



HUAKE TESTING

TEST REPORT

Prepared for:

LEADERJOY IMP. & EXP. CO., LTD

RM 401, BUILDING 6, NO.315, HONGYUN RD, YIWU, ZHEJIANG, CHINA

Sample Name: Early Education Subscription Box

Model No.: LYWM-001

Date of Test: From January 22, 2024 to February 01, 2024

Date of Report: February 01, 2024

Report Number: HK2401220057-1RR

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**

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Applicant: LEADERJOY IMP. & EXP. CO., LTD

Address: RM 401, BUILDING 6, NO.315, HONGYUN RD, YIWU, ZHEJIANG, CHINA

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

Sample Name: Early Education Subscription Box

Model No.: LYWM-001

Tested Age Grade: 0-6 Month

Labeled Age Grading: 0-6 Month

Appropriate Age Grade: 0-6 Month

Sample Receiving Date: January 22, 2024

Testing Period: From January 22, 2024 to February 01, 2024

Results: Please refer to the next page(s).

Signed for and on behalf of HUAKE

Approved by: _____

Jason Zhou

Lab Manager

Remark: Only selected materials were tested as per client's requirement.



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Summary of Test Results:

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TEST REQUEST

1. Mechanical and physical - ASTM F963-17.
2. Flammability - ASTM F963-17.
3. Mechanical and physical properties - EN 71-1:2014+A1:2018(E)
4. Flammability - EN 71-2:2020(E)
5. Mechanical and physical properties – BS EN 71-1:2014+A1:2018
6. Flammability – BS EN 71-2:2020
7. Total Lead (Pb) Content In Surface Coating - ASTM F963-17.
8. Total Lead (Pb) Content In Substrates - ASTM F963-17.
9. Total Lead (Pb) Content In Surface Coating-CPSIA Section 101.
10. Total Lead (Pb) Content In Substrates - CPSIA Section 101.
11. Phthalates Content - 16 CFR 1307.
12. Soluble migrated elements - ASTM F963-17.
13. Soluble Heavy Metal –EN 71-3:2019+A1:2021
14. Soluble Heavy Metal – BS EN 71-3:2019+A1:2021

CONCLUSION

PASS
PASS
PASS
PASS
PASS
PASS
NA
PASS
NA
PASS
PASS
PASS
PASS
PASS



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Tested part(s):

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Seq. no	Test components description	Location
01	/	Early Education Subscription Box
02	Yellow plastic	Yellow irregular ball
03	Red plastic	Red ball
04	Dark green textile	Dark green ball of yarn

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Test result:**1. Mechanical and Physical Properties according to ASTM F963-17**

Section	Testing Item(s)	Conclusion(s)
4	Safety requirements	
4.1	Material quality	PASS
4.3.7	Stuffing Materials	PASS
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	PASS
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	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	PASS
4.28	Stroller carriage toys	NA
4.29	Art materials	NA
4.30	Toy gun marking	NA
4.31	Balloons	NA

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4.32	Certain toys with spherical ends	NA
4.33	Marbles	NA
4.34	Balls	PASS
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	
5.2	Age grading labeling	PASS
5.3	Safety labeling requirements	NA
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	PASS
5.17	Magnets	NA
6	Instructional literature	
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

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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.

2. Flammability according to ASTM F963-17

Test Method: As per section 4.2 of the ASTM F963-17, flammability test for solids and soft toys materials (CPSC 16 CFR 1500.44 & ASTM F963-17 Annex 5)

Component No.	Burn rate (in/sec.)	Limit (in/sec.)	Test Result(s)
01	0.02	0.10	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

Requirement:

- 1) If the burn rate of all samples is less than 0.1 in./s (2.5mm/s), accept.
- 2) If the burn rate of all samples is greater than 0.1 in./s (2.5 mm/s) but less than 0.15 in./s (3.75 mm/s), accept and consider further investigation for action to improve performance.
- 3) If the burn rate of one of the samples is 0.15 in./s (3.75mm/s) or greater, reject and repeat the test with four additional samples (one time only). If the burn rate of any of the retested samples is 0.15 in./s. or greater, reject.
- 4) If the burn rate of more than one of the initial 4 samples 0.15 in./s (3.75 mm/s) or greater, reject.



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3. Mechanical and Physical Test- EN 71-1:2014+A1:2018(E):

Section	Testing Item(s)	Conclusion(s)
4	General requirements	
4.1	Material cleanliness	PASS
4.2	Assembly	NA
4.3	Flexible plastic sheeting	NA
4.4	Toy bags	NA
4.5	Glass	NA
4.6	Expanding materials	NA
4.7	Edges	PASS
4.8	Points and metallic wires	PASS
4.9	Protruding parts	NA
4.10	Parts moving against each other	NA
4.11	Mouth-actuated toys and other toys intended to be put in the mouth	NA
4.12	Balloons	NA
4.13	Cords of toy kites and other flying toys	NA
4.14	Enclosures	NA
4.15	Toys intended to bear the mass of a child	NA
4.16	Heavy immobile toys	NA
4.17	Projectile toys	NA
4.18	Aquatic toys and inflatable toys	NA
4.19	Percussion caps specifically designed for use in toys and toys using percussion caps	NA
4.20	Acoustics	NA
4.21	Toys containing a non-electrical heat source	NA
4.22	Small balls	NA
4.23	Magnets	NA
4.24	Yo-yo balls	NA
4.25	Toys attached to food	NA
4.26	Toy Disguise Costumes	NA

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4.27	Flying toys	NA
5	Toys intended for children under 36 months	
5.1	General requirements:	PASS
5.2	Soft-filled toys and soft-filled parts of a toy	NA
5.3	Plastic sheeting	NA
5.4	Cords, chains and electrical cables in toys	NA
5.5	Liquid-filled toys	NA
5.6	Speed limitation of electrically - driven ride-on toys	NA
5.7	Glass and porcelain	NA
5.8	Shape and size of certain toys	NA
5.9	Toys comprising monofilament fibers	NA
5.10	Small balls	PASS
5.11	Play figures	NA
5.12	Hemispheric-shaped toys	NA
5.13	Suction cups	NA
5.14	Straps intended to be worn fully or partially around the neck	NA
5.15	Sledges with cords for pulling	NA
6	Packaging	PASS
7	Warnings, markings and instructions for use	
7.1	General	PASS
7.2	Toys not intended for children under 36 months	NA
7.3	Latex balloons	NA
7.4	Aquatic toys	NA
7.5	Functional toys	NA
7.6	Hazardous sharp functional edges and points	NA
7.7	Projectile toys	NA
7.8	Imitation protective masks and helmets	NA
7.9	Toy kites	NA
7.10	Roller skates, inline skates, skateboards and certain other ride-on toys	NA
7.11	Toys otherwise intended to be strung across a cradle, cot, or perambulator	NA

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7.12	Liquid-filled teethingers	NA
7.13	Percussion caps specifically designed for use in toys	NA
7.14	Acoustics	NA
7.15	Toy bicycles	NA
7.16	Toys intended to bear the mass of a child	NA
7.17	Toys comprising monofilament fibres	NA
7.18	Toy scooters	NA
7.19	Rocking horses and similar toys	NA
7.20	Magnetic/ electrical experimental sets	NA
7.21	Toys with electrical cables exceeding 300mm in length	NA
7.22	Toys with cords or chains intended for children of 18 months and over but under 36 months	NA
7.23	Toys intended to be attached to a cradle, cot or perambulator	NA
7.24	Sledges with cords for pulling	NA
7.25	Flying toys	NA
7.26	Improvised projectiles	NA

Note:

- 1) NA = Not Applicable
- 2) “*” = Per client's requirement, the packaging was not evaluated.

Labeling requirements:**Directive 2009/48/EC - Safety of toys**

Testing Item(s)	Observation Result(s)	Location
Washing/Cleaning instruction	Not applicable	/
Importer's Name	Meet	Packaging
Importer's Address	Meet	Packaging
Manufacturer's Name	Meet	Packaging
Manufacturer's Address	Meet	Packaging
Product ID	Meet	Packaging
CE mark	Meet	Packaging



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Note:

1. Above are additional information according to Directive 2009/48/EC requirement. These information also appears as a note within the EN 71 but are not standard requirements and not accredited.
2. According to Directive 2009/48/EC, a toy intended for use by children under 36 months must be designed and manufactured in such a way that it can be cleaned. A textile toy must, to this end, be washable, except if it contains a mechanism that may be damaged if soaked. The manufacturer should, if applicable, provide instructions on how the toy has to be cleaned.
3. The manufacturer's name and registered trade name or registered trade mark and the address at which the manufacturer can be contacted shall be indicated on the toy or, where that is not possible, on its packaging or in the document accompanying the toy. This requirement applies also to the name and address etc. of any importer.
4. Manufacturers shall ensure that their toys bear a type, batch, serial or model number or other element allowing their identification, or where the size or nature of the toy does not allow it, that the required information is provided on the packaging or in the document accompanying the toy.
5. CE marking should be visible from outside the packaging and its height must be at least 5 mm.

4. Flammability - EN 71-2:2020(E):

Section	Testing Item(s)	Assessment
4.1	General requirements	PASS
4.2	Toys to be worn on the head	NA
4.3	Toy disguise costumes and toys intended to be worn by a child in play	NA
4.4	Toys intended to be entered by a child	NA
4.5	Soft-filled toys	NA

Note: NA= Not Applicable.



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5. Mechanical and Physical Test- BS EN 71-1:2014+A1:2018:

Section	Testing Item(s)	Conclusion(s)
4	General requirements	
4.1	Material cleanliness	PASS
4.2	Assembly	NA
4.3	Flexible plastic sheeting	NA
4.4	Toy bags	NA
4.5	Glass	NA
4.6	Expanding materials	NA
4.7	Edges	PASS
4.8	Points and metallic wires	PASS
4.9	Protruding parts	NA
4.10	Parts moving against each other	NA
4.11	Mouth-actuated toys and other toys intended to be put in the mouth	NA
4.12	Balloons	NA
4.13	Cords of toy kites and other flying toys	NA
4.14	Enclosures	NA
4.15	Toys intended to bear the mass of a child	NA
4.16	Heavy immobile toys	NA
4.17	Projectile toys	NA
4.18	Aquatic toys and inflatable toys	NA
4.19	Percussion caps specifically designed for use in toys and toys using percussion caps	NA
4.20	Acoustics	NA
4.21	Toys containing a non-electrical heat source	NA
4.22	Small balls	NA
4.23	Magnets	NA
4.24	Yo-yo balls	NA
4.25	Toys attached to food	NA

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4.26	Toy Disguise Costumes	NA
4.27	Flying toys	NA
5	Toys intended for children under 36 months	
5.1	General requirements:	PASS
5.2	Soft-filled toys and soft-filled parts of a toy	NA
5.3	Plastic sheeting	NA
5.4	Cords, chains and electrical cables in toys	NA
5.5	Liquid-filled toys	NA
5.6	Speed limitation of electrically - driven ride-on toys	NA
5.7	Glass and porcelain	NA
5.8	Shape and size of certain toys	NA
5.9	Toys comprising monofilament fibers	NA
5.10	Small balls	PASS
5.11	Play figures	NA
5.12	Hemispheric-shaped toys	NA
5.13	Suction cups	NA
5.14	Straps intended to be worn fully or partially around the neck	NA
5.15	Sledges with cords for pulling	NA
6	Packaging	PASS
7	Warnings, markings and instructions for use	
7.1	General	PASS
7.2	Toys not intended for children under 36 months	NR
7.3	Latex balloons	NA
7.4	Aquatic toys	NA
7.5	Functional toys	NA
7.6	Hazardous sharp functional edges and points	NA
7.7	Projectile toys	NA
7.8	Imitation protective masks and helmets	NA
7.9	Toy kites	NA
7.10	Roller skates, inline skates, skateboards and certain other ride-on toys	NA

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7.11	Toys otherwise intended to be strung across a cradle, cot, or perambulator	NA
7.12	Liquid-filled teethingers	NA
7.13	Percussion caps specifically designed for use in toys	NA
7.14	Acoustics	NA
7.15	Toy bicycles	NA
7.16	Toys intended to bear the mass of a child	NA
7.17	Toys comprising monofilament fibres	NA
7.18	Toy scooters	NA
7.19	Rocking horses and similar toys	NA
7.20	Magnetic/ electrical experimental sets	NA
7.21	Toys with electrical cables exceeding 300mm in length	NA
7.22	Toys with cords or chains intended for children of 18 months and over but under 36 months	NA
7.23	Toys intended to be attached to a cradle, cot or perambulator	NA
7.24	Sledges with cords for pulling	NA
7.25	Flying toys	NA
7.26	Improvised projectiles	NA

Note:

- 1) NA = Not Applicable
- 2) "*" = Per client's requirement, the packaging was not evaluated.

Labeling requirements:**Directive 2009/48/EC - Safety of toys**

Testing Item(s)	Observation Result(s)	Location
Washing/Cleaning instruction	Not applicable	/
Importer's Name	Meet	Packaging
Importer's Address	Meet	Packaging
Manufacturer's Name	Meet	Packaging
Manufacturer's Address	Meet	Packaging
Product ID	Meet	Packaging
CE mark	Meet	Packaging
UKCA mark	Meet	Packaging



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Note:

1. Above are additional information according to Directive 2009/48/EC requirement. These information also appears as a note within the EN 71 but are not standard requirements and not accredited.
2. According to Directive 2009/48/EC, a toy intended for use by children under 36 months must be designed and manufactured in such a way that it can be cleaned. A textile toy must, to this end, be washable, except if it contains a mechanism that may be damaged if soaked. The manufacturer should, if applicable, provide instructions on how the toy has to be cleaned.
3. The manufacturer's name and registered trade name or registered trade mark and the address at which the manufacturer can be contacted shall be indicated on the toy or, where that is not possible, on its packaging or in the document accompanying the toy. This requirement applies also to the name and address etc. of any importer.
4. Manufacturers shall ensure that their toys bear a type, batch, serial or model number or other element allowing their identification, or where the size or nature of the toy does not allow it, that the required information is provided on the packaging or in the document accompanying the toy.
5. CE marking should be visible from outside the packaging and its height must be at least 5 mm.
6. UKCA marking should be visible from outside the packaging and its height must be at least 5 mm.

6. Flammability – BS EN 71-2:2020:

Section	Testing Item(s)	Assessment
4.1	General requirements	PASS
4.2	Toys to be worn on the head	NA
4.3	Toy disguise costumes and toys intended to be worn by a child in play	NA
4.4	Toys intended to be entered by a child	NA
4.5	Soft-filled toys	NA

Note: NA= Not Applicable.**7. Total Lead (Pb) Content in Surface Coating according to ASTM F963-17****Test Method:** With reference to CPSC-CH-E1003-09.1. The lead content analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

Test item(s)	Unit	MDL	Limit	Test Result(s)
Lead (Pb)	mg/kg	10	90	NA

Note: NA = Not Applicable**8. Total Lead (Pb) Content in Substrates according to ASTM F963-17****Test Method:** With reference to CPSC-CH-E1001-08.3 and/or CPSC-CH-E1002-08.3. The lead content analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

Component No.	Unit	MDL	Limit	Test Result(s)	Conclusion(s)
02	mg/kg	10	100	N.D.	PASS

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Note:

- 1) 1mg/kg = 0.0001% = mass percent.
- 2) N.D. = not detected, less than MDL.
- 3) MDL = Method Detection Limit.
- 4) “▲” = This data is obtained from composite testing on more than one materials or shapes, it is possible that result obtained from individual testing on any one of the materials or shapes is substantially higher. Please be cautious when using this data for compliance evaluation.

9. Total Lead (Pb) Content In Surface Coating according to CPSIA

Test Method: With reference to CPSC-CH-E1003-09.1. The lead content analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

Test item(s)	Unit	MDL	Limit	Test Result(s)
Lead (Pb)	mg/kg	10	90	NA

Note: NA = Not Applicable

10. Total Lead (Pb) Content in Substrates according to CPSIA

Test method: With reference to CPSC-CH-E1001-08.3 and/or CPSC-CH-E1002-08.3. The lead content analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

Component No.	Unit	MDL	Limit	Test Result(s)	Conclusion(s)
02	mg/kg	10	100	N.D.	PASS

Note:

- 1) 1mg/kg = 0.0001% = mass percent.
- 2) N.D. = not detected, less than MDL.
- 3) MDL = Method Detection Limit.
- 4) “▲” = This data is obtained from composite testing on more than one materials or shapes, it is possible that result obtained from individual testing on any one of the materials or shapes is substantially higher. Please be cautious when using this data for compliance evaluation.



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11. Phthalates Content according to 16 CFR 1307

Test method: With reference to CPSC-CH-C1001-09.4, was analyzed by Gas Chromatograph-Mass Spectrometer (GC-MS).

Test Item(s)	CAS No.	Unit	MDL	Limit	Test Result(s)
					03
Dibutyl Phthalate (DBP)	84-74-2	mg/kg	30	1000	N.D.
Benzyl butyl Phthalate (BBP)	85-68-7	mg/kg	30	1000	N.D.
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	mg/kg	30	1000	N.D.
Dinonyl phthalate (DINP)	28553-12-0	mg/kg	100	1000	N.D.
Di-n-hexyl phthalate (DnHP/DHEXP)	84-75-3	mg/kg	30	1000	N.D.
Di-n-pentyl phthalate (DnPP/DPENP)	131-18-0	mg/kg	30	1000	N.D.
Dicyclohexylphthalate (DCHP)	84-61-7	mg/kg	30	1000	N.D.
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg	30	1000	N.D.
Conclusion(s)					PASS

Note:

1) 1mg/kg = 0.0001% = mass percent.

2) N.D. = not detected, less than MDL.

3) MDL = Method Detection Limit.

4) “▲” = This data is obtained from composite testing on more than one materials or shapes, it is possible that result obtained from individual testing on any one of the materials or shapes is substantially higher. Please be cautious when using this data for compliance evaluation.



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12.Soluble migrated elements according to ASTM F963-17**Test method:** ASTM F963-17 Standard Consumer Safety Specification for Toy Safety - Section 8.3, Test Methods for Determination of Heavy Element Content in Toys, Toy Components and Materials

Test Item(s)	Unit	MDL	Limit	Test Result(s)
				04
Sol.Sb	mg/kg	5	60	N.D.
Sol.As	mg/kg	2.5	25	N.D.
Sol.Ba	mg/kg	5	1000	10
Sol.Cd	mg/kg	5	75	N.D.
Sol.Cr	mg/kg	5	60	N.D.
Sol.Pb	mg/kg	5	90	N.D.
Sol. Hg	mg/kg	5	60	N.D.
Sol.Se	mg/kg	5	500	N.D.
Conclusion(s)				PASS

Note:

1) 1mg/kg = 0.0001% = mass percent.

2) N.D. = not detected, less than MDL.

3) MDL = Method Detection Limit.

4) “▲” = This data is obtained from composite testing on more than one materials or shapes, it is possible that result obtained from individual testing on any one of the materials or shapes is substantially higher. Please be cautious when using this data for compliance evaluation.



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13. Soluble Heavy Metal - EN 71-3:2019+A1:2021(Category III):

Method: EN 71-3:2019+A1:2021, analyzed by Inductively coupled plasma mass spectrometry (ICP-MS) or Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).

No.	Substances Name	CAS No.	Unit	MDL	Limit	Test Result(s)
						04
1	Soluble Aluminum (Al)	7429-90-5	mg/kg	5	28130	7
2	Soluble Antimony (Sb)	7440-36-0	mg/kg	5	560	N.D.
3	Soluble Arsenic (As)	7440-38-2	mg/kg	2.5	47	3.2
4	Soluble Barium (Ba)	7440-39-3	mg/kg	5	18750	14
5	Soluble Boron (B)	7440-42-8	mg/kg	5	15000	9
6	Soluble Cadmium (Cd)	7440-43-9	mg/kg	5	17	N.D.
7	Soluble CrIII	--	mg/kg	2.0	460	N.D.
8	Soluble CrVI	18540-29-9	mg/kg	0.025	0.053	N.D.
9	Soluble Cobalt (Co)	7440-48-4	mg/kg	5	130	N.D.
10	Soluble Copper (Cu)	7440-50-8	mg/kg	5	7700	N.D.
11	Soluble Lead (Pb)	7439-92-1	mg/kg	5	23	N.D.
12	Soluble Manganese (Mn)	7439-96-5	mg/kg	5	15000	N.D.
13	Soluble Mercury (Hg)	7439-97-6	mg/kg	5	94	N.D.
14	Soluble Nickel (Ni)	7440-02-0	mg/kg	5	930	N.D.
15	Soluble Selenium (Se)	7782-49-2	mg/kg	5	460	N.D.
16	Soluble Strontium (Sr)	7440-24-6	mg/kg	5	56000	N.D.
17	Soluble Tin (Sn)	7440-31-5	mg/kg	2.5	180000	2.7
18	Soluble Organic tin	--	mg/kg	2.5	12	N.D.
19	Soluble Zinc (Zn)	7440-66-6	mg/kg	5	46000	N.D.
Conclusion(s)						PASS

Note:

1) mg/kg= milligram per kilogram (ppm).

2) N.D. = Not Detected (Less than MDL).

3) Migration of organic tin was calculated by summat ion of the migration values of Methyl tin, Dimethyl tin, Di-n-propyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetra butyl tin, n-Octyl tin, Di-n- octyl tin, Diphenyl tin, Triphenyl tin and was expressed as tributyltin cation content. however other organic tin compounds may also be present in the sample, The Toy Safety Directive (2009/48/EC) requirement covers total migratable organic tin.

4) The soluble organic tin was not conducted due to the soluble tin is not detected.

5) Soluble chromium (VI) test method: EN 71-3:2019+A 1:2021 Annex F, analyzed by Ion Chromatograph Ultraviolet spectroscopy (IC-UV).

6) Soluble organic tin test method: EN 71-3:2019+A1:2021 Annex G, analyzed by Gas Chromatography- Mass Spectroscopy (GC-MS).



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14. Soluble Heavy Metal – BS EN 71-3:2019+A1:2021(Category III):

Method: EN 71-3:2019+A1:2021, analyzed by Inductively coupled plasma mass spectrometry (ICP-MS) or Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).

No.	Substances Name	CAS No.	Unit	MDL	Limit	Test Result(s)
						04
1	Soluble Aluminum (Al)	7429-90-5	mg/kg	5	28130	7
2	Soluble Antimony (Sb)	7440-36-0	mg/kg	5	560	N.D.
3	Soluble Arsenic (As)	7440-38-2	mg/kg	2.5	47	3.2
4	Soluble Barium (Ba)	7440-39-3	mg/kg	5	18750	14
5	Soluble Boron (B)	7440-42-8	mg/kg	5	15000	9
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7	Soluble CrIII	--	mg/kg	2.0	460	N.D.
8	Soluble CrVI	18540-29-9	mg/kg	0.025	0.053	N.D.
9	Soluble Cobalt (Co)	7440-48-4	mg/kg	5	130	N.D.
10	Soluble Copper (Cu)	7440-50-8	mg/kg	5	7700	N.D.
11	Soluble Lead (Pb)	7439-92-1	mg/kg	5	23	N.D.
12	Soluble Manganese (Mn)	7439-96-5	mg/kg	5	15000	N.D.
13	Soluble Mercury (Hg)	7439-97-6	mg/kg	5	94	N.D.
14	Soluble Nickel (Ni)	7440-02-0	mg/kg	5	930	N.D.
15	Soluble Selenium (Se)	7782-49-2	mg/kg	5	460	N.D.
16	Soluble Strontium (Sr)	7440-24-6	mg/kg	5	56000	N.D.
17	Soluble Tin (Sn)	7440-31-5	mg/kg	2.5	180000	2.7
18	Soluble Organic tin	--	mg/kg	2.5	12	N.D.
19	Soluble Zinc (Zn)	7440-66-6	mg/kg	5	46000	N.D.
Conclusion(s)						PASS

Note:

1) mg/kg= milligram per kilogram (ppm).

2) N.D. = Not Detected (Less than MDL).

3) Migration of organic tin was calculated by summat ion of the migration values of Methyl tin, Dimethyl tin, Di-n-propyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetra butyl tin, n-Octyl tin, Di-n- octyl tin, Diphenyl tin, Triphenyl tin and was expressed as tributyltin cation content. however other organic tin compounds may also be present in the sample, The Toy Safety Directive (2009/48/EC) requirement covers total migratable organic tin.

4) The soluble organic tin was not conducted due to the soluble tin is not detected.

5) Soluble chromium (VI) test method: EN 71-3:2019+A 1:2021 Annex F, analyzed by Ion Chromatograph Ultraviolet spectroscopy (IC-UV).

6) Soluble organic tin test method: EN 71-3:2019+A1:2021 Annex G, analyzed by Gas Chromatography- Mass Spectroscopy (GC-MS).



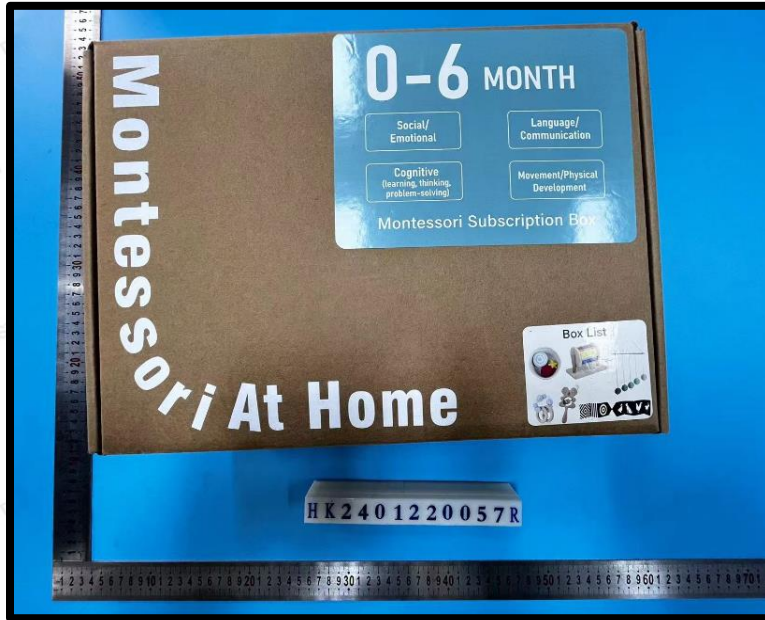
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Photograph of Sample:



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