



# 检测报告 Test Report

报告编号 A2190039541101001E  
Report No. A2190039541101001E

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申请单位 立达超微工业（苏州）有限公司  
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以下测试之样品及样品信息由申请者提供并确认  
**The following sample(s)and sample information was/were submitted and identified by/on the behalf of the client**

样品名称 碳酸钙  
**Sample Name** 碳酸钙  
材料名称 碳酸钙/粉末  
**Material** 碳酸钙/粉末  
样品接收日期 2019.03.01  
**Sample Received Date** Mar. 1, 2019  
样品检测日期 2019.03.01-2019.03.09  
**Testing Period** Mar. 1, 2019 to Mar. 9, 2019

## 测试要求

### TEST REQUEST

欧洲玩具安全标准 European Standard on Safety of Toys  
EN71-3:2013+A2:2017 特定元素的迁移  
EN71-3:2013+A2:2017 Migration of certain elements

## 测试结果

### CONCLUSION

符合  
PASS

主 检 周红霞  
Tested by

审 核 顾翠丽  
Reviewed by

批 准 陈凯敏  
Approved by

日 期 2019.03.09  
Date

陈凯敏  
实验室经理 Lab Manager



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### 欧洲玩具安全标准

#### European Standard on Safety of Toys

##### ▼ EN 71-3:2013+A2:2017 特定元素的迁移

##### ▼ EN71-3:2013+A2:2017 Migration of certain elements

使用方法 EN 71-3:2013+A2:2017, 通过 ICP-OES, ICP-MS, IC-ICP-MS 和/或 GC-MS 分析。

Method(s) EN71-3:2013+A2:2017 was/were used, and the item(s) was/were determined by ICP-OES, ICP-MS, IC-ICP-MS and/or GC-MS.

类别 I : 玩具中干燥, 脆, 粉末状和可塑的材料

Category I : dry, brittle, powder-like or pliable toy material

测试项目 Tested Item(s)	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
铝 (Al) Aluminium (Al)	N.D.	50	5625
锑 (Sb) Antimony (Sb)	N.D.	2	45
砷 (As) Arsenic (As)	0.6	0.1	3.8
钡 (Ba) Barium (Ba)	N.D.	50	1500
硼 (B) Boron (B)	N.D.	50	1200
镉 (Cd) Cadmium (Cd)	N.D.	0.2	1.3
三价铬 (Cr(III)) <sup>#1</sup> Chromium (III) <sup>#1</sup>	0.238	--	37.5
六价铬 (Cr(VI)) Chromium (VI)	N.D.	0.005	0.02
钴 (Co) Cobalt (Co)	N.D.	0.2	10.5
铜 (Cu) Copper (Cu)	N.D.	50	622.5
铅 (Pb) Lead (Pb)	2	1	13.5
锰 (Mn) Manganese (Mn)	N.D.	50	1200
汞 (Hg) Mercury (Hg)	N.D.	0.6	7.5
镍 (Ni) Nickel (Ni)	N.D.	5	75
硒 (Se) Selenium (Se)	N.D.	5	37.5
锶 (Sr) Strontium (Sr)	N.D.	50	4500
锡 (Sn) <sup>#2</sup> Tin (Sn) <sup>#2</sup>	N.D.	0.05	15000
有机锡(TBT) <sup>#3</sup> Organic tin (TBT) <sup>#3</sup>	N.D.	0.2	0.9
锌 (Zn) Zinc (Zn)	N.D.	50	3750

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备注:

- N.D. = 未检出 (小于方法检出限)
- mg/kg = ppm = 百万分之一
- 实验室采用滤纸代替滤膜进行测试。
- <sup>#1</sup> 三价铬含量=铬含量-六价铬含量，当铬含量超过六价铬和/或三价铬限值的时候，通过 HPLC-ICP-MS 分析六价铬含量，并通过该公式计算三价铬含量。
- <sup>#2</sup> 为符合 EN 71-3:2013+A2:2017 可以通过锡含量来对有机锡进行筛选测试。
- <sup>#3</sup> 有机锡的迁移含量以三丁基锡含量表示。当锡的含量超过有机锡的限值时，通过 GC-MS 分析下表中的十种有机锡，客户应清楚可能有其它的有机锡会存在玩具材料中。

EN 71-3:2013+A2:2017 中测试的有机锡
Methyl tin (MeT) 甲基锡
Butyl tin (BuT) 丁基锡
Dibutyl tin (DBT) 二丁基锡
Tributyl tin (TBT) 三丁基锡
Tetrabutyl tin (TeBT) 四丁基锡
n-Octyl tin (MOT) 辛基锡
Di-n-octyl tin (DOT) 二辛基锡
Di-n-propyl tin (DProT) 二丙基锡
Diphenyl tin (DPhT) 二苯基锡
Triphenyl tin (TPhT) 三苯基锡

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**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.
- <sup>#1</sup> Trivalent chromium (Cr (III)) = Chromium (Cr) - Hexavalent chromium (Cr (VI)) , 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.
- <sup>#2</sup> Tin (Sn) content can be used for screen test for organic tins analysis to show compliance with the requirement of EN71-3:2013+A2:2017.
- <sup>#3</sup> 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 EN71-3:2013+A2:2017
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)

注释：本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。

Note: The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

测试样品/部位描述                      白色粉末  
**Tested Sample/Part Description**                      **White powder**

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## 样品图片

### Photo(s) of the sample(s)



\*\*\* 报告结束 \*\*\*

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

#### 声明 Statement:

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2. 样品及样品信息由申请者提供, 申请者应对其真实性负责, CTI 未核实其真实性;

The sample(s) and sample information was/were provided by the client who should be responsible for the authenticity which CTI hasn't verified;

3. 本报告检测结果仅对受测样品负责;

The result(s) shown in this report refer(s) only to the sample(s) tested;

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