	004809-35-2	Sum:1 mg/6 dm ²
(c) BADGE.H ₂ O.HCI	227947-06-0	

5) \Rightarrow The test was carried out in lab accredited by DEKRA.



Test item	Description	
001	white plastic tube	
		23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 .

----- End of Report

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