



# TEST REPORT

**Prepared for:**

**Zhejiang Muzhimei Baby Products Co., Ltd.**

**No. 274, Xinhua Road, Fenghuangshan Street, Yunhe County, Lishui City, Zhejiang Province, China**

**Product Name: Wooden Puzzle**

**Model No.: N/A**

**Trade Mark: N/A**

**Date of Test: From December 19, 2023 to December 22, 2023**

**Date of Report: January 12, 2024**

**Report Number: HK2401120681-1RR**

**Prepared by:**

**Shenzhen HUAKE Testing Technology Co., LTD.**

**1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community,  
Fuhai Street, Bao'an District, Shenzhen, Guangdong, China**



# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 2 of 15

**Applicant:** Zhejiang Muzhimei Baby Products Co., Ltd.  
**Address:** No. 274, Xinhua Road, Fenghuangshan Street, Yunhe County, Lishui City, Zhejiang Province, China  
**Manufacturer:** Zhejiang Muzhimei Baby Products Co., Ltd.  
**Address:** No. 274, Xinhua Road, Fenghuangshan Street, Yunhe County, Lishui City, Zhejiang Province, China

The following sample was submitted and identified by/on behalf of the client as:

Product Name: Wooden Puzzle  
 Model No.: N/A  
 Trade Mark: N/A  
 Tested Age Grade: 3+ years old  
 Labeled Age Grading: 3+ years old  
 Appropriate Age Grade: 3+ years old  
 Sample Receiving Date: December 19, 2023  
 Testing Period: From December 19, 2023 to December 22, 2023  
 Results: Please refer to next page(s).

Signed for and on behalf of HUAKE

Approved by: Jason  
 Lab Manager





# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 3 of 15

## Information of the Test Laboratory

Shenzhen HUAKE Testing Technology Co., Ltd.

Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Laboratory Authorization:

A2LA Accreditation Code is 4781.01.

FCC Designation Number is CN1229.

Canada IC CAB identifier is CN0045.

CNAS Registration Number is L9589.

CPSC Certification Number is 1710.

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# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 4 of 15

## Summary of Test Results:

### TEST REQUEST

### CONCLUSION

A	ASTM F963-17 Standard Consumer Safety Specification for Toy Safety	
	1.-Mechanical and Physical Tests	PASS
	2.-Section 4.2 Flammability Tests	PASS
	3.-Section 4.3.5.1 Heavy Metals Content in paint and similar surface coating material	NA
	4.-Section 4.3.5.2 Heavy Metals Content in Toy Substrate Materials	PASS
B	- USA 16 CFR Part 1303 Ban of Lead Containing Paint and Certain Consumer Products Bearing Lead- Containing Paint	NA
C	- USA Consumer Product Safety Improvement Act (CPSIA) Sec.101 Children’s products containing Lead; Lead paint rule	PASS
	- USA Consumer Product Safety Improvement Act (CPSIA) Sec.108 Prohibition on sale of certain products containing specified phthalates	
D	- USA 16 CFR Part 1307 Prohibition of Children’s Toys and Child Care Articles Containing Specified Phthalates	PASS
E	-CPSA Section 14(a) (5) Tracking Labels for Children's Products (15 USC §2063(a)(5) (CPSA))	PASS

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# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 5 of 15

**Results:**

**A.1 ASTM F963-17 Standard Consumer Safety Specification for Toy Safety  
-Mechanical and Physical Tests**

Applicable Section	Description	Result
4	Safety requirements	
4.1	Material quality	Pass
4.3.6	Cosmetics, Liquids, Pastes, Putties, Gels, Powders, and Items of Avian Feather Origin	NA
4.3.7	Stuffing Materials	NA
4.4	Electrical/thermal energy	NA
4.5	Sound producing toys	NA
4.6	Small objects	Pass
4.7	Accessible edges	Pass
4.8	Projections	NA
4.9	Accessible points	NA
4.10	Wires or rods	Pass
4.11	Nails and fasteners	NA
4.12	Plastic film	Pass
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	Pacifiers	NA
4.21	Projectile Toys	NA
4.22	Teethers and Teething Toys	NA
4.23	Rattles	NA
4.24	Squeeze toys	NA
4.25	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

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# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 6 of 15

Applicable Section	Description	Result
4.28	Stroller carriage toys	NA
4.29	Art materials	NA
4.30	Toy gun marking	NA
4.31	Balloons	NA
4.32	Certain toys with spherical ends	NA
4.33	Marbles	NA
4.34	Balls	NA
4.35	Pompoms	NA
4.36	Hemispheric-shaped objects	NA
4.37	Yo Yo 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	Labeling requirements	
5.1	Federal Government Requirements	Pass
5.2	Age grading labeling	Pass
5.3	Safety labeling requirements	Pass
5.4	Aquatic Toys	NA
5.5	Crib and Playpen Toys	NA
5.6	Mobiles	NA
5.7	Stroller and Carriage Toys	NA
5.8	Toys Intended to be Assembled By an Adult	NA
5.9	Simulated Protective Devices	NA
5.10	Toys with Functional Sharp Edges or Points	NA
5.11	Small objects, Small balls, Marbles and balloons	NA
5.12	Toy Caps	NA
5.13	Art Materials	NA
5.14	Electric Toys	NA
5.15	Battery-Operated Toys	NA
5.16	Promotional Materials	NA
5.17	Magnets	NA
6	Instructional literature	

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# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 7 of 15

Applicable Section	Description	Result
6.1	Definition and description	Pass
6.2	Crib and Playpen Toys	NA
6.3	Mobiles	NA
6.4	Toys Intended to be Assembled By an Adult	NA
6.5	Battery-Operated Toys	NA
6.6	Battery Powered Ride-on Toys	NA
6.7	Toys in Contact with Food	NA
6.8	Toys Chests	NA
7	Producer's markings	
7.1	Name and address of the producer or distributor	Pass
7.2	Battery-Powered Ride-on Toys	NA
7.3	Toy chests	NA

Note:

--NA= Not Applicable

-- NC = Not Conducted (According to customer requirement, no evaluation of this clause)

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### Use and abuse testing:

Applicable Section	Description	Test Condition	Result
8.5	Normal use testing		Pass
8.6	Abuse testing		Pass
8.7	Impact test	4dropsat3.0ft.	Pass
8.8	Torque test	4in-lbf.	Pass
8.9	Tension test	15lbf.	Pass
8.10	Compression test	30lbf.	Pass



# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 8 of 15

## A.2 Section 4.2 Flammability Tests

### (A5) FLAMMABILITY TESTING PROCEDURE FOR SOLIDS AND SOFT TOYS

Flammability test of material

Sample	Burn rate (in/sec.)	Result
Yellow wood	DNI	Pass

Note: In accordance with the ASTM F963, the burning rate should not be greater than 0.1 inch per second.

DNI = Did Not Ignited

SE = Self-Extinguished

IBE = Ignite but Extinguished

Remark:

A5.2.2 soft toy—any stuffed or plush toy, that may or may not be parts or components of other toys.

A5.2.3 solids—toys or toy parts constructed of rigid, flexible, or pliable solids.

A5.2.4 accessories—an item intended to be removed to enhance the play pattern.

- A5.2.5 strings—long slender flexible material usually consisting of several strands (as of thread or yarn) woven or twisted together, usually used to bind, fasten, tether, or tie.

A5.2.6 paper—Examples of paper products are traditional playing cards, newspaper, magazines, and construction paper.

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# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 9 of 15

**Tested part(s):**

Seq. no	Part(s) name
1	Yellow wood

**A.3 Section 4.3.5.1 Heavy Metals content in paint and similar surface coating material**

**(1) Total Lead Content**

**Test method:** With reference to ASTM F963-17 Section 8.3.1, sample was digested with acid mixture and analyzed by inductively coupled plasma atomic emission spectrometer (ICP-AES).

Item	Unit	MDL	Results	Limit(Each)
			NA	
Lead Content (Pb)	mg/kg	2	NA	90
<b>Conclusion</b>	/	/	NA	/

**(2) Soluble Heavy Metals Content**

**Test method:** With reference to ASTM F963-17 Section 8.3.2. The heavy metals content was determined by inductively Coupled plasma atomic emission spectrometer (ICP-AES).

Item	Unit	MDL	Results	Limit(Each)
			NA	
Soluble Lead (Pb)	mg/kg	2	NA	90
Soluble Antimony (Sb)	mg/kg	2	NA	60
Soluble Arsenic (As)	mg/kg	2	NA	25
Soluble Barium (Ba)	mg/kg	2	NA	1000
Soluble Cadmium (Cd)	mg/kg	2	NA	75
Soluble Chromium (Cr)	mg/kg	2	NA	60
Soluble Mercury (Hg)	mg/kg	2	NA	60
Soluble Selenium (Se)	mg/kg	2	NA	500
<b>Conclusion</b>	/	/	NA	/

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# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 10 of 15

## A.4 Section 4.3.5.2 Heavy Metals Content in Toy Substrate Materials

### (1) Total Lead Content

**Test method:** With reference to ASTM F963-17 Section 8.3.1, sample was digested with acid mixture and analyzed by inductively coupled plasma atomic emission spectrometer (ICP-AES).

Item	Unit	MDL	Results	Limit(Each)
			1	
Lead Content (Pb)	mg/kg	2	N.D.	100
<b>Conclusion</b>	/	/	<b>Pass</b>	/

### (2) Soluble Heavy Metals Content

**Test method:** With reference to ASTM F963-17 Section 8.3.2. The heavy metals content was determined by inductively Coupled plasma atomic emission spectrometer (ICP-AES).

Item	Unit	MDL	Results	Limit(Each)
			1	
Soluble Lead (Pb)	mg/kg	2	N.D.	90
Soluble Antimony (Sb)	mg/kg	2	N.D.	60
Soluble Arsenic (As)	mg/kg	2	N.D.	25
Soluble Barium (Ba)	mg/kg	2	N.D.	1000
Soluble Cadmium (Cd)	mg/kg	2	N.D.	75
Soluble Chromium (Cr)	mg/kg	2	N.D.	60
Soluble Mercury (Hg)	mg/kg	2	N.D.	60
Soluble Selenium (Se)	mg/kg	2	N.D.	500
<b>Conclusion</b>	/	/	<b>Pass</b>	/

Remark:

Maximum acceptable element migration from toy materials

Toy material	Element (mg/kg)							
	Sb	As	Ba	Cd	Cr	Pb	Hg	Se
Surface Coatings and Substrates Other Than Modeling Clay Included as Part of a Toy	60	25	1000	75	60	90	60	500
Modelling Clays Included as Part of a Toy	60	25	250	50	25	90	25	500

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# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 11 of 15

## B. USA 16 CFR Part 1303 Ban of Lead Containing Paint and Certain Consumer Products Bearing Lead- Containing Paint

**Test method:** With reference to CPSC-CH-E1003-09.1, sample was digested with acid mixture and analyzed by inductively coupled plasma atomic emission spectrometer (ICP-AES)

Item	Unit	MDL	Results	Limit(Each)
			NA	
Lead Content (Pb)	mg/kg	5	NA	90
<b>Conclusion</b>	/	/	NA	/

## C. USA Consumer Product Safety Improvement Act (CPSIA) Sec.101 Children’s products containing Lead; Lead paint rule

### (1) Substrate Materials

**Test method:** With reference to CPSC-CH-E1001-08.3; CPSC-CH-E1002-08.3, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-AES).

Item	Unit	MDL	Results	Limit(Each)
			1	
Lead Content (Pb)	mg/kg	5	N.D.	100
<b>Conclusion</b>	/	/	<b>Pass</b>	/

### (2) Paint and similar surface coating material

**Test method:** With reference to CPSC-CH-E1003-09.1, sample was digested with acid mixture and analyzed by inductively coupled plasma atomic emission spectrometer (ICP-AES)

Item	Unit	MDL	Results	Limit(Each)
			NA	
Lead Content (Pb)	mg/kg	5	NA	90
<b>Conclusion</b>	/	/	NA	/

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# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 12 of 15

**D. USA Consumer Product Safety Improvement Act (CPSIA) Sec.108 Prohibition on sale of certain products containing specified phthalates  
USA 16 CFR Part 1307 Prohibition of Children’s Toys and Child Care Articles Containing Specified Phthalates**

**Test method:** With reference to CPSC-CH-C1001-09.4, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

Item	Unit	MDL	Results	Limit(Each)
			1	
Dibutyl Phthalate (DBP)	mg/kg	30	N.D.	1000
Benzylbutyl Phthalate (BBP)	mg/kg	30	N.D.	1000
Bis-(2-ethylhexyl) Phthalate (DEHP)	mg/kg	30	N.D.	1000
Diisononyl Phthalate (DINP)	mg/kg	100	N.D.	1000
Di-isobutyl Phthalate (DIBP)	mg/kg	100	N.D.	1000
Dicyclohexyl Phthalate (DCHP)	mg/kg	100	N.D.	1000
Di-n-hexyl Phthalate (DHEXP)	mg/kg	100	N.D.	1000
Di-n-pentyl Phthalates (DPENP)	mg/kg	100	N.D.	1000
<b>Conclusion</b>	/	/	<b>Pass</b>	/

Note:

- N.D. =Not Detected or less than MDL.
- MDL=Method Detection Limit.
- NA= Not Applicable
- %=Percentage by weight.
- 0.1%=1000mg/kg, mg/kg=ppm.
- "+"=The test result is obtained from composite testing on materials linked with "+" mark, it is possible that individual test result can be higher if materials are tested separately. This had been taken in account in the conclusion of this report.

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# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 13 of 15

## E. CPSA Section 14(a) (5) Tracking Labels for Children's Products (15 USC §2063(a)(5) (CPSA))

Applicable Section	Description	Result
(a)(5) (A)	Effective 1 year after the date of enactment of the Consumer Product Safety Improvement Act of 2008, the manufacturer of a children's product shall place permanent, distinguishing marks on the product and its packaging, to the extent practicable, that will enable—	Pass
(i)	the manufacturer to ascertain the location and date of production of the product, cohort information (including the batch, run number, or other identifying characteristic), and any other information determined by the manufacturer to facilitate ascertaining the specific source of the product by reference to those marks; and	Pass
(ii)	the ultimate purchaser to ascertain the manufacturer or private labeler, location and date of production of the product, and cohort information (including the batch, run number, or other identifying characteristic).	Pass
(B)	The Commission may, by regulation, exclude a specific product or class of products from the requirements in subparagraph (A) if the Commission determines that it is not practicable for such product or class of products to bear the marks required by such subparagraph. The Commission may establish alternative requirements for any product or class of products excluded under the preceding sentence consistent with the purposes described in clauses (i) and (ii) of subparagraph (A).	NA
(b)	The Commission may by rule prescribe reasonable testing programs for any product which is subject to a consumer product safety rule under this Act, or a similar rule, regulation, standard, or ban under any other Act enforced by the Commission, and for which a certificate is required under subsection (a). Any test or testing program on the basis of which a certificate is issued under subsection (a) may, at the option of the person required to certify the product, be conducted by an independent third party qualified to perform such tests, unless the Commission, by rule, requires testing by an independent third party for a particular rule, regulation, standard, or ban, or for a particular class of products.	Pass
(c)	The Commission may by rule require the use and prescribe the form and content of labels which contain the following information (or that portion of it specified in the rule) —	Pass
(1)	The date and place of manufacture of any consumer product.	Pass
(2)	The cohort information (including the batch, run number, or other identifying characteristic) of the product.	Pass
(3)	A suitable identification of the manufacturer of the consumer product, unless the product bears a private label in which case it shall identify the private labeler and shall also contain a code mark which will permit the seller of such product to identify the manufacturer thereof to the purchaser upon his request.	Pass
(4)	In the case of a consumer product subject to a consumer product safety rule, a certification that the product meets all applicable consumer product safety standards and a specification of the standards which are applicable. Such labels, where practicable, may be required by the Commission to be permanently marked on or affixed to any such consumer product. The	Pass

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# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 14 of 15

Applicable Section	Description	Result
	Commission may, in appropriate cases, permit information required under paragraphs (1) and (2) of this subsection to be coded.	
(d)	REQUIREMENT FOR ADVERTISEMENTS.—No advertisement for a consumer product or label or packaging of such product may contain a reference to a consumer product safety rule or a voluntary consumer product safety standard unless such product conforms with the applicable safety requirements of such rule or standard.	Pass
(e)	WITHDRAWAL OF ACCREDITATION-	Pass
(f)	DEFINITIONS.--In this section	Pass
(g)	REQUIREMENTS FOR CERTIFICATES.-- (1) IDENTIFICATION OF ISSUER AND CONFORMITY ASSESSMENT BODY.--Every certificate required under this section shall identify the manufacturer or private labeler issuing the certificate and any third party conformity assessment body on whose testing the certificate depends. The certificate shall include, at a minimum, the date and place of manufacture, the date and place where the product was tested, each party's name, full mailing address, telephone number, and contact information for the individual responsible for maintaining records of test results.	Pass
(h)	RULE OF CONSTRUCTION.	Pass
(i)	ADDITIONAL REGULATIONS FOR THIRD PARTY TESTING	Pass

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### \*\* Modified History \*\*

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	2023/12/22	Jason Zhou
Revision 2.0	All test data were obtained from: HK23121914924-1RR	2024/01/12	Jason Zhou



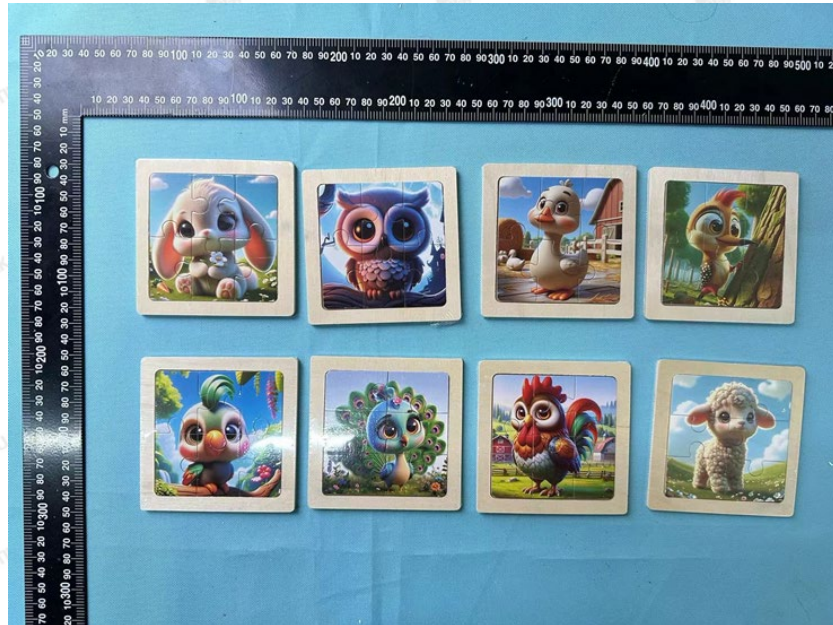
# TEST REPORT

REPORT No.: HK2401120681-1RR

Date: January 12, 2024

Page 15 of 15

## Photograph of Sample



HUAK authenticate the photo on original report only

**\*\*\* End of Report \*\*\***

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