

TEST REPORT

The report shall not be reproduced without written approval from Intertek
The results relate only to the item tested.

Number: BKKH19011142

Applicant: PLAN CREATIONS CO., LTD.
8 MOO 8, TRANG-PALIAN RD.,
YANTAKAO, TRANG, THAILAND 92140
ATTN: K.NARONG, K.SUPAPORN

Date: Sep 25, 2019

Sample description:

Quantity of sample:	One (1) set
Sample description:	Wooden toy
Date sample received:	August 26, 2019
Date information received:	September 19, 2019

Client Information:

One (1) set of submitted sample said to be SENSORY TUMBLING

Item Name:	SENSORY TUMBLING
Item Number:	5258



Test conducted:

As requested by the applicant, for details please refer to attached page(s)

To be continued

For and on behalf of :
Intertek Testing Services (Thailand) Ltd.,
Hardlines Laboratory



Ladtaka Wongwiboonporn
Laboratory Manager
Hardlines Department

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Conclusion:

Tested samples

Submitted sample

Standard

U.S. ASTM F963-17 for Physical and mechanical tests

Result

Pass

U.S. ASTM F963-17 for Flammability test of materials other than textile materials

Pass

U.S. ASTM F963-17 for Heavy elements Test

Pass

Standard - U.S. CFR title 16

(CPSC regulations)
Part 1303 total Lead content

Pass

Standard

U.S. Consumer product safety improvement Act 2008(H.R. 4040) Title I, Section 101 For total lead content in surface coating

Pass

U.S. Consumer product safety improvement Act 2008(H.R. 4040) Title I, Section 101 For total lead content in non-surface coating material (substrate)

Pass

US 16 CFR Part 1307 for Prohibition of Children’s Toys and Child Care Articles Containing Specified Phthalates

Pass

Phthalate Content Requirement base on the California Proposition 65

Pass

Illinois Lead Poisoning Prevention Act 410 ILCS 45 section 6 (public act 095-1019)

Pass

Remark: As requested by the applicant, the test was conducted only on components listed in this report. Other components were not tested.



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Remark:

The chemical test results was not conducted on the below components of samples. Applicant claimed the components were tested on our previous test report.

<u>Components</u>	<u>Report No.</u>	<u>Date</u>
<u>ASTM F963-17: Heavy metal</u>		
LACQUER COATING ON WOOD	BKKH19007792S1	Jul 15, 2019
BROWN COATING ON WOOD	BKKH19007791S1	Jul 15, 2019
LIGHT ORANGE COATING ON WOOD	BKKH19009836	Aug 15, 2019
BLUE COATING ON WOOD (No.4)	BKKH19008028S1	Jul 18, 2019
LIGHT YELLOW COATING ON WOOD	BKKH19009836	Aug 15, 2019
CLEAR ACRYLIC	BKKH19007619	Jun 18, 2019
WHITE FABRIC (MOHAIR)	BKKH19011002	Sep 02, 2019
PC MIRROR	BKKH19008180S1	Jul 15, 2019
<u>Lead in surface coating</u>		
LACQUER COATING ON WOOD	BKKH19007792S1	Jul 15, 2019
BROWN COATING ON WOOD	BKKH19007791S1	Jul 15, 2019
LIGHT ORANGE COATING ON WOOD	BKKH19009836	Aug 15, 2019
BLUE COATING ON WOOD (No.4)	BKKH19008028S1	Jul 18, 2019
LIGHT YELLOW COATING ON WOOD	BKKH19009836	Aug 15, 2019
<u>Lead in substrate</u>		
CLEAR ACRYLIC	BKKH19007619	Jun 18, 2019
WHITE FABRIC (MOHAIR)	BKKH19011002	Sep 02, 2019
PC MIRROR	BKKH19008180S1	Jul 15, 2019
<u>Phthalate content</u>		
CLEAR ACRYLIC	BKKH19007619	Jun 18, 2019
LACQUER COATING ON WOOD	BKKH19007792S1	Jul 15, 2019
PC MIRROR	BKKH19008180S1	Jul 15, 2019
BROWN COATING ON WOOD	BKKH19007791S1	Jul 15, 2019
LIGHT ORANGE COATING ON WOOD	BKKH19009836	Aug 15, 2019
BLUE COATING ON WOOD (No.4)	BKKH19008028S1	Jul 18, 2019
LIGHT YELLOW COATING ON WOOD	BKKH19009836	Aug 15, 2019



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Test conducted:

1 Physical And Mechanical Tests

Test Standard : ASTM Standard Consumer Safety Specification for Toy Safety F963-17.

Applicant's specified testing age : For age over 6 months.

The submitted samples were undergone the use and abuse tests in accordance with the Federal Hazardous Substances Act (FHSA), Title 16, Code of Federal Regulations : -

<u>Test</u>	<u>FHSA</u>	<u>Parameter</u>
Drop test	Section 1500.51(b)	10 x 4.5 ft
Torque test	Section 1500.53(e)	4 in-lbf
Tension test	Section 1500.53(f)	15 lbf
Compression test	Section 1500.53(g)	30 lbf

<u>Clause</u>	<u>Testing items</u>	<u>Assessment</u>
4.1	Material quality	P
4.5	Sound-producing toys	P *1
4.6.1	Toys intended for children under 36 months (small objects)	P
4.6.2 [▲]	Mouth-actuated toys	NA
4.6.3	Toys and games for 36 months to 72 months (small part warning)	NA
4.7	Accessible edges	P
4.8	Projections	NA
4.9	Accessible points	P
4.10	Wires or rods	NA
4.11	Nails and fasteners	NA
4.12	Plastic film	NA
4.13	Folding mechanisms and hinges	NA
4.14	Cords, straps and elastics	NA
4.15	Stability and over-load requirements	NA
4.16	Confined spaces	NA
4.17	Wheels, tires and axles	NA
4.18	Holes, clearance, and accessibility of mechanisms	NA
4.19	Simulated protective devices	NA
4.20(4.20.1 [▲])	Pacifiers	NA
4.21	Projectile toys	NA
4.22	Teethers and teething toys	NA

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Test conducted:

Clause	Testing items	Assessment
4.23	Rattles	P
4.24	Squeeze toys	NA
4.25 (4.25.10, 4.25.11 [▲])	Battery-operated toys	NA
4.26	Toys intended to be attached to a crib or playpen	NA
4.27	Stuffed and beanbag-type toys	NA
4.28	Stroller and carriage toys	NA
4.29	Art materials	NA
4.30	Toy gun marking	NA
4.31	Balloons	NA
4.32	Certain toys with nearly spherical ends	NA
4.33	Marbles	NA
4.34	Balls	NA
4.35	Pompoms	NA
4.36	Hemispheric-shaped objects	NA
4.37 [▲]	Yoyo elastic tether toys	NA
4.38	Magnets	NA
4.39	Jaw entrapment in handles and steering wheels	NA
4.40	Expanding materials	NA
4.41	Toy chests	NA
5	Labelling requirement	P
6	Instructional literature	P
7	Producer's markings - name of producer (toy and package) - address (package)	Yes Yes

Remark : P = Pass NA = Not applicable

▲ = Tested items are not included in the TISI Accreditation

The submitted samples were undergone the tests in accordance with clause 8.5 through clause 8.17 and 8.19 through 8.26 on normal use, abuse and specific tests for different types of toys whichever is applicable.

Testing period : August 27, 2019 to September 10, 2019



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Number: BKKH19011142

Test conducted:

*1 Sound producing toys test

Test Standard : ASTM Standard Consumer Safety Specification on Toy Safety F963-17, clause 4.5.

Clause	Test item	Assessment
4.5.1.1	A-weighted equivalent sound pressure level, L_{Aeq} , produced by close to the ear toys.	NA
4.5.1.2	Maximum A-weighted sound pressure level, L_{AFmax} , produced by the translational motion of floor or table top toys where the motion is imparted on the toy by the child.	NA
4.5.1.3	A-weighted equivalent sound pressure level, L_{Aeq} , produced by all other toys.	NA
4.5.1.4	C-weighted peak sound pressure level, L_{Cpeak} , produced by close to the ear toys.	NA
4.5.1.5	C-weighted peak sound pressure level, L_{Cpeak} , produced by any type of toy excluding toys using explosive action.	P
4.5.1.6	C-weighted peak sound pressure level, L_{Cpeak} , produced by a toy using percussion caps or other explosive action.	NA

Remark : P = Pass NA = Not applicable

Measured data:

<u>Tested component</u>	<u>Peak sound pressure level (L_{Cpeak})</u>	<u>Limit (db)</u>
SENSORY TUMBLING AUDITORY	101.5	115



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Test conducted:

2 Flammability Test

Test Standard : Clause 4.2 of the ASTM Standard Consumer Safety Specification for Toy Safety F963-17.

Results : Did not ignite

Testing period : August 27, 2019 to September 10, 2019



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Number: BKKH19011142

Test conducted:

Heavy Elements Analysis

As per clause 4.3.5.2(2)(b) of the ASTM Standard Consumer Safety Specification on Toy Safety F963-17, acid extraction method was used and heavy elements migration content were determined by ICP-OES analysis.

	(6)	(7)	Result mg/kg (8)	LOD mg/kg	LOQ mg/kg	Limit mg/kg
Sol. Barium (Ba)	ND	ND	ND	1	5	1000
Sol. Lead (Pb)	ND	ND	ND	1	5	90
Sol. Cadmium (Cd)	ND	ND	ND	1	5	75
Sol. Antimony (Sb)	ND	<5	ND	2	5	60
Sol. Selenium (Se)	ND	ND	ND	1	5	500
Sol. Chromium (Cr)	ND	ND	ND	2	5	60
Sol. Mercury (Hg)	ND	ND	ND	1	5	60
Sol. Arsenic (As)	ND	ND	ND	2	5	25

Remark: Sol. = Soluble
 mg/kg = Milligram per kilogram based on weight of sample; = ppm = Parts per million
 LOD = Limit of Detection LOQ = Limit of Quantitation
 ND = Not detected (Less than LOD) < = Less than

Tested components:

- | | | |
|-----------------------------|-------|----------------|
| (6) = CLEAR ACRYLIC | Refer | BKKH19007619 |
| (7) = WHITE FABRIC (MOHAIR) | Refer | BKKH19011002 |
| (8) = PC MIRROR | Refer | BKKH19008180S1 |

Note: The results of soluble toxic elements were adjusted by subtracting the analytical correction factor.



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Number: BKKH19011142

Test conducted:

7 Phthalate content

As per CPSC-CH-C1001-09.3:2010 and U.S. Consumer Product Safety Improvement Act 2008 (H.R. 4040), Title I, Section 108 requirement on Phthalates, solvent extraction method was used and Phthalate content was determined by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

	<u>Result</u>					<u>LOD</u>	<u>LOQ</u>	<u>(16CFR1307)</u>	<u>NPR</u>
	(1)	(2)	(3)	(4)	(5)	(%, w/w)	(%, w/w)	Limit (%, w/w)	(%, w/w)
Dibutyl Phthalate (DBP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Benzyl butyl Phthalate (BBP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	ND	ND	ND	0.0015	0.0090	0.1	0.1
Di-n-octyl Phthalate (DNOP)	ND	ND	ND	ND	ND	0.0015	0.0030	--	--
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	ND	ND	0.0015	0.0090	--	--
Di-isobutyl phthalate (DIBP) [▲]	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-n-pentyl phthalate (DPENP) [▲]	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-n-hexyl phthalate (DHEXP) [▲]	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Di-cyclohexyl phthalate (DCHP) [▲]	ND	ND	ND	ND	ND	0.0015	0.0030	0.1	0.1
Diisooctyl phthalate (DIOP) [▲]	ND	ND	ND	ND	ND	0.0015	0.0090	--	--

Remark : The above limit was quoted according to US 16 CFR Part 1307 for Prohibition of Children’s Toys and Child Care Articles Containing Specified Phthalates except the Phthalate no.5-6,11 was conducted as per applicant requested only.

- NPR = Notice of proposed rulemaking
- %, w/w = Percentage weight by weight
- LOD = Limit of Detection
- LOQ = Limit of Quantitation
- ND = Not detected (Less than LOD)
- ▲ = Tested items are not included in the TISI Accreditation

Tested components:

(1) = CLEAR ACRYLIC	Refer	BKKH19007619
(2) = LACQUER COATING ON WOOD	Refer	BKKH19007792S1
(3) = PC MIRROR	Refer	BKKH19008180S1
(4) = BROWN COATING ON WOOD	Refer	BKKH19007791S1
(5) = LIGHT ORANGE COATING ON WOOD	Refer	BKKH19009836



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Number: BKKH19011142

Test conducted:

Phthalate content

As per CPSC-CH-C1001-09.3:2010 and U.S. Consumer Product Safety Improvement Act 2008 (H.R. 4040), Title I, Section 108 requirement on Phthalates, solvent extraction method was used and Phthalate content was determined by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

	<u>Result</u>		<u>LOD</u>	<u>LOQ</u>	<u>(16CFR1307)</u>	<u>NPR</u>
	<u>(%, w/w)</u>		<u>(%, w/w)</u>	<u>(%, w/w)</u>	<u>Limit (%, w/w)</u>	<u>(%, w/w)</u>
	(6)	(7)				
Dibutyl Phthalate (DBP)	ND	ND	0.0015	0.0030	0.1	0.1
Di(2-ethylhexyl) phthalate (DEHP)	ND	ND	0.0015	0.0030	0.1	0.1
Benzyl butyl Phthalate (BBP)	ND	ND	0.0015	0.0030	0.1	0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	0.0015	0.0090	0.1	0.1
Di-n-octyl Phthalate (DNOP)	ND	ND	0.0015	0.0030	--	--
Di-iso-decyl Phthalate (DIDP)	ND	ND	0.0015	0.0090	--	--
Di-isobutyl phthalate (DIBP) [▲]	ND	ND	0.0015	0.0030	0.1	0.1
Di-n-pentyl phthalate (DPENP) [▲]	ND	ND	0.0015	0.0030	0.1	0.1
Di-n-hexyl phthalate (DHEXP) [▲]	ND	ND	0.0015	0.0030	0.1	0.1
Di-cyclohexyl phthalate (DCHP) [▲]	ND	ND	0.0015	0.0030	0.1	0.1
Diisooctyl phthalate (DIOP) [▲]	ND	ND	0.0015	0.0090	--	--

Remark : The above limit was quoted according to US 16 CFR Part 1307 for Prohibition of Children’s Toys and Child Care Articles Containing Specified Phthalates except the Phthalate no.5-6,11 was conducted as per applicant requested only.

- NPR = Notice of proposed rulemaking
- %, w/w = Percentage weight by weight
- LOD = Limit of Detection
- LOQ = Limit of Quantitation
- ND = Not detected (Less than LOD)
- ▲ = Tested items are not included in the TISI Accreditation

Tested components:

- (6) = BLUE COATING ON WOOD (No.4) Refer BKKH19008028S1
- (7) = LIGHT YELLOW COATING ON WOOD Refer BKKH19009836



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Test conducted:

8 Phthalate content test[▲]

By solvent extraction and Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

	<u>Result</u>					<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
	(1)	(2)	(3)	(4)	(5)	(%, w/w)	(%, w/w)	(%, w/w)
Dibutyl Phthalate (DBP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1
Di(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1
Benzyl butyl Phthalate (BBP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	ND	ND	ND	0.0015	0.0090	0.1
Di-octyl Phthalate (DNOP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1
Di-iso-decyl Phthalate (DIDP)	ND	ND	ND	ND	ND	0.0015	0.0090	0.1
Di-n-hexyl Phthalate (DnHP)	ND	ND	ND	ND	ND	0.0015	0.0030	0.1

Remark : % w/w = Percentage weight by weight
 LOD = Limit of Detection
 LOQ = Limit of Quantitation
 ND = Not detected (Less than LOD)
 ▲ = Tested items are not included in the TISI Accreditation

Note : The above limit was quoted according to the California Proposition 65

Tested components:

(1) = CLEAR ACRYLIC	Refer	BKKH19007619
(2) = LACQUER COATING ON WOOD	Refer	BKKH19007792S1
(3) = PC MIRROR	Refer	BKKH19008180S1
(4) = BROWN COATING ON WOOD	Refer	BKKH19007791S1
(5) = LIGHT ORANGE COATING ON WOOD	Refer	BKKH19009836



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Test conducted:

Phthalate content test[▲]

By solvent extraction and Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

	<u>Result</u>		<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
	<u>(%, w/w)</u>		<u>(%, w/w)</u>	<u>(%, w/w)</u>	<u>(%, w/w)</u>
	(6)	(7)			
Dibutyl Phthalate (DBP)	ND	ND	0.0015	0.0030	0.1
Di(2-ethylhexyl) phthalate (DEHP)	ND	ND	0.0015	0.0030	0.1
Benzyl butyl Phthalate (BBP)	ND	ND	0.0015	0.0030	0.1
Di-iso-nonyl Phthalate (DINP)	ND	ND	0.0015	0.0090	0.1
Diocetyl Phthalate (DNOP)	ND	ND	0.0015	0.0030	0.1
Di-iso-decyl Phthalate (DIDP)	ND	ND	0.0015	0.0090	0.1
Di-n-hexyl Phthalate (DnHP)	ND	ND	0.0015	0.0030	0.1

Remark : %, w/w = Percentage weight by weight
 LOD = Limit of Detection
 LOQ = Limit of Quantitation
 ND = Not detected (Less than LOD)
 ▲ = Tested items are not included in the TISI Accreditation

Note : The above limit was quoted according to the California Proposition 65

Tested components:

(6) = BLUE COATING ON WOOD (No.4)	Refer	BKKH19008028S1
(7) = LIGHT YELLOW COATING ON WOOD	Refer	BKKH19009836



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Number: BKKH19011142

Test conducted:

9 Total Lead (Pb) Content[▲]
As per Illinois Lead poisoning prevention act 410 ILCS 45 section 6 (public act 095-1019), acid digestion method was used and total Lead content was determined by Inductively Couple Plasma Optical Emission Spectrometry.

I Surface coating material

<u>Tested component</u>	<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
	<u>mg/kg</u>	<u>mg/kg</u>	<u>mg/kg</u>	<u>mg/kg</u>
(1)	ND	2	13	90
(2)	ND	2	13	90
(3)	<13	2	13	90
(4)	ND	2	13	90
(5)	ND	2	13	90

Remark: < = Less than
mg/kg = Milligram per kilogram based on weight of sample; = ppm = Parts per million
LOD = Limit of Detection
LOQ = Limit of Quantitation
ND = Not detected (Less than LOD)

Requirement: ▲ = Tested items are not included in the TISI Accreditation
According to Illinois Lead poisoning prevention act 410 ILCS 45 section 6 (public act 095-019), appropriate warning statement is required when the Lead content of the submitted sample is more than 40 ppm but less than 90 ppm for surface coatings and less than 100 ppm for substrates by total weight or a lower standard for Lead content as may be established by federal or state law or regulation.

Tested components:

(1) = LACQUER COATING ON WOOD	Refer	BKKH19007792S1
(2) = BROWN COATING ON WOOD	Refer	BKKH19007791S1
(3) = LIGHT ORANGE COATING ON WOOD	Refer	BKKH19009836
(4) = BLUE COATING ON WOOD (No.4)	Refer	BKKH19008028S1
(5) = LIGHT YELLOW COATING ON WOOD	Refer	BKKH19009836



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Number: BKKH19011142

Test conducted:

II Non-surface coating material (substrate)

<u>Tested component</u>	<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
	<u>mg/kg</u>	<u>mg/kg</u>	<u>mg/kg</u>	<u>mg/kg</u>
(6)	ND	1	13	100
(7)	ND	1	13	100
(8)	ND	1	13	100

Remark: < = Less than
mg/kg = Milligram per kilogram based on weight of sample; = ppm = Parts per million
LOD = Limit of Detection
LOQ = Limit of Quantitation
ND = Not detected (Less than LOD)

Requirement: According to Illinois Lead poisoning prevention act 410 ILCS 45 section 6 (public act 095-019), appropriate warning statement is required when the Lead content of the submitted sample is more than 40 ppm but less than 90 ppm for surface coatings and less than 100 ppm for substrates by total weight or a lower standard for Lead content as may be established by federal or state law or regulation.

Tested components:

(6) = CLEAR ACRYLIC	Refer	BKKH19007619
(7) = WHITE FABRIC (MOHAIR)	Refer	BKKH19011002
(8) = PC MIRROR	Refer	BKKH19008180S1

Note: LOD and LOQ value in this test report were effective since October, 2014

*****END*****/KS/NK

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