

TEST REPORT

APPLICANT : Liyou Industrial Co., Ltd

ADDRESS : Yangwan Industrial area, QiaoXia Town, Yongjia County,
Zhejiang 325106

SAMPLE DESCRIPTION : Children Plastic Tunnel

ITEM NO. : LY-1602、LY-1603

AGE REQUESTED ON APPLICATION FORM : 3+

LABELED AGE GRADE : Age for 3-6 years old

AGE GRADE APPLIED IN TESTING : 3+

SAMPLE RECEIVED DATE : 16-Mar-2021

SAMPLE RESUBMISSION DATE : 29-Mar-2021

TURN AROUND TIME : 16-Mar-2021 to 07-Apr-2021

The following test item(s) was/were performed on submitted sample(s) and/or component(s) confirmed by applicant

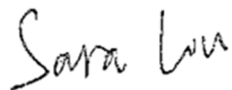
TEST REQUESTED	TEST METHOD/REGULATION	RESULT
Physical and Mechanical Hazards	ASTM F963-17	Pass
Flammability of Toys	ASTM F963-17	Pass
Heavy Metals	ASTM F963-17	Pass
Total Lead Content in Substrate	US CPSIA, Section 101	Pass
Phthalates Content	US CPSIA, Section 108	Pass
Phthalates Content	CPSC 16 CFR part 1307	Pass

Samples are obtained by express delivery, Results obtained refer only to samples, products or material received in Laboratory, as described in point related to sample description, and tested in conditions shown in present report. Eurofins Product Testing Service (Shanghai) Co., Ltd ensures that this job has been performed according to our Quality System and complying contract and legal conditions. If you happen to have any comments, please do it by sending email to info.hz@eurofins.com and referring to this report number. Reproduction of this document is only valid if it is done completely and under the written permission of Eurofins Product Testing Service (Shanghai) Co., Ltd. If you happen to have any complaints, please do it by sending email to chinacomplaint@eurofins.com and referring to this report number.

***** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) *****

Signed for and on behalf of

Eurofins Product Testing Service (Shanghai) Co., Ltd. Hangzhou Branch



Sara Liu
Lab Manager

SAMPLE PHOTO(S)



A LY-1602



B LY-1603

EFHZ21032051-CG-01

TO BE CONTINUED

COMPONENT LIST

Component No.	Component	Sample No.
1	Transparent soft plastic sticker with multicolor coating	A,B
2	White plastic (eyes)	A
3	Dark orange plastic (head/tail/body)	A
4	Light brown plastic (nose/tail)	A
5	Dark red plastic (tongue/body)	A
6	Navy plastic (body)	A
7	Grass green plastic (body)	A
8	Orange plastic joint (body)	A,B
9	Blue plastic (foot)	A
10	Red plastic (foot)	A,B
11	Green plastic (foot)	A
12	Light yellow plastic (foot)	A
13	Purple plastic (body)	B
14	White plastic (eyes)	B
15	Black plastic (eyes)	B
16	Yellow plastic (bowknot)	B
17	Light blue plastic (foot)	B
18	Orange plastic (foot)	B
19	Light green plastic (foot)	B
20	Light orange plastic screw	B
21	Silver metal screw	A

TO BE CONTINUED

TEST RESULT

Physical and Mechanical Hazards

Test Request: As specified in Consumer Safety Specification ASTM F963-17

Section	Description	Result
4.1	Material Quality	P
4.3.7	Stuffing Materials	N/A
4.5	Sound-Producing Toys	N/A
4.6	Small Objects	N/A
4.6.1	Toys that are intended for children under 36 months of age	N/A
4.6.2	Mouth-Actuated Toys	N/A
4.6.3	Toys that are intended for children over 36 months but less than 72 months	N/A
4.7	Accessible Edges	P
4.8	Projections	N/A
4.8.1	Bath Toy Projections	N/A
4.9	Accessible Points	P
4.10	Wires or Rods	N/A
4.11	Nails and Fasteners	N/A
4.12	Plastic Film	N/A
4.13	Folding Mechanisms and Hinges	N/A
4.14	Cords, Straps and Elastics	N/A
4.15	Stability and Over-Load Requirements	N/A
4.16	Confined Spaces	P
4.17	Wheels, Tires, and Axles	N/A
4.18	Holes, Clearances, and Accessibility of Mechanisms	P
4.19	Simulated Protective Devices	N/A
4.20	Pacifiers	N/A
4.21	Projectile Toys	N/A
4.22	Teethers and Teething Toys	N/A
4.23	Rattles	N/A
4.24	Squeeze Toys	N/A
4.25	Battery-Operated Toys	N/A
4.26	Toys Intended to be Attached to a Crib or Playpen	N/A
4.27	Stuffed and Beanbag-Type Toys	N/A
4.28	Stroller and Carriage Toys	N/A
4.30	Toy Gun Marking	N/A
4.31	Balloons	N/A
4.32	Certain Toys with Nearly Spherical Ends	N/A
4.33	Marbles	N/A
4.34	Balls	N/A
4.35	Pompoms	N/A
4.36	Hemispheric-Shaped Objects	N/A
4.37	Yo Yo Elastic Tether Toys	N/A
4.38	Magnets	N/A
4.39	Jaw Entrapment in Handles and Steering Wheels	N/A
4.40	Expanding material	N/A
4.41	Toy Chests	N/A
5	Labeling Requirements	
5.2	Age Grading Labeling	P

TO BE CONTINUED

TEST RESULT

Section	Description	Result
5.3	Safety Labeling Requirements	N/A
5.4	Aquatic Toys	N/A
5.5	Crib and Playpen Toys	N/A
5.6	Mobiles	N/A
5.7	Stroller and Carriage Toys	N/A
5.8	Toys Intended to be Assembled by an Adult	N/A
5.9	Simulated Protective Devices	N/A
5.10	Toys with Functional Sharp Edges and Sharp Points	N/A
5.11	Small Objects, Small Balls, Marbles and Balloons (16 CFR 1500.19)	N/A
5.12	Toy Caps (16 CFR 1500.86 for Required Labeling)	N/A
5.13	Art Materials (16 CFR 1500.14(b)(8))	N/A
5.14	Electric Toys	N/A
5.15	Battery-Operated Toys	N/A
5.15.1	Battery-Powered Ride-On Toys	N/A
5.15.2	Button or Coin Cell Batteries	N/A
5.16	Promotional Materials	P
5.17	Magnets	N/A
6	Instructional Literature	
6.1	Definition and Description	P
6.2	Crib and Playpen Toys	N/A
6.3	Mobiles	N/A
6.4	Toys Intended to be Assembled by an Adult	N/A
6.5	Battery-Operated Toys	N/A
6.6	Battery-Powered Ride-On Toys	N/A
6.7	Toys in Contact with Food	N/A
6.8	Toy Chests	N/A
7	Producer's Markings	
7.1	Producer's or Distributor's Name and Address	P
7.2	Battery-Powered Ride-on Toys	N/A
7.3	Toy Chests	N/A

Remark:

P - Pass

NA - Not Applicable

TO BE CONTINUED

TEST RESULT

Flammability of Toys

Test Request: As specified in ASTM F963-17, Section 4.2, testing procedure for materials other than textiles (excluding paper) used in toys is contained in Annex A5.

Sample	Limit	Result
A	0.1 inch/second	P
B	0.1 inch/second	P

Remark:

P - Pass

TO BE CONTINUED

TEST RESULT

Heavy Metals

1) ASTM F963-17- Heavy Elements – Total Lead in Substrate Material (Clause 4.3.5.2(2) (a))

Test Method: ASTM International Standard ASTM F963-17, Section 8.3.1 and Annex A7.

Tested Item(s)	Unit	Limit	MDL	Result				
				1	2	3	4	5
Total Lead in Substrate	mg/kg	100	10	ND	ND	ND	ND	ND

Tested Item(s)	Unit	Limit	MDL	Result				
				6	7	8	9	10
Total Lead in Substrate	mg/kg	100	10	ND	ND	ND	ND	ND

Tested Item(s)	Unit	Limit	MDL	Result				
				11	12	13	14	15
Total Lead in Substrate	mg/kg	100	10	ND	ND	ND	ND	ND

Tested Item(s)	Unit	Limit	MDL	Result				
				16	17	18	19	20
Total Lead in Substrate	mg/kg	100	10	ND	ND	ND	ND	ND

Tested Item(s)	Unit	Limit	MDL	Result				
				21				
Total Lead in Substrate	mg/kg	100	10	ND				

2) ASTM F963-17- Heavy Elements – Total Elements Content, Initial Screening for Soluble Migrated Elements Content in Surface Coatings and Substrates Other Than Modeling Clay(Clause 4.3.5.1(2) and 4.3.5.2(2)(b))

Test Method: ASTM International Standard ASTM F963-17, Section 8.3.1 and Annex A7.

Tested Item(s)	Unit	Limit	MDL	Result				
				1	2	3	4	5
Total Antimony	mg/kg	60	5	66*	ND	16	ND	ND
Total Arsenic	mg/kg	25	5	ND	ND	ND	ND	ND
Total Barium	mg/kg	1000	10	134	ND	ND	ND	ND
Total Cadmium	mg/kg	75	5	ND	ND	ND	ND	ND
Total Chromium	mg/kg	60	5	ND	ND	ND	ND	ND
Total Lead	mg/kg	90	10	ND	ND	ND	ND	ND
Total Mercury	mg/kg	60	5	ND	ND	ND	ND	ND
Total Selenium	mg/kg	500	10	ND	ND	ND	ND	ND

TO BE CONTINUED

TEST RESULT

Tested Item(s)	Unit	Limit	MDL	Result				
				6	7	8	9	10
Total Antimony	mg/kg	60	5	ND	ND	15	ND	ND
Total Arsenic	mg/kg	25	5	ND	ND	ND	ND	ND
Total Barium	mg/kg	1000	10	ND	ND	ND	ND	ND
Total Cadmium	mg/kg	75	5	ND	ND	ND	ND	ND
Total Chromium	mg/kg	60	5	ND	ND	ND	ND	ND
Total Lead	mg/kg	90	10	ND	ND	ND	ND	ND
Total Mercury	mg/kg	60	5	ND	ND	ND	ND	ND
Total Selenium	mg/kg	500	10	ND	ND	ND	ND	ND

Tested Item(s)	Unit	Limit	MDL	Result				
				11	12	13	14	15
Total Antimony	mg/kg	60	5	ND	ND	24	ND	ND
Total Arsenic	mg/kg	25	5	ND	ND	ND	ND	ND
Total Barium	mg/kg	1000	10	ND	ND	ND	ND	ND
Total Cadmium	mg/kg	75	5	ND	ND	ND	ND	ND
Total Chromium	mg/kg	60	5	ND	ND	ND	ND	ND
Total Lead	mg/kg	90	10	ND	ND	ND	ND	ND
Total Mercury	mg/kg	60	5	ND	ND	ND	ND	ND
Total Selenium	mg/kg	500	10	ND	ND	ND	ND	ND

Tested Item(s)	Unit	Limit	MDL	Result				
				16	17	18	19	20
Total Antimony	mg/kg	60	5	ND	ND	ND	ND	15
Total Arsenic	mg/kg	25	5	ND	ND	ND	ND	ND
Total Barium	mg/kg	1000	10	ND	ND	ND	ND	ND
Total Cadmium	mg/kg	75	5	ND	ND	ND	ND	ND
Total Chromium	mg/kg	60	5	ND	ND	ND	ND	ND
Total Lead	mg/kg	90	10	ND	ND	ND	ND	ND
Total Mercury	mg/kg	60	5	ND	ND	ND	ND	ND
Total Selenium	mg/kg	500	10	ND	ND	ND	ND	ND

TO BE CONTINUED

TEST RESULT

3) ASTM F963-17- Heavy Elements – Soluble Migrated Elements Content in Surface Coatings and Substrates Other Than Modeling Clay (Clause 4.3.5.1(2) and 4.3.5.2(2)(b))

Test Method: ASTM International Standard ASTM F963-17, Section 8.3.2 to 8.3.5 (excluding 8.3.5.5(3))

Tested Item(s)	Unit	Limit	MDL	Result
				1
Soluble Antimony	mg/kg	60	5	ND
Soluble Arsenic	mg/kg	25	5	ND
Soluble Barium	mg/kg	1000	10	ND
Soluble Cadmium	mg/kg	75	5	ND
Soluble Chromium	mg/kg	60	5	ND
Soluble Lead	mg/kg	90	10	ND
Soluble Mercury Hg	mg/kg	60	5	ND
Soluble Selenium	mg/kg	500	10	ND

Remark:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

The analytical results were adjusted by subtracting analytical correction factor.

* On the initial analysis for soluble heavy metals content, any tested component of greater than the set limit, the result is inconclusive for the requirement and therefore were retested with soluble heavy metals analysis of ASTM F963-17, Sections 8.3.2 to 8.3.5 as specified in Section 8.3.1.3. The result herein is for reference only (show data), please refer to soluble heavy metals content analysis for the corresponding conclusive results.

TO BE CONTINUED

TEST RESULT

Total Lead Content in Substrate

Test Request: Total lead in substrate as specified in US Consumer Product Safety Improvement Act 2008 (CPSIA), Section 101

Test Method: CPSC-CH-E1001-08.3, CPSC-CH-E1002-08.3
The sample was acid digested, and total lead content was determined by ICP-OES.

Test Item(s)	Unit	Limit	MDL	Result			
				1	2+3+4	5+6+7	8+9+10
Total Lead(Pb)	mg/kg	100	10	ND	ND	ND	ND

Test Item(s)	Unit	Limit	MDL	Result			
				11+12+13	14+15+16	17+18+19	20
Total Lead(Pb)	mg/kg	100	10	ND	ND	ND	ND

Test Item(s)	Unit	Limit	MDL	Result
				21
Total Lead(Pb)	mg/kg	100	10	ND

Remark:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

TO BE CONTINUED

TEST RESULT

Phthalates Content

Test Request: Phthalates Content as specified in US Consumer Product Safety Improvement Act 2008 (CPSIA), Section 108

Test Method: CPSC-CH-C1001-09.4

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					1	2+3+4
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	0.018	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Diisodecylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					5+6+7	8
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	0.088
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	0.010
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Diisodecylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					9	10
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Diisodecylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					11+12+13	14+15+16
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Diisodecylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					17+18+19	20
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Diisodecylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND

Remarks:

MDL = method detection limit

ND = Not detected, less than MDL

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

TO BE CONTINUED

TEST RESULT

Phthalates Content

Test Request: Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates as specified in CPSC 16 CFR part 1307.

Test Method: CPSC-CH-C1001-09.4

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					1	2+3+4
Diisononyl phthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Di-n-pentyl phthalate (DPENP)	131-18-0	%	0.1	0.005	ND	ND
Di-n-hexyl phthalate (DHEXP)	84-75-3	%	0.1	0.005	ND	ND
Dicyclohexyl phthalate (DCHP)	84-61-7	%	0.1	0.005	ND	ND
Diisobutyl phthalate (DIBP)	84-69-5	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	0.018	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					5+6+7	8
Diisononyl phthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Di-n-pentyl phthalate (DPENP)	131-18-0	%	0.1	0.005	ND	ND
Di-n-hexyl phthalate (DHEXP)	84-75-3	%	0.1	0.005	ND	ND
Dicyclohexyl phthalate (DCHP)	84-61-7	%	0.1	0.005	ND	ND
Diisobutyl phthalate (DIBP)	84-69-5	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	0.010
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	0.088
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					9	10
Diisononyl phthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Di-n-pentyl phthalate (DPENP)	131-18-0	%	0.1	0.005	ND	ND
Di-n-hexyl phthalate (DHEXP)	84-75-3	%	0.1	0.005	ND	ND
Dicyclohexyl phthalate (DCHP)	84-61-7	%	0.1	0.005	ND	ND
Diisobutyl phthalate (DIBP)	84-69-5	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					11+12+13	14+15+16
Diisononyl phthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Di-n-pentyl phthalate (DPENP)	131-18-0	%	0.1	0.005	ND	ND
Di-n-hexyl phthalate (DHEXP)	84-75-3	%	0.1	0.005	ND	ND
Dicyclohexyl phthalate (DCHP)	84-61-7	%	0.1	0.005	ND	ND
Diisobutyl phthalate (DIBP)	84-69-5	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					17+18+19	20
Diisononyl phthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Di-n-pentyl phthalate (DPENP)	131-18-0	%	0.1	0.005	ND	ND
Di-n-hexyl phthalate (DHEXP)	84-75-3	%	0.1	0.005	ND	ND
Dicyclohexyl phthalate (DCHP)	84-61-7	%	0.1	0.005	ND	ND
Diisobutyl phthalate (DIBP)	84-69-5	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND

Remarks:

MDL = method detection limit

ND = Not detected, less than MDL

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

END OF THE REPORT