



**CENTRE OF TESTING SERVICE  
INTERNATIONAL**

**OPERATE ACCORDING TO ISO/IEC 17025**

# **TEST REPORT**

**RoHS 2011/65/EU**

**Test Report Number : CNB3170412-01187-C**



**CTS (Ningbo) Testing Service Technology Co., Ltd.**

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## TEST REPORT

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### 1 General Information

#### 1.1 Application Details

Name : MIDOCEANBRANDS B.V.  
Address : Unit 201, 2/F., Laford Centre, 838 Lai Chi Kok Road, Cheung Sha  
Wan, Kowloon, Hong Kong  
Contact : /  
Telephone : /  
Fax : /  
Mobile telephone : /  
Email : /

#### 1.2 Manufacturer & Buyer

Manufacturer name : /  
Address : /  
Contact : /  
Telephone : /  
Fax : /  
Mobile telephone : /  
Email : /  
Buyer name : /

#### 1.3 Description of the Test Item

Sample name : Light up stylus pen  
Model No. : MO9142  
EORI number : NL806979069  
Brand name : /  
Condition of sample(s) : EFFECTIVE

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### 2 Integration Report

#### 2.1 Sample Receiving Date

Apr. 12, 2017

#### 2.2 Reports Combine Date

Apr. 12, 2017 to Apr. 17, 2017

#### 2.3 Request

To combine the submitted test reports for the submitted sample.

#### 2.4 Survey Report Contents

Test report	Report No	Issue date
	CNB3170314-00716-C	2017.03.20

Conclusion: Based on the reports submitted by applicant, CTS combine the test data from the original reports as following.

#### Survey part

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Part name No.1	light pen
Model	: light pen
Vendor	:
Report No	: CNB3170314-00716-C

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### Test Data Summary

No.	Sample Description	Results					Chemical Confirmation Result (Unit=mg/kg)
		Pb	Cd	Hg	Cr	Br	
1	Silvery coating	P	P	P	P	P	/
2	Black coating	P	P	P	P	P	/
3	Black plastic cover	P	P	P	P	P	/
4	Beige plastic Base material	P	P	P	P	P	/
5	White plastic cover	P	P	P	P	P	/
6	Pink plastic cover	P	P	P	P	P	/
7	Black soft plastic	P	P	P	P	P	/
8	Copper-colored metal wafer	X	X	P	P	/	Pb: N.D. Cd: N.D.
9	Silvery metal parts	P	P	P	P	/	/
10	Silvery metal hook	P	P	P	P	/	/
11	Brown plastic cover	P	P	P	P	P	/
12	LED	Transparent body	P	P	P	P	/
13		Pin	P	P	P	P	/
14	Cell box	Beige plastic	P	P	P	P	/
15	Silvery metal spring	P	P	P	P	/	/

Note : P = Below Limit (Pass)  
 F = Over Limit (Fail)  
 X = Inconclusive  
 N.D. = not detected (less than MDL)  
 1mg/kg=1ppm=0.0001%

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Remarks:

- (1) Results are obtained by EDXRF for primary screening, and further chemical testing is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013.

Element	Polymer Materials	Metallic Materials	Electronic Materials
Pb	$P \leq 500 < X < 1300 \leq F$	$P \leq 500 < X < 1300 \leq F$	$P \leq 500 < X < 1300 \leq F$
Cd	$P \leq 50 < X < 130 \leq F$	$P \leq 50 < X < 130 \leq F$	$X < 130 \leq F$
Hg	$P \leq 500 < X < 1300 \leq F$	$P \leq 500 < X < 1300 \leq F$	$P \leq 500 < X < 1300 \leq F$
Cr	$P \leq 700 < X$	$P \leq 700 < X$	$P \leq 500 < X$
Br	$P \leq 250 < X$	/	$P \leq 250 < X$

- (2) Chemical Confirmation Result acceptable Limit and Method DetectLimit:

Test items	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (CrVI) by alkaline extraction	Chromium VI (CrVI) by boiling water extraction#	PBBs	PBDEs
Unit	mg/kg	mg/kg	mg/kg	mg/kg	$\mu\text{g}/\text{cm}^2$	mg/kg	mg/kg
Method Detection Limit	2	2	2	2	0.10	5	5
Acceptable Limit	1000	100	1000	1000	---	1000	1000

- Note : 1. #=a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13  $\mu\text{g}/\text{cm}^2$ . The sample coating is considered to contain CrVI.  
 b. The sample is negative for CrVI if CrVI is N.D. (concentration less than 0.10  $\mu\text{g}/\text{cm}^2$ ). The coating is considered a non-CrVI based coating.  
 c. The result between 0.10  $\mu\text{g}/\text{cm}^2$  and 0.13  $\mu\text{g}/\text{cm}^2$  is considered to be inconclusive unavoidable coating variations may influence the determination.  
 2. Cr(VI) results represent status of the sample at the time of testing.

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### 3 Test result of Selective Test

#### 3.1 Sample Receiving Date

Apr. 12, 2017

#### 3.2 Testing Period

Apr. 12, 2017 to Apr. 17, 2017

#### 3.3 Test Requested

In accordance with the RoHS Directive 2011/65/EU Annex II.

#### 3.4 Test Method

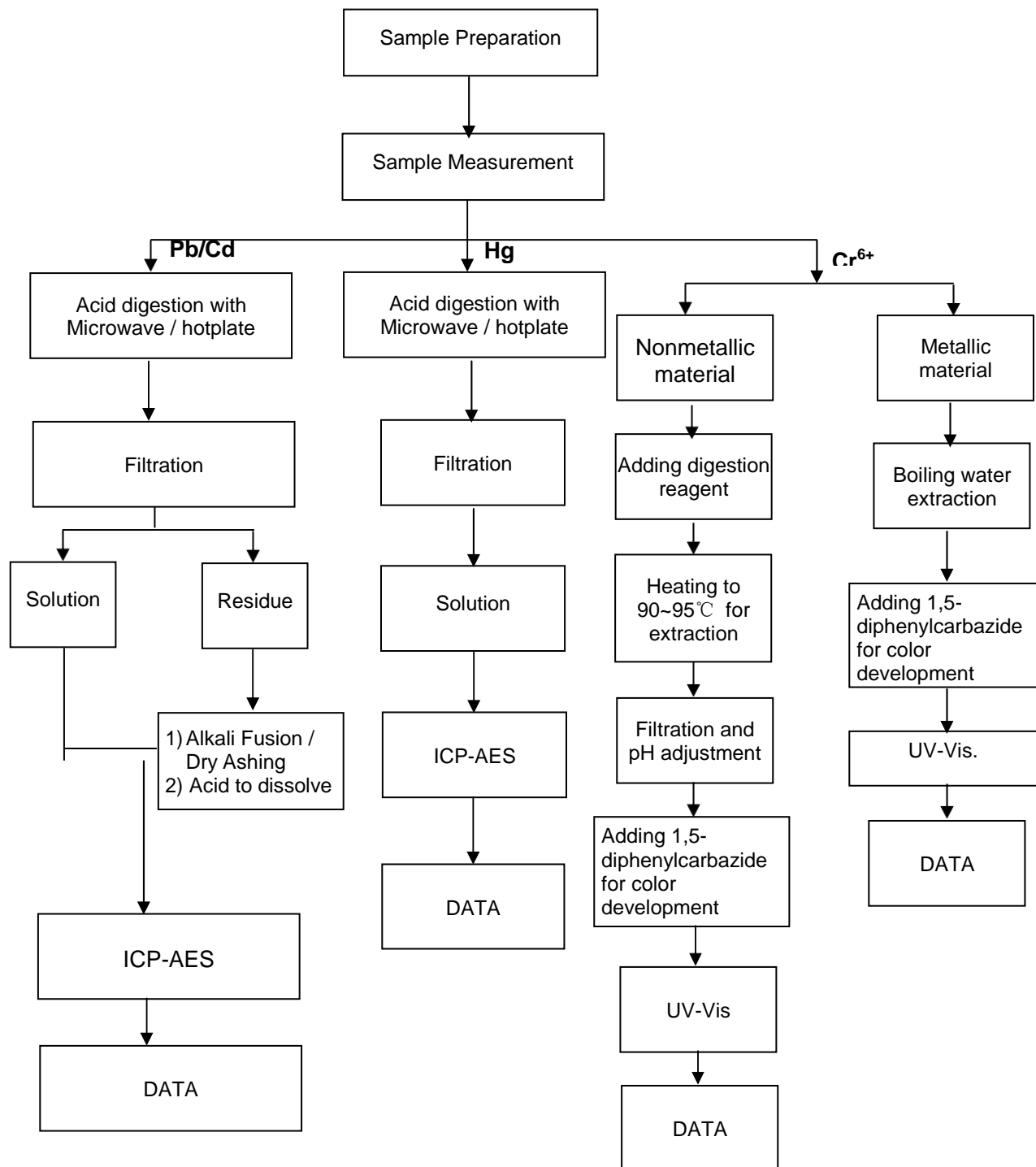
Test Item(s)	Sample preparation	Test Method	Test Instrument
Lead (Pb)	With reference to IEC 62321-2:2013	With reference to IEC 62321-5:2013	ICP-AES
Cadmium (Cd)		With reference to IEC 62321-5:2013	ICP-AES
Mercury (Hg)		With reference to IEC 62321-4:2013	ICP-AES
Chromium VI (Cr VI)		With reference to IEC 62321:2008 IEC 62321-7-1:2015	UV-Vis
PBBs		With reference to IEC 62321-6:2015	GC-MS
PBDEs			

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### 3.5 Chemical Test Method Flow Chart

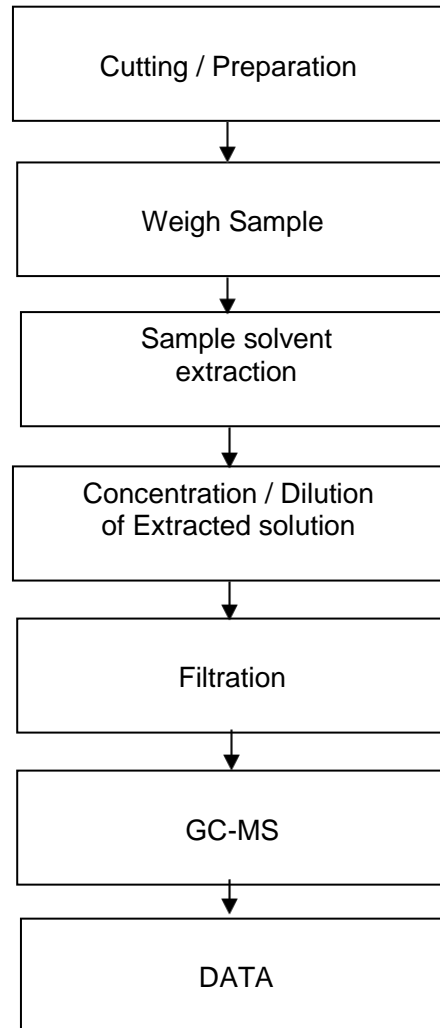


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**PBBs / PBDEs****3.6 Conclusion**

Based on the performed tests on submitted samples, the results of Lead, Cadmium, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

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### 3.7 Test Results

Test items	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (CrVI) by alkaline extraction	Chromium VI (CrVI) by boiling water extraction #	PBBs	PBDEs
Unit	mg/kg	mg/kg	mg/kg	mg/kg	μg/cm <sup>2</sup>	mg/kg	mg/kg
Acceptable Limit	1000	100	1000	1000	---	1000	1000
16 Blue printing ink	22	N.D.	N.D.	N.D.	N.A.	N.D.	N.D.

- Note :
- Specimens, which requested to determine Cadmium, Mercury and Lead content, have been dissolved completely.
  - N.D. = not detected (less than MDL)
  - N.A. = not applicable
  - 1 mg/kg=1 ppm=0.0001%
  - #=a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 μg/cm<sup>2</sup>. The sample coating is considered to contain CrVI.  
 b. The sample is negative for CrVI if CrVI is N.D. (concentration less than 0.10 μg/cm<sup>2</sup>). The coating is considered a non-CrVI based coating.  
 c. The result between 0.10 μg/cm<sup>2</sup> and 0.13 μg/cm<sup>2</sup> is considered to be inconclusive unavoidable coating variations may influence the determination.
  - Cr(VI) results represent status of the sample at the time of testing.

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7. The method detect limit for each hazardous substances, and determined individual PBBs and individual PBDEs are:

Method Detect Limit in mg/kg		
Heavy Metals	Lead (Pb)	2
	Cadmium (Cd)	2
	Mercury (Hg)	2
	Chromium VI (CrVI) by alkaline extraction	2 mg/kg
	Chromium VI (CrVI) by boiling water extraction	0.10µg/cm <sup>2</sup>
PBBs	Monobromobiphenyl	5
	Dibromobiphenyl	5
	Tibromobiphenyl	5
	Tetrabromobiphenyl	5
	Pentabromobiphenyl	5
	Hexabromobiphenyl	5
	Heptabromobiphenyl	5
	Octabromobiphenyl	5
	Nonabromodiphenyl	5
	Decabromodiphenyl	5
PBDEs	Monobromodiphenyl ether	5
	Dibromodiphenyl ether	5
	Tibromodiphenyl ether	5
	Tetrabromodiphenyl ether	5
	Pentabromodiphenyl ether	5
	Hexabromodiphenyl ether	5
	Heptabromodiphenyl ether	5
	Octabromodiphenyl ether	5
	Nonabromodiphenyl ether	5
	Decabromodiphenyl ether	5

Written by: *Jessie*

Inspected by: *Suzei*

Approved by: *Jan* 

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

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### 4 Sample Reference Photo



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