PAI TEST REPORT Test Report #	18A-004780-1	Date of Report Issue:	November 20, 2018
Date of Sample Received:	October 24, 2018	Pages:	Page 1 of 12
CLIENT INFORMATION: Company: Address: SAMPLE INFORMATION:	Anhui Inno-Sign Internati Room 1409 1410,Buildin Center,No.188 South Qia Province,China		
Product Name:	Hydrate leak proof lockal	ble tritan bottle	
Model/style No.:	P436.28		
Main Material:	-		
Buyer:	-		
Supplier:	-		
Country of Distribution:	EU		
Testing Period:	10/24/2018-11/02/2018		

OVERALL RESULT:

 \mathcal{P} PASS

Refer to page 2 for test result summary and appropriate notes.

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Keim.lee

Kevin Lee Technical Manager



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Date of Sample Received:

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TEST RESULTS SUMMARY:

At the request of the client, the following tests were conducted:

CONCLUSION	TEST(S) CONDUCTED
PASS	Client's requirement, Bisphenol A content
PASS	German Product Safety Act (ProdSG) Article 21 (1) No. 3, Polycyclic Aromatic Hydrocarbon (PAH)
PASS	Regulation (EC) No 1935/2004, (EU) No 10/2011 -Sensorial examination odour and taste test
PASS	Regulation (EC) No 1935/2004, (EU) No 10/2011 , its amendment (EU) 2016/1416 and Res AP(2004)5- Overall migration
PASS	Regulation (EC) No 1935/2004, (EU) No 10/2011 and its amendment (EU) 2016/1416- Specific migration of heavy metals
PASS	Regulation (EC) No 1935/2004, (EU) No 10/2011 -Specific migration of Primary Aromatic Amines
PASS	Regulation (EC) No 1935/2004, (EU) No 10/2011 -Sensorial examination odour and taste test
PASS	Regulation (EC) No 1935/2004, (EU) No 10/2011 -Specific migration of Bisphenol A



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DETAILED RESULTS:

Client's requirement, Bisphenol A content

Test method: Refer to US EPA 3550C:2007 & US EPA 8270D:2014 Analytical Method: Gas Chromatography-Mass Spectrometer

Sample No.:	1	2	3			Client's limit
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	(mg/kg)
Bisphenol A (BPA)	ND	ND	ND			Not Detected
Conclusion	PASS	PASS	PASS			

Note: mg/kg=milligram per kilogram ND=Not Detected(Reporting limit = 1mg/kg)





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DETAILED RESULTS:

German Product Safety Act (ProdSG) Article 21 (1) No. 3, Polycyclic Aromatic Hydrocarbon (PAH)

Test Method:	AfPS GS 2014:01
Analytical Method:	Gas Chromatography with Mass Spectrometry

<u>Category 1: Materials, that are intended to be put in the mouth, or materials in toys with Intended and prolonged skin-Contact (Longer than 30 Seconds)</u>

Specimen No.		1	2	3		Limit
Test Item	CAS No.	Result	Result	Result	Result	(mg/kg)
restitem	CAS NO.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(8/8/
Benzo (a) pyrene	50-32-8	ND	ND	ND		0.2
Benzo (e) pyrene	192-97-2	ND	ND	ND		0.2
Benzo (a) anthracene	56-55-3	ND	ND	ND		0.2
Benzo (b) fluoranthene	205-99-2	ND	ND	ND		0.2
Benzo (j) fluoranthene	205-82-3	ND	ND	ND		0.2
Benzo (k) fluoranthene	207-08-9	ND	ND	ND		0.2
Chrysene	218-01-9	ND	ND	ND		0.2
Dibenzo (a,h) anthracene	53-70-3	ND	ND	ND		0.2
Benzo (g,h,i) perylene	191-24-2	ND	ND	ND		0.2
Indeno (1,2,3-cd) pyrene	193-39-5	ND	ND	ND		0.2
Acenaphthylene	208-96-8	ND	ND	ND		
Acenaphthene	83-32-9	ND	ND	ND		
Fluorene	86-73-7	ND	ND	ND		
Phenanthrene	85-01-8	ND	ND	ND		
Pyrene	129-00-0	ND	ND	ND		
Anthracene	120-12-7	ND	ND	ND		
Fluoranthene	206-44-0	ND	ND	ND		
Sum of Acenaphtl Acenaphthene, Flu Phenanthrene, Pyrene, Fluoranthen	uorene, Anthracene,	ND	ND	ND		1
Naphthalene	91-20-3	ND	ND	ND		1
Sum of 18 PA	H	ND	ND	ND		1
Conclusion		PASS	PASS	PASS		

Note:

mg/kg = Milligrams per kilogram LT = Less than

ND = Not detected (Reporting Limit = 0.2 mg/kg)

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DETAILED RESULTS:

Regulation (EC) No 1935/2004, (EU) No 10/2011 -Sensorial examination odour and taste test

Test Method: DIN 10955: 2004 Test condition: 70°C, 2 hours Test media: Distilled water No. of panelist: 6

Specimen No.	4				Max.Permissible
Test Item	Result	Result	Result	Result	Limit
Sensorial examination odour (Point scale)	0				2.5
Sensorial examination taste (Point scale)	0				2.5
Conclusion	PASS				

Scale evaluation:

- 0: No perceptible odour
- 1: Odour just perceptible (still difficult to define)
- 2: Moderate odour
- 3: Moderately strong odour
- 4: Strong odour





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DETAILED RESULTS:

Regulation (EC) No 1935/2004, (EU) No 10/2011, its amendment (EU) 2016/1416 and Res AP(2004)5-Overall migration

Test method: EN1186-1:2002: for selection of conditions and test methods EN1186-3:2002: aqueous food simulants by total immersion EN1186-9:2002: aqueous food simulants by article filling

Specimen No.		1	2	3	Maximum
Simulant used	Test condition	Result (mg/dm²)	Result (mg/dm²)	Result (mg/dm²)	permissible Limit (mg/dm²)
10% ethanol	2 hours at 70°C	ND	ND	ND	10
3% acetic acid	2 hours at 70°C	ND	ND	4	10
Conclusion		PASS	PASS	PASS	

Note:

mg/dm² = milligram per square decimeter ND = Not Detected (Reporting limit = 3 mg/dm²)



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DETAILED RESULTS:

Regulation (EC) No 1935/2004, (EU) No 10/2011 and its amendment (EU) 2016/1416- Specific migration of heavy metals

Test method: Sample preparation in 3% acetic acid at 70°C for 2hours

Analytical Method: Inductively Coupled Plasma-Mass Spectrometry/ Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.		1	3			Maximum
Test Item	Detection	Result	Result	Result	Result	permissible Limit
restitem	limit	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Barium	0.1	ND	ND			1
Cobalt	0.05	ND	ND			0.05
Copper	0.5	ND	ND			5
Iron	1.0	ND	ND			48
Lithium	0.1	ND	ND			0.6
Manganese	0.1	ND	ND			0.6
Zinc	1.0	ND	ND			5
Aluminum	0.1	ND	ND			1
Nickel	0.01	ND	ND			0.02
Conclus	ion	PASS	PASS			

Note:

mg/kg=milligram per kilogram ND= Not Detected





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DETAILED RESULTS:

Regulation (EC) No 1935/2004, (EU) No 10/2011 -Specific migration of Primary Aromatic Amines

Test Method: To refer to the EN 13130-1:2004, the analysis was performed by Gas Chromatography with Mass Spectrometry.

Specimen No.		1	3			Limit
Test Item	Test condition	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	(mg/kg)
Primary Aromatic Amines migration	70°C, 2h 3% Acetic acid	ND	ND			Non- detectable
Conclusion		PASS	PASS			

Note :

mg/kg = milligram per kilogram = ppm MDL = Method Detection Limit ND = Not Detected (Reporting Limit= 0.01mg/kg)

Primary Aromatic Amines List:

No.	Name	No.	Name
1	4-aminodiphenyl	14	p-cresidine
2	Benzidine	15	4,4'-methylene-bis-(2-chloroaniline)
3	4-chloro-o-toluidine	16	4,4'-oxydianiline
4	2-naphthylamine	17	4,4'-thiodianiline
5	o-aminoazotoluene	18	o-toluidine
6	2-amino-4-nitrotoluene	19	2,4-diaminotoluene
7	p-chloroaniline	20	2,4,5-trimethylaniline
8	2,4-diaminoanisole	21	2-methoxyaniline
9	4,4'-diaminodiphenylmethane	22	4-aminoazobenzene
10	3,3'-dichlorobenzidine	23	2,4-Xylidine
11	3,3'-dimethoxybenzidine	24	2,6-Xylidine
12	3,3'-dimethylbenzidine	25	p-Phenylenediamine
13	3,3'-dimethyl-4,4'-diaminodiphenylmethane	26	Aniline





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DETAILED RESULTS:

Regulation (EC) No 1935/2004, (EU) No 10/2011 -Specific migration of Bisphenol A

Test method: EN 13130-1:2004 & DD CEN/TS 13130-13:2005

Specimen No.		3					Limit
Test Item	Test condition	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	(mg/kg)
Bisphenol A (BPA)	70°C, 2h 3% Acetic acid	ND					0.05
Conclusion		PASS					

Note :

mg/kg = milligram per kilogram = ppm ND = Not Detected (Reporting Limit= 0.05mg/kg)





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SPECIMEN DESCRIPTION:

Specimen No.	Specimen Description	Location
1	Grey plastic	Lid of blue style(hydrate leak proof lockable tritan bottle)
2	Translucent plastic	Sealing ring of blue style(hydrate leak proof lockable tritan bottle)
3	Transparent blue plastic	Shell of blue style(hydrate leak proof lockable tritan bottle)



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