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Issued Date: Jul 24, 2020

The results relate only to the item tested.

Applicant: PLAN CREATIONS CO., LTD.

8 MOO 8, TRANG-PALIAN RD.,

YANTAKAO, TRANG, THAILAND 92140 ATTN: K.NARONG, K.RATCHADA

Sample description:

Quantity of sample: One (1) set Sample description: Wooden toy Date sample received: May 20, 2020 Date information received: July 21, 2020

Client Information:

One (1) set of submitted sample said to be SAND PLAY SET

Item Name: SAND PLAY SET

Item Number: 5803 Label Age grading: 18m+ Country of origin: Thailand







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

adtal

Ladtaka Wongwiboonporn Laboratory Manager

Hardlines Department

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NSC-TISI-TIS 17025 TESTING 0417

Number: BKKH20005475

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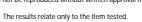
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Tested samples Submitted sample	Standard U.S. ASTM F963-17 for Physical and mechanical tests	<u>Result</u> Pass
	U.S. ASTM F963-17 for Flammability test of materials other than textile materials	Pass
	U.S. ASTM F963-17 for Heavy elements Test	Pass
	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 (subst	Pass rate)
	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





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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.

Components	Report No.	<u>Date</u>
ASTM F963-17: Heavy metal		
LACQUER COATING ON WOOD	BKKH19007792S1	Jul 15, 2019
BLUE SAWDUST	BKKH19008027S1	Jul 18, 2019
ORANGE SAWDUST	BKKH19008027S1	Jul 18, 2019
YELLOW SAWDUST	BKKH19008027S1	Jul 18, 2019
RED SAWDUST	BKKH19008027S1	Jul 18, 2019
COTTON CORD	BKKH19008553	Jul 08, 2019
Lead in surface coating		
LACQUER COATING ON WOOD	BKKH19007792S1	Jul 15, 2019
Lead in substrate		
BLUE SAWDUST	BKKH19008027S1	Jul 18, 2019
ORANGE SAWDUST	BKKH19008027S1	Jul 18, 2019
YELLOW SAWDUST	BKKH19008027S1	Jul 18, 2019
RED SAWDUST	BKKH19008027S1	Jul 18, 2019
COTTON CORD	BKKH19008553	Jul 08, 2019
Phthalate content		
BLUE SAWDUST	BKKH19008027S1	Jul 18, 2019
ORANGE SAWDUST	BKKH19008027S1	Jul 18, 2019
YELLOW SAWDUST	BKKH19008027S1	Jul 18, 2019
RED SAWDUST	BKKH19008027S1	Jul 18, 2019
LACQUER COATING ON WOOD	BKKH19007792S1	Jul 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 18 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 : -

 Test
 FHSA
 Parameter

 Drop test
 Section 1500.52(b)
 4 x 3.0 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	Р
4.5	Sound-producing toys	NA
4.6.1	Toys intended for children under 36 months (small objects)	Р
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	Р
4.8	Projections	NA
4.9	Accessible points	Р
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 ^A)	Pacifiers	NA
4.21	Projectile toys	NA
4.22	Teethers and teething toys	NA



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Test conducted:

<u>Clause</u>	<u>Testing items</u>	<u>Assessment</u>
4.23	Rattles	NA
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	Р
6	Instructional literature	Р
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: May 22, 2020 to July 16, 2020



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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: May 22, 2020 to July 16, 2020



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The results relate only to the item tested

Test conducted:

3 Heavy Elements Analysis

As per clause 4.3.5.1(2) 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.

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

(1) = LACQUER COATING ON WOOD Refer BKKH19007792S1

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





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The results relate only to the item tested

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.

			Result mg/kg			<u>LOD</u> mg/kg	<u>LOQ</u> mg/kg	<u>Limit mg/kg</u>
	(2)	(3)	(4)	(5)	(6)	<u>mg/kg</u>	<u>mg/kg</u>	
Sol. Barium (Ba)	<5	ND	82	<5	ND	1	5	1000
Sol. Lead (Pb)	ND	<5	<5	<5	ND	1	5	90
Sol. Cadmium (Cd)	ND	ND	ND	ND	ND	1	5	75
Sol. Antimony (Sb)	ND	ND	ND	ND	ND	2	5	60
Sol. Selenium (Se)	ND	ND	ND	ND	ND	1	5	500
Sol. Chromium (Cr)	ND	ND	ND	ND	ND	2	5	60
Sol. Mercury (Hg)	ND	ND	ND	ND	ND	1	5	60
Sol. Arsenic (As)	ND	ND	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:

(2) =	BLUE SAWDUST	Refer	BKKH19008027S1
(3) =	ORANGE SAWDUST	Refer	BKKH19008027S1
(4) =	YELLOW SAWDUST	Refer	BKKH19008027S1
(5) =	RED SAWDUST	Refer	BKKH19008027S1
(6) =	COTTON CORD	Refer	BKKH19008553

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

(in)



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The results relate only to the item tested

Test conducted:

Total Lead (Pb) Content

As per clause 4.3.5.1(1) of the ASTM Standard Consumer Safety Specification on Toy Safety F963-17, test method CPSC-CH-E1003-09.1:2011 was used and total Lead content was determined by ICP-OES analysis.

(I) Surface coating

LOQ Limit Result Tested Component mq/kq (mg/kg) (mg/kg) (1) ND 13

mg/kg = Milligram per kilogram based on weight of sample; = ppm = Parts per million Remark:

> LOD = Limit of Detection LOQ = Limit of Quantitation

ND = Not detected (Less than LOD) Less than

Tested components:

(1) = LACQUER COATING ON WOOD Refer BKKH19007792S1



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The results relate only to the item tested

Test conducted:

Total Lead (Pb) Content

As per clause 4.3.5.2(2)(a) of the ASTM Standard Consumer Safety Specification on Toy Safety F963-17, test method CPSC-CH-E1001-08.3:2012, CPSC-CH-E1002-08.3:2012 were used and total Lead content was determined by ICP-OES analysis.

(II) Non-surface coating

Tostad Component	<u>Result</u>	<u>LOD LOQ</u>	<u>Limit</u>
<u>Tested Component</u>	<u>mg/kg</u>	(mg/kg) (mg/kg)	<u>(mg/kg)</u>
(2)	<13	1 13	100
(3)	ND	1 13	100
(4)	<13	1 13	100
(5)	<13	1 13	100
(6)	ND	1 13	100

Remark: 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:

(2) =	BLUE SAWDUST		Refer	BKKH19008027S1
(3) =	ORANGE SAWDUST		Refer	BKKH19008027S1
(4) =	YELLOW SAWDUST		Refer	BKKH19008027S1
(5) =	RED SAWDUST		Refer	BKKH19008027S1
(6) =	COTTON CORD		Refer	BKKH19008553





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Test conducted:

4 Total Lead (Pb) content [▲]

As per U.S. Code of Federal Regulations title 16 Part 1303. Acid digestion method was used and total Lead content was determined by Inductively Couple Plasma Optical Emission Spectrometry.

 Tested component
 Result %
 LOD %
 LOQ %
 Limit %

 (1)
 ND
 0.0002
 0.0013
 0.0090

Remark: % = percentage < = Less than

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) = LACQUER COATING ON WOOD Refer BKKH19007792S1





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Test conducted:

5 Total lead (Pb) content in surface coating

As per U.S. Consumer Product Safety Improvement Act of 2008 (H.R. 4040), Title I, Section 101 for children's products containing Lead, CPSC-CH-E1003-09.1:2011 method was used and total Lead content was determined by Inductively Couple Plasma Optical Emission Spectrometry.

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

Remark: 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:

(1) = LACQUER COATING ON WOOD Refer BKKH19007792S1



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Test conducted:

6 Total lead (Pb) content in substrate material- non-metal children's product

As per U.S. Consumer product safety improvement Act of 2008 (H.R. 4040), Title I, Section 101 for children's products containing lead, CPSC-CH-E1002-08.3:2012 method was used and total lead content

was determined by Inductively Couple Plasma Optical Emission Spectrometry.

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Tested component	<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Limit mg/kg</u>
	<u>mg/kg</u>	mg/kg	mg/kg	
(1)	<13	1	13	100
(2)	ND	1	13	100
(3)	<13	1	13	100
(4)	<13	1	13	100
(5)	ND	1	13	100

Remark: 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:

(1) =	BLUE SAWDUST	Refer	BKKH19008027S1
(2) =	ORANGE SAWDUST	Refer	BKKH19008027S1
(3) =	YELLOW SAWDUST	Refer	BKKH19008027S1
(4) =	RED SAWDUST	Refer	BKKH19008027S1
(5) =	COTTON CORD	Refer	BKKH19008553





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The results relate only to the item tested

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.

			Result			<u>LOD</u>	<u>LOQ</u>	(16CFR1307)	<u>NPR</u>
			(%, w/w)	<u>)</u>		(%, w/w)	(%, w/w)	Limit (%, w/w)	(%, w/w)
	(1)	(2)	(3)	(4)	(5)				
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) =	BLUE SAWDUST	Refer	BKKH19008027S1
(2) =	ORANGE SAWDUST	Refer	BKKH19008027S1
(3) =	YELLOW SAWDUST	Refer	BKKH19008027S1
(4) =	RED SAWDUST	Refer	BKKH19008027S1
(5) =	LACQUER COATING ON WOOD	Refer	BKKH19007792S1

(in)



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Test conducted:

8 Phthalate content test 4

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

			<u>Result</u>			<u>LOD</u>	<u>LOQ</u>	<u>Limit</u>
			(%, w/w)	<u> </u>		(%, w/w)	(%, w/w)	(%, w/w)
	(1)	(2)	(3)	(4)	(5)			
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
Dioctyl 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) =	BLUE SAWDUST		Refer	BKKH19008027S1
(2) =	ORANGE SAWDUST		Refer	BKKH19008027S1
(3) =	YELLOW SAWDUST		Refer	BKKH19008027S1
(4) =	RED SAWDUST		Refer	BKKH19008027S1
(5) =	LACQUER COATING ON WOOD		Refer	BKKH19007792S1





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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

Tested component	<u>Result</u>	<u>LOD</u> <u>LOQ</u>	<u>Limit</u>
	<u>mg/kg</u>	<u>mg/kg</u> <u>mg/kg</u>	mg/kg
(1)	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)

▲ = Tested items are not included in the TISI Accreditation

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:

(1) = LACQUER COATING ON WOOD Refer BKKH19007792S1





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Number: BKKH20005475

The results relate only to the item tested

Test conducted:

II Non-surface coating material (substrate)

Tested component	<u>Result</u>	LOD LOQ	<u>Limit</u>
	<u>mg/kg</u>	mg/kg mg/kg	mg/kg
(2)	<13	1 13	100
(3)	ND	1 13	100
(4)	<13	1 13	100
(5)	<13	1 13	100
(6)	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:

(2)	=	BLUE SAWDUST			Refer	BKKH19008027S1
(3)	=	ORANGE SAWDUST			Refer	BKKH19008027S1
(4)	=	YELLOW SAWDUST			Refer	BKKH19008027S1
(5)	=	RED SAWDUST			Refer	BKKH19008027S1
(6)	=	COTTON CORD			Refer	BKKH19008553

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

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