

TEST REPORT

Test Report # 22W-007110(A1) Date of Report Issue: July 20, 2022
Date of Sample Received: May 16, 2022 Pages: Page 1 of 23

CLIENT INFORMATION:

Company: Spector & Co.
Address: testing@spectorandco.com



SAMPLE INFORMATION:

Description: 12 OZ/360 ML DOUBLE-WALL VACCUM INSULATED STAINLESS STEEL MUG w/
Assortment: GRY/NVY
PO No.: PO 72224
Item No./Name: DW411
Item Class: 12 OZ/360 ML MEAN MUGGIN RONAN
Factory/Supplier: USS049
Country of Origin: China
Country of Distribution: Canada, United States
Testing Period: 05/18/2022-05/26/2022, 05/27/2022-06/22/2022

OVERALL RESULT:

PASS with information

Please refer to the following pages for test result summary and appropriate notes.

QIMA (HANGZHOU) TESTING CO., LTD.

Jeremy Xu
Chemical Laboratory Supervisor



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Test(s) marked with 'φ' was subcontracted to external laboratory.

The test result(s) and conclusion(s) in this report relate only to the sample(s) as received and method /regulation section(s) tested as described herein.

If it is not further specified in the report, the decision rule for stating conformity is based on the QIMA decision rule.

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TEST RESULTS SUMMARY:

At the request of the client, the following tests were conducted:

CONCLUSION	TEST(S) CONDUCTED
PASS	California Proposition 65, Total Lead in Paints and Surface Coatings
PASS	California Proposition 65, Total Lead in Substrate Materials
PASS	Canadian Surface Coating Materials Regulations SOR/2016-193, Total Lead and Mercury in Paints and Surface Coatings
PASS	Canadian Consumer Products Containing Lead Regulations (SOR/2018-83), Total Lead Content
PASS	California Proposition 65, Total Cadmium in Paints and Surface Coatings
PASS	California Proposition 65, Total Cadmium in Substrate Materials
Information only	Client's requirement, Total Nickel content
Information only	Client's Requirement, Total Tungsten content
PASS	Client's requirement, Bisphenol A content
PASS	CPSC 16 CFR 1307 Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates (DBP, BBP, DEHP, DINP, DHEXP / DnHP, DCHP, DIBP, DPENP)
PASS	California Proposition 65, Phthalates (DBP, BBP, DEHP, DINP, DIDP, DnHP)
PASS	Client's Requirement, Phthalates content
PASS	FDA 21 CFR 175.300, Resinous and Polymeric Coatings
PASS	FDA 21 CFR 177.1210, Closures with Sealing Gaskets
PASS	FDA 21 CFR 177.2600, Rubber
PASS	FDA 21 CFR 180.22 and 181.32, Acrylonitrile/Styrene Copolymers
PASS	FDA GRAS Specifications, Total Chromium in Stainless Steel Food Containers



DETAILED RESULTS:

California Proposition 65, Total Lead in Paints and Surface Coatings

Test Method: CPSC-CH-E1003-09.1

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+8	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	ND	---	---	---	---	90
Conclusion	PASS	---	---	---	---	

Note:

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:

The specification is quoted from client's requirement.



DETAILED RESULTS:

California Proposition 65, Total Lead in Substrate Materials

Test Method: CPSC-CH-E1001-08.3 (Metal), CPSC-CH-E1002-08.3 (Non-Metal)
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	2	4	5	6+7	10	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	ND	ND	ND	ND	ND	100
Conclusion	PASS	PASS	PASS	PASS	PASS	

Note:

mg/kg =Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit =15 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:

The specification is quoted from client’s requirement.



DETAILED RESULTS:

Canadian Surface Coating Materials Regulations SOR/2016-193, Total Lead and Mercury in Paints and Surface Coatings

Test Method: ASTM F963-17 Clause 8.3.1

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+8	---	---	---	---	Total Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	ND	---	---	---	---	90
Total Mercury (Hg)	ND	---	---	---	---	10
Conclusion	PASS	---	---	---	---	

Note:

mg/kg=Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit: Pb=15 mg/kg; Hg = 10 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



DETAILED RESULTS:

Canadian Consumer Products Containing Lead Regulations (SOR/2018-83), Total Lead Content

Test Method: ASTM F963-17 Clause 8.3.1

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+8	2	4	5	6+7	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	ND	ND	ND	ND	ND	90
Conclusion	PASS	PASS	PASS	PASS	PASS	

Specimen No.	10	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	ND	---	---	---	---	90
Conclusion	PASS	---	---	---	---	

Note:

mg/kg=Milligrams per kilogram)

LT = Less than

ND = Not detected (Reporting Limit = 15 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



DETAILED RESULTS:

California Proposition 65, Total Cadmium in Paints and Surface Coatings

Test Method: ASTM F963-17 Clause 8.3.1

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+8	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Cadmium (Cd)	ND	---	---	---	---	75
Conclusion	PASS	---	---	---	---	

Note:

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:

The specification is quoted from client's requirement.



DETAILED RESULTS:

California Proposition 65, Total Cadmium in Substrate Materials

Test Method: ASTM F963-17 Clause 8.3.1

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	2	4	5	6+7	10	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Cadmium (Cd)	ND	ND	ND	ND	ND	75
Conclusion	PASS	PASS	PASS	PASS	PASS	

Note:

mg/kg =Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:

The specification is quoted from client's requirement.



DETAILED RESULTS:

Client's requirement, Total Nickel content

Test Method: US EPA 3052:1996 & US EPA 6010D:2014
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	2+4	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Nickel (Ni)	71222	---	---	---	---	
Conclusion	Information only	---	---	---	---	

Note:

mg/kg = Milligrams per kilogram

ND = Not detected (report limit = 30 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



DETAILED RESULTS:

Client's Requirement, Total Tungsten content

Test Method: US EPA 3052:1996 & US EPA 6010D:2014
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	2+4	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Tungsten (W)	59	---	---	---	---	
Conclusion	Information only	---	---	---	---	

Note:

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.



DETAILED RESULTS:

Client's requirement, Bisphenol A content

Test Method: In-House Method

Analytical Method: Liquid Chromatography-Mass Spectrometer Mass Spectrometer (LC-MS/MS)

Specimen No.		1	5	6	7	Client's limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Bisphenol A (BPA)	80-05-7	ND	ND	ND	ND	Not Detected
Conclusion		PASS	PASS	PASS	PASS	

Specimen No.		8	---	---	---	Client's limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Bisphenol A (BPA)	80-05-7	ND	---	---	---	Not Detected
Conclusion		PASS	---	---	---	

Note:

mg/kg=milligram per kilogram

ND=Not Detected (Reporting limit = 1.0mg/kg)



DETAILED RESULTS:

CPSC 16 CFR 1307 Prohibition of Children’s Toys and Child Care Articles Containing Specified Phthalates (DBP, BBP, DEHP, DINP, DHEXP / DnHP, DCHP, DIBP, DPENP)

Test Method: CPSC-CH-C1001-09.4
 Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.		1+8	5	6+7	10	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	ND	ND	1000
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	ND	ND	1000
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	ND	ND	1000
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	ND	ND	ND	1000
Di-n-hexyl phthalate (DHEXP / DnHP)	84-75-3	ND	ND	ND	ND	1000
Dicyclohexyl phthalate (DCHP)	84-61-7	ND	ND	ND	ND	1000
Diisobutyl phthalate (DIBP)	84-69-5	ND	ND	ND	ND	1000
Di-n-pentyl phthalate (DPENP)	131-18-0	ND	ND	ND	ND	1000
Conclusion		PASS	PASS	PASS	PASS	

Note:
 mg/kg = Milligrams per kilogram
 LT = Less than
 ND = Not detected (Reporting Limit = 150 mg/kg)
 Composite results are based on specimen of least mass resulting in highest potential concentration.



DETAILED RESULTS:

California Proposition 65, Phthalates (DBP, BBP, DEHP, DINP, DIDP, DnHP)

Test Method: CPSC-CH-C1001-09.4

Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.		1+8	5	6+7	10	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	ND	ND	1000
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	ND	ND	1000
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	ND	ND	1000
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	ND	ND	ND	1000
Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	ND	ND	ND	1000
Di-n-hexyl phthalate (DnHP)	84-75-3	ND	ND	ND	ND	1000
Conclusion		PASS	PASS	PASS	PASS	

Note:

mg/kg (Milligrams per kilogram) = 0.0001 % w/w (Percent by weight)

LT = Less than

ND = Not detected (Reporting Limit = 150 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:

The specification is quoted from client's requirement.



DETAILED RESULTS:

Client's Requirement, Phthalates content

Test Method: CPSC-CH-C1001-09.4
 Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.		1+8	5	6+7	10	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	ND	ND	1000
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	ND	ND	1000
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	ND	ND	1000
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	ND	ND	ND	1000
Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	ND	ND	ND	1000
Di-n-hexyl phthalate (DHEXP / DnHP)	84-75-3	ND	ND	ND	ND	1000
Di-n-octyl phthalate (DNOP)	117-84-0	ND	ND	ND	ND	1000
Diethyl phthalate (DEP)	84-66-2	ND	ND	ND	ND	1000
Diisobutyl phthalate (DIBP)	84-69-5	ND	ND	ND	ND	1000
Dicyclohexyl phthalate (DCHP)	84-61-7	ND	ND	ND	ND	1000
Di-n-pentyl phthalate (DPENP/DnPP)	131-18-0	ND	ND	ND	ND	1000
Conclusion		PASS	PASS	PASS	PASS	

Note:
 mg/kg (Milligrams per kilogram) = 0.0001 % w/w (Percent by weight)
 LT = Less than
 ND = Not detected (Reporting Limit = 150 mg/kg)
 Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:
 The specification is quoted from client's requirement.



DETAILED RESULTS:

FDA 21 CFR 175.300, Resinous and Polymeric Coatings

Test Method: FDA 21 CFR 175.300

Specimen No.			3	RL	Limit
Test Item	Test Condition		Result		
	Temp.	Duration			
Distilled water extractive (mg/in ²)	Fill boiling	Cooling to 100°F	ND	0.1	18
n-Heptane extractive (mg/in ²)	120°F	0.25 hours	ND	0.1	18
8% Ethanol extractive (mg/in ²)	Fill boiling	Cooling to 100°F	ND	0.1	18
Conclusion			PASS		

Specimen No.			9	RL	Limit
Test Item	Test Condition		Result		
	Temp.	Duration			
Distilled water extractive (mg/in ²)	Fill boiling	Cooling to 100°F	ND	0.1	18
n-Heptane extractive (mg/in ²)	120°F	0.25 hours	ND	0.1	18
8% Ethanol extractive (mg/in ²)	Fill boiling	Cooling to 100°F	ND	0.1	18
Conclusion			PASS		

Note:

Temp. = Temperature

°F = Degree Fahrenheit

mg/in² = Milligrams per square inch

LT = Less than

ND = Not detected. Result value is less than reporting limit (RL).

Remark:

The specification is quoted from 21 CFR 175.300 (c) (3).



DETAILED RESULTS:

FDA 21 CFR 177.1210, Closures with Sealing Gaskets

Test Method: FDA 21 CFR 177.1210

Specimen No.			6	RL	Limit
Test Item	Test Condition		Result		
	Temp.	Duration			
Distilled water extractive (mg/kg)	Fill boiling	Cooling to 100°F	ND	10	50
n-Heptane extractive (mg/kg)	120°F	0.25hours	ND	10	50
8% Ethanol extractive (mg/kg)	Fill boiling	Cooling to 100°F	ND	10	50
Conclusion			PASS		

Note:

Temp. = Temperature

°F = Degree Fahrenheit

ppm (Parts per million) = mg/kg (Milligrams per kilogram)

LT = Less than

ND = Not detected. Result value is less than reporting limit (RL).

Remark:

The specification is quoted from 21 CFR 177.1210 Table 2 Section 3.



DETAILED RESULTS:

FDA 21 CFR 177.2600, Rubber

Test Method: FDA 21 CFR 177.2600

Specimen No.			7	RL	Limit
Test Item	Test Condition		Result		
	Temp.	Duration			
Distilled water extractive (mg/in ²)	Reflux	First 7 hours	ND	2	20
Distilled water extractive (mg/in ²)	Reflux	Succeeding 2 hours	ND	0.1	1
n-Hexane extractive (mg/in ²)	Reflux	First 7 hours	21	15	175
n-Hexane extractive (mg/in ²)	Reflux	Succeeding 2 hours	2.3	0.4	4
Conclusion			PASS		

Note:

Temp. = Temperature

mg/in² = Milligrams per square inch

LT = Less than

ND = Not detected. Result value is less than reporting limit (RL).

Remark:

The specification is quoted from 21 CFR 177.2600 (e) and 177.2600 (f).



DETAILED RESULTS:

FDA 21 CFR 180.22 and 181.32, Acrylonitrile/Styrene Copolymers

Test Method: FDA 21 CFR 180.22 and 181.32
 Analytical Method: Headspace-Gas Chromatography with Mass Spectrometry

Acrylonitrile Monomers:

Specimen No.		5		Result	RL	Limit
Test Simulant	Test Condition		Result			
	Temp.	Duration				
3% Acetic acid extractive (mg/in ²)	120°F	2 hours	ND	0.001	0.003	
Conclusion			PASS			

Note:
 Temp. = Temperature
 °F = Degree Fahrenheit
 mg/in² = Milligrams per square inch
 LT = Less than
 ND = Not detected. Result value is less than reporting limit (RL).

Remark:
 The specification is quoted from 21 CFR 181.32 (b) (3).



DETAILED RESULTS:

FDA GRAS Specifications, Total Chromium in Stainless Steel Food Containers

Test Method: SN/T 2718-2010

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	4	---	---	---	---	Limit (% m/m)
Test Item	Result (% m/m)	Result (% m/m)	Result (% m/m)	Result (% m/m)	Result (% m/m)	
Total Chromium (Cr)	18.37	---	---	---	---	GT 16
Conclusion	PASS	---	---	---	---	

Note:

% m/m = Percent by mass

GT = Greater than

Remark:

The limit is quoted from ANSI/NSF 51-1997 Section 7.1.2.



SPECIMEN DESCRIPTION:

Specimen No.	Specimen Description	Location
1	Blue/black/transparent coating	Exterior (blue style)
2	Silvery metal	Exterior (blue style)
3	Blue/black/transparent coated silvery metal	Exterior (blue style)
4	Silvery metal	Interior (blue style)
5	Transparent plastic	Lid (blue style)
6	Black soft plastic	Seal ring (blue style)
7	Translucent soft plastic	Seal cap (blue style)
8	Dark grey/black/transparent coating	Exterior (black style)
9	Dark grey/black/transparent coated silvery metal	Exterior (black style)
10	Black soft plastic	Mat



SAMPLE PHOTO:



SAMPLE PHOTO:



QIMA (HANGZHOU) TESTING CO., LTD. ♦ 4-5/F A2 BLDG NO. 1213 HUOJU SOUTH ROAD PUYAN STREET BINJIANG DISTRICT HANGZHOU CHINA

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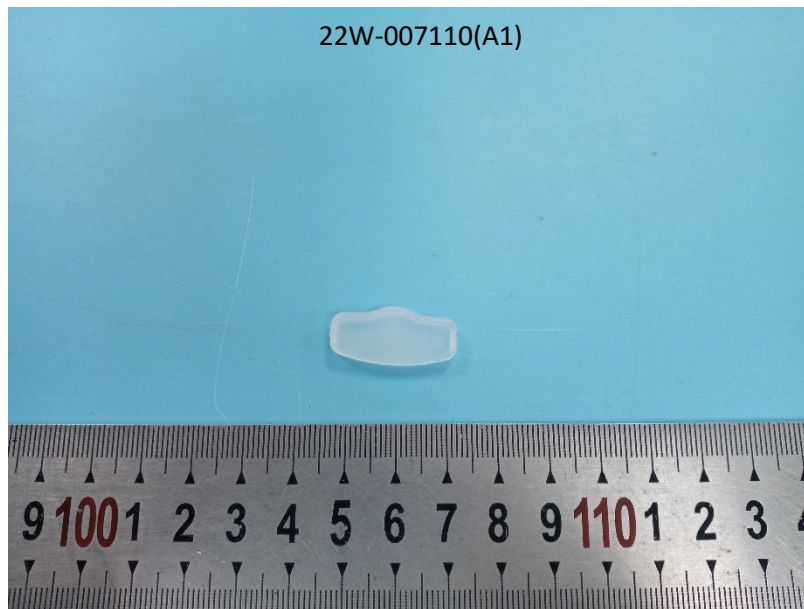
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SAMPLE PHOTO:



-End Report-

