

Test Report No.: 68.431.19.03872.01

Dated: 2019-09-16



**Applicant** : Spector & Co  
**Address** : /  
**Sample Description** : Ballpoint pen  
**Product Type / End Use** : Writing instrument  
**Item No.** : EC1090  
**Style No.** : ECOLOGIST  
**Supplier** : USN015  
**Country of Origin** : China  
**Exported to** : Canada & U.S.A.  
**Test Sample Receipt Date, Location** : 2019-08-05, 2019-08-19, 2019-09-09, Shenzhen  
**Test Period, Location** : From 2019-08-05 to 2019-09-12, Shenzhen  
**Test Result(s)** : Refer to Section 3

**Purpose Of Examination / Conclusion:**

No.	Test Item(s)	Conclusion
1.	US California Proposition 65 - Total Cadmium Content Test - Substrate Materials	Pass*
2.	US California Proposition 65 - Total Cadmium Content Test - Paint and Similar Surface-Coating Materials	Pass*
3.	US California Proposition 65 - Total Lead Content Test - Substrate Materials	Pass*
4.	US California Proposition 65 - Total Lead Content Test - Paint and Similar Surface-Coating Materials	Pass*
5.	Canadian Consumer Products Containing Lead Regulations SOR/2018-83 - Total Lead Content Test	Pass
6.	Canadian Surface Coating Materials Regulations SOR/2016-193 - Total Lead Content Test	Pass
7.	Phthalates Content	Pass*

**Laboratory:**  
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No.	Test Item(s)	Conclusion
8.	US California Proposition 65 - Phthalates Content	Pass*
9.	U.S. CFR Title 16 Part 1307 - Phthalates Content	Pass
10.	Tungsten Content Test	Report as is
11.	Canadian Products Containing Mercury Regulations SOR/2014-254 - Total Mercury Content Test	Pass

Remarks:

- (1) The results relate only to the items tested.
- (2) Samples are tested as received.
- (3) "\*" denotes the conclusion was drawn according to the client's specification.
- (4) The test item and samples were specified by the client
- (5) "Pass" means the measured result is within a limit, even when extended by expanded uncertainty. "Fail" means the measured result is beyond a limit, even when extended by expanded uncertainty. "Inconclusive" means the measured result can be within or beyond a limit when extended by expanded uncertainty. The confidence level of the expanded uncertainty for "pass", "Fail" and "Inconclusive" is 95%.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch  
TÜV SÜD Group

Prepared by:

Reviewed by:



<Cara Xiang>  
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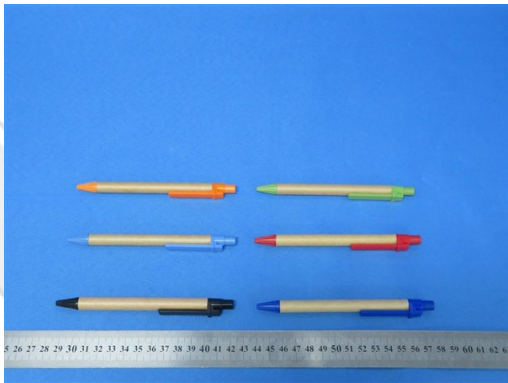

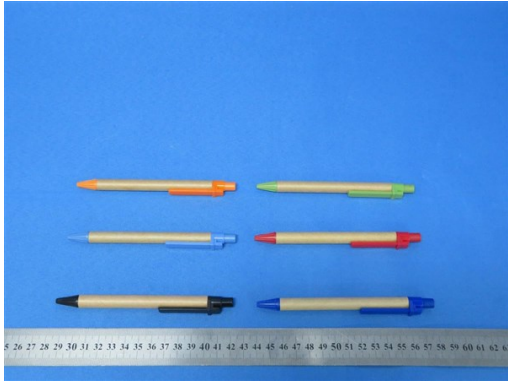
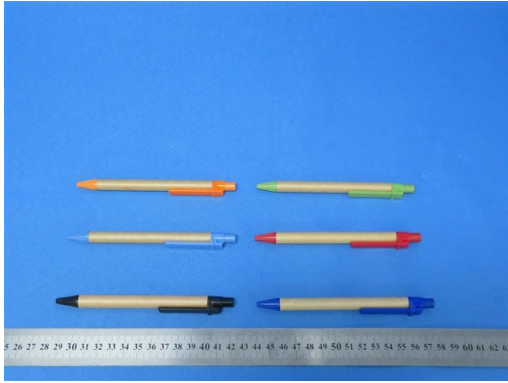
<Ken Chen>  
<Project Manager>

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1. Description of the Test Sample:

Sample Description	Ballpoint pen
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2. List of Materials as identified by the Laboratory:

T. No.	Sample No.	Colour and Description	Photograph
T1	001	Blue plastic (Pen)	
T2	002	Deep blue plastic (Pen)	
T3	003	Green plastic (Pen)	
T4	004	Black plastic pen)	
T5	005	Red plastic (Pen)	
T6	006	Orange plastic (Pen)	
T7	007	Blue ink (Pen ink)	
T8	008	Silvery metal (Tip of core)	
T9	009	Silvery metal (Ball of tip)	
T10	010	Brown paper board (Barrel)	

**3. Test Result**

**3.1 US California Proposition 65 - Total Cadmium Content Test - Substrate Materials**

Test method: Acid digestion/Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 001+002+003	Sample 004+005+006	Sample 008	
Cadmium	N.D.	N.D.	N.D.	<75
<b>Conclusion</b>	Pass	Pass	Pass	-

Test item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 009	
Cadmium	N.D.	<75
<b>Conclusion</b>	Pass	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg

**3.2 US California Proposition 65 - Total Cadmium Content Test - Paint and Similar Surface-Coating Materials**

Test method: Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test Item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 007	
Cadmium	N.D.	<75
<b>Conclusion</b>	Pass	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg

**3.3 US California Proposition 65 - Total Lead Content Test - Substrate Materials**

Test method: Acid digestion or Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 001+002+003	Sample 004+005+006	Sample 008	
Lead	N.D.	N.D.	N.D.	<100
<b>Conclusion</b>	Pass	Pass	Pass	-

Test Item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 009	
Lead	N.D.	<100
<b>Conclusion</b>	Pass	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg

**3.4 US California Proposition 65 - Total Lead Content Test - Paint and Similar Surface-Coating Materials**

Test method: Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test Item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 007	
Lead	N.D.	<90
<b>Conclusion</b>	Pass	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg

**3.5 Total Lead Content Test**

Consumer Products Containing Lead Regulations SOR/2018-83  
 Acid digestion / Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).  
 [Reporting Limit: 10.0mg/kg]

Analyte	Result [mg/kg]		
	Sample 001+002+003	Sample 004+005+006	Sample 007
Lead	N.D.	N.D.	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]	
	Sample 008	Sample 009
Lead	N.D.	N.D.
Limit	<90	
Conclusion	Pass	Pass

- Note 1. "mg/kg" denotes milligram per kilogram  
 2. "<" denotes less than  
 3. "N.D." denotes Not Detected with Detection Limit 10.0mg/kg

**3.6 Total Lead Content Test**

Surface Coating Materials Regulations SOR/2016-193  
 Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Analyte	Result [mg/kg]
	Sample 007
Lead	N.D.
Limit	<90
Conclusion	Pass

- Note 1. "mg/kg" denotes milligram per kilogram  
 2. "<" denotes less than  
 3. "N.D." denotes Not Detected with Detection Limit 10.0mg/kg

### 3.7 Phthalates Content

Test method: In-house method, solvent extracted and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting limit: 0.005%]

Test Items	CAS No.	Results [%]			Client's Specification [%]
		Sample 001+002 +003	Sample 004+005 +006	Sample 007	
Di-(2-ethylhexyl)-phthalat (DEHP)	117-81-7	N.D.	N.D.	N.D.	<0.1
Dibutylbenzylphthalat (DBP)	84-74-2	N.D.	N.D.	N.D.	<0.1
Diethyl phthalate (DEP)	84-66-2	N.D.	N.D.	N.D.	<0.1
Butylbenzylphthalat (BBP)	85-68-7	N.D.	N.D.	N.D.	<0.1
Di-iso-butylphthalat (DIBP)	84-69-5	N.D.	N.D.	N.D.	<0.1
Di-isononyl phthalate (DINP)	28553-12-0 , 68515-48-0	N.D.	N.D.	N.D.	<0.1
Di-isodecylphthalat (DIDP)	26761-40-0 , 68515-49-1	N.D.	N.D.	N.D.	<0.1
Di-n-octylphthalat (DNOP)	117-84-0	N.D.	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DnHP)	84-75-3	N.D.	N.D.	N.D.	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	N.D.	N.D.	N.D.	<0.1
Di-n-pentylphthalat (DNPP)	131-18-0	N.D.	N.D.	N.D.	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

Note 1. “%” denotes percentage by weight

2. “<” denotes less than

3. “N.D.” denotes Not Detected with Detection Limit 0.005%

**3.8 US California Proposition 65 - Phthalates Content**

Test method: In-house method, solvent extracted and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting limit: 0.005%]

Test Items	CAS No.	Results [%]			Client's Specification [%]
		Sample 001+002+003	Sample 004+005+006	Sample 007	
Dibutyl phthalate, (DBP)	84-74-2	N.D.	N.D.	N.D.	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	N.D.	N.D.	N.D.	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	N.D.	N.D.	N.D.	<0.1
Di-isodecyl phthalate, (DIDP)	26761-40-0 , 68515-49-1	N.D.	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DNHP)	84-75-3	N.D.	N.D.	N.D.	<0.1
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	N.D.	N.D.	N.D.	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

- Note 1. “%” denotes percentage by weight  
 2. “<” denotes less than  
 3. “N.D.” denotes Not Detected with Detection Limit 0.005%



**3.9 U.S. CFR Title 16 Part 1307 - Phthalates Content**

CPSC-CH-C1001-09.4 – Standard Operating Procedure for Determination of Phthalates  
 [Reporting Limit = 0.005%]

Phthalates	CAS No.	Results [%]			Limit [%]
		Sample 001+002+003	Sample 004+005+006	Sample 007	
Dibutyl phthalate, (DBP)	84-74-2	N.D.	N.D.	N.D.	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	N.D.	N.D.	N.D.	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	N.D.	N.D.	N.D.	<0.1
Diisobutylphthalate, (DIBP)	84-69-5	N.D.	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DHEXP)	84-75-3	N.D.	N.D.	N.D.	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	N.D.	N.D.	N.D.	<0.1
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	N.D.	N.D.	N.D.	<0.1
Di-n-pentyl phthalates (DPENP)	131-18-0	N.D.	N.D.	N.D.	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

- Note 1. “%” denotes percentage by weight  
 2. “<” denotes less than  
 3. “N.D.” denotes Not Detected with Detection Limit 0.005%



**3.10 Tungsten Content Test**

Test method: EPA 3050B:1996, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test Item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 008	
Tungsten	N.D.	-
<b>Conclusion</b>	Report as is	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg

**3.11 Total Mercury Content Test**

Products Containing Mercury Regulations SOR/2014-254

With reference to IEC 62321-4:2017, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).[Reporting Limit: 10mg/kg]

Test Item	Results [mg/kg]			Limit [mg/kg]
	Sample 001+002+003	Sample 004+005+006	Sample 007	
Mercury	N.D.	N.D.	N.D.	≤1000
<b>Conclusion</b>	Pass	Pass	Pass	-

Test Item	Results [mg/kg]			Limit [mg/kg]
	Sample 008	Sample 009	Sample 010	
Mercury	N.D.	N.D.	N.D.	≤1000
<b>Conclusion</b>	Pass	Pass	Pass	-

Note 1. "mg/kg" denotes milligram per kilogram

2. "≤" denotes less than or equal to

3. "N.D." denotes Not Detected with Detection Limit 10.0mg/kg

-- END OF TEST REPORT--