

# Test Report

Report No. ECL01H025912

Page 1 of 9

**Applicant** TIGER MONTESSORI

**Address** XINHUA STREET, YUNHE INDUSTRIAL PART LISHUI, ZHEJIANG

**The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client**

Sample Name	Montessori Materials-Knobless Cylinders (Set of 4)
Item No.	A030
Manufacturer	Tiger Montessori
Supplier	Tiger Montessori
Quantity Of Sample	1
Country of Origin	CHINA
Exported to	EUROPE
Client Specified Age Grading	3
Labeled Age Grading	NOT STATED
Age Group Applied in Testing	3+ YEARS
Sample Received Date	May. 28, 2015
Further Information Date	May. 29, 2015/ Jun. 3, 2015
Testing Period	May. 28, 2015 to Jun. 4, 2015

**Test Conducted:**

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

Tested by

*Melon Tang*

Reviewed by

*Li Chunxian*



*Victor Wang*

Victor Wang  
Lab Manager

Date

Jun. 4, 2015

No. T209583082

Centre Testing International Co.,Ltd. Shanghai Branch

No.1996,Xinjinqiao Road, Pudong New District,Shanghai,China

# Test Report

Report No. ECL01H025912

Page 2 of 9

**Executive Summary:**

**TEST REQUEST**

European Standard on Safety of Toys

- EN 71-1: 2011+A3:2014 Mechanical and Physical Properties
- EN 71-2: 2011+A1:2014 Flammability of Toys
- EN 71-3: 2013 Migration of certain elements
- Labeling requirement (CE mark, Manufacture/Importer mark and product identification)—Directive 2009/48/EC Safety of toys

**CONCLUSION**

**PASS**

**PASS**

**PASS**

**REFER TO  
NEXT PAGES**

For chemical test, the tested component(s) is/are identified by the applicant.

\*\*\*\*\* For Further Details, Please Refer To the Following Page(s) \*\*\*\*\*

# Test Report

Report No. ECL01H025912

Page 3 of 9

**European Standard on Safety of Toys**

**▼ Mechanical and physical properties**

As specified in European Standard on Safety of Toys EN 71-1: 2011+A3:2014

<u>Clause</u>	<u>Description</u>	<u>Assessment</u>
4	General requirements	
4.1	Material cleanliness.....	Pass
4.7	Edges .....	Pass
4.8	Points and metallic wires .....	Pass
7	Warnings and instructions for use	
7.1	General .....	Pass
7.2	Toys not intended for children under 36 months .....	Pass

**▼ Flammability of Toys**

As specified in European Standard on Safety of Toys EN 71-2:2011+A1:2014.

<u>Clause</u>	<u>Description</u>	<u>Assessment</u>
4	Requirements	
4.1	General .....	Pass
	(The following materials shall not be used in the manufacture of toys except as provided in EN 71-2:2011+A1:2014 :	
	Celluloid, materials with the same behaviour in fire as celluloid, materials with a piled surface which produce surface flash, flammable gases, extremely flammable liquids, highly flammable liquids, flammable liquids and flammable gels.)	

# Test Report

Report No. ECL01H025912

Page 4 of 9

**Labeling requirement (CE mark, importer / manufacturer name and address, product identification)  
according to the Directive 2009/48/EC – Safety of toys**

Summary table:

	Observation Result	Location
CE mark	Found	Packaging
Importer's Name & Address	Found	Packaging
Manufacturer's Name & Address	Found	Packaging
Product ID	Found	Packaging

Note:

- ①: Toys made available on the market must bear the CE marking. The CE marking must be subject to the general principle set out in Article 30 of Regulation (EC) NO 765/2008. The CE marking must be affixed visibly, legibly and indelibly to the toy, to an affixed label or to the packaging. In the case of small toys and toys consisting of small parts, the CE marking may alternatively be affixed to a label or an accompanying leaflet. Where, in the case of toys sold in counter displays, that is not technically possible, and on condition that the counter display was originally used as packaging for the toy, the CE marking may be affixed to the counter display. Where the CE marking is not visible from outside the packaging, if any, it shall as a minimum be affixed to the packaging. Where specific legislation does not impose specific dimensions, the CE marking must be at least 5 mm high.
- ②: The manufacturer's name registered trade name or registered trade mark and the address at which the manufacture can be contacted must be indicated on the toy or, where that is not possible, on its packaging or in a document accompanying the toy. This requirement applies also to the name and address etc. of any importer.
- ③: Manufacturer must 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 a document accompanying the toy.

# Test Report

Report No. ECL01H025912

Page 5 of 9

## ▼ EN 71-3:2013 Migration of certain elements

Method(s) EN 71-3:2013 was/were used, and the item(s) was/were analyzed by ICP-OES, ICP-MS, HPLC-ICP-MS and/or GC-MS.

### Category III: scraped-off toy material

Tested Item(s)	Result (mg/kg)						MDL (mg/kg)	Limit (mg/kg)
	001	002	003	004	011	012		
Aluminium (Al)	N.D.	N.D.	N.D.	N.D.	N.D.	167	50	70000
Antimony (Sb)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5	560
Arsenic (As)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5	47
Barium (Ba)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	50	18750
Boron (B)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	50	15000
Cadmium (Cd)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	1	17
Chromium (Cr) <sup>#1</sup>	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.2	--
Chromium (III) <sup>#2</sup>	--	--	--	--	--	--	--	460
Chromium (VI)	--	--	--	--	--	--	0.005	0.2
Cobalt (Co)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5	130
Copper (Cu)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	50	7700
Lead (Pb)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5	160
Manganese (Mn)	N.D.	N.D.	N.D.	N.D.	82	127	50	15000
Mercury (Hg)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5	94
Nickel (Ni)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5	930
Selenium (Se)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5	460
Strontium (Sr)	N.D.	N.D.	264	N.D.	N.D.	N.D.	50	56000
Tin (Sn) <sup>#3</sup>	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	2	180000
Organic tin (TBT) <sup>#4</sup>	--	--	--	--	--	--	5	12
Zinc (Zn)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	50	46000

### Remark:

- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL)
- mg/kg = ppm = parts per million
- Filter paper was used instead of membrane filter in lab testing.
- Where the test portion has a mass of between 10mg and 100mg, the quantity of the appropriate elements shall be calculated as if 100mg of the test portion had been used.

# Test Report

Report No. ECL01H025912

Page 6 of 9

- #1 Chromium(Cr) content can be used for screen test for hexavalent chromium and trivalent chromium analysis and to show compliance with the requirement of EN 71-3:2013.
- #2 Chromium (Cr) = Hexavalent chromium (Cr (VI)) +Trivalent chromium (Cr (III)), where the chromium content exceeded the limits of hexavalent chromium and/or trivalent chromium, then hexavalent chromium was analyzed by HPLC-ICP-MS and trivalent chromium content was calculated using the formula.
- #3 Tin(Sn) content can be used for screen test for organic tins analysis to show compliance with the requirement of EN 71-3:2013.
- #4 The migration of organic tin is expressed as tributyltin (TBT). where the tin content exceeded the limit of organic tin, ten organic tins listed in table were determined by GC-MS and the client should be noted there are other organic tins may be present in toy materials.

Organic tins tested under EN 71-3:2013
Methyl tin (MeT)
Butyl tin (BuT)
Dibutyl tin (DBT)
Tributyl tin (TBT)
Tetrabutyl tin (TeBT)
n-Octyl tin (MOT)
Di-n-octyl tin (DOT)
Di-n-propyl tin (DProT)
Diphenyl tin (DPhT)
Triphenyl tin (TPhT)

Note:

- Only applicable clause(s) was/were shown.

### Tested Sample/Part Description

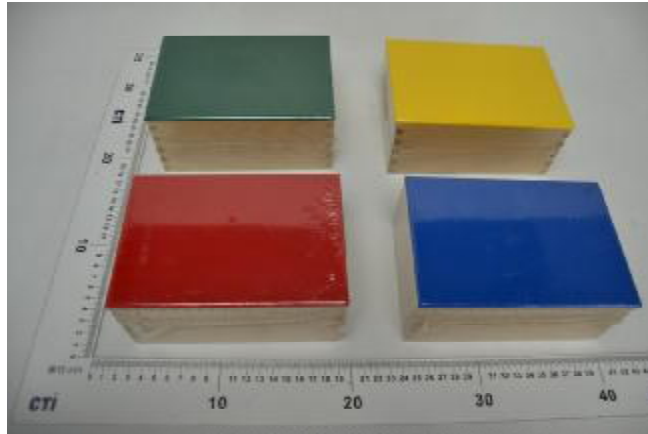
- 001 Yellow coating(cylinder)
- 002 Blue coating(cylinder)
- 003 Red coating(cylinder) (sample weight: 90mg)
- 004 Green coating(cylinder)
- 011 Beige wood(handle)
- 012 Brown MDF(puzzle)

# Test Report

Report No. ECL01H025912

Page 7 of 9

Photo(s) of the sample(s)

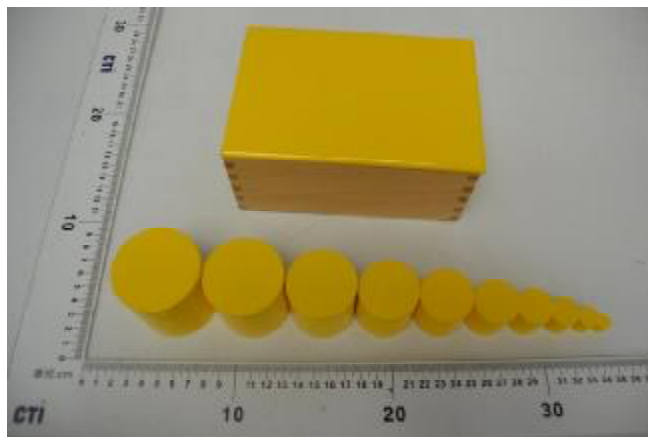
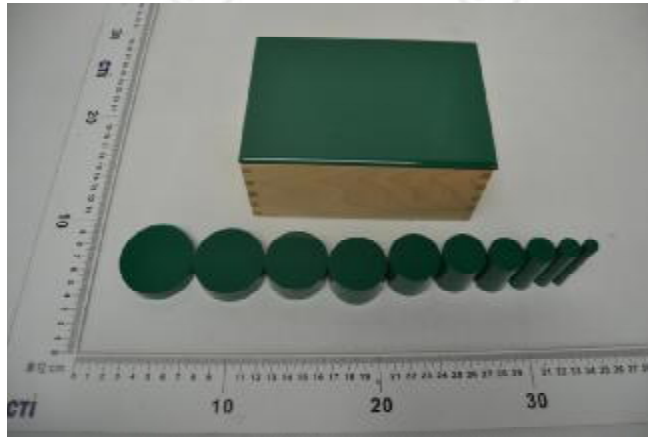




# Test Report

Report No. ECL01H025912

Page 8 of 9

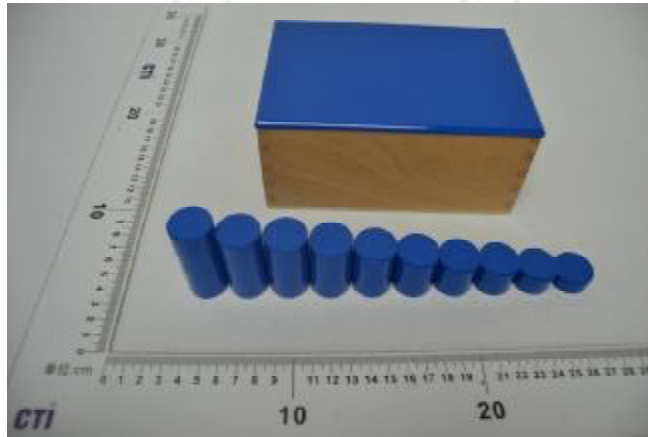




# Test Report

Report No. ECL01H025912

Page 9 of 9



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

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