

## TEST REPORT

Test Report # 23W-009494(A1) Date of Report Issue: August 2, 2023  
Date of Sample Received: July 19, 2023 Pages: Page 1 of 18

### CLIENT INFORMATION:

Company: Polyconcept GBS  
Recipient: Kathy Lu  
Recipient Email: kathy.lu@polyconceptgbs.com



### SAMPLE INFORMATION:

Description: Arctic Zone® Titan Thermal HP® Mug 14oz w/ FSC GB  
Arctic Zone® Titan Thermal HP® Copper Tumbler 30oz  
Article No.: 1626-47GY/BK/WH/NY Purchase Order Number: 1930217 1939956  
1625-67BK/NY/WH 1939958 1935110  
Factory No.: 10942 Toy Co./Agency: -  
Vendor No.: 10531 Country of Origin: China  
Country of Distribution: Canada, United States Labeled Age Grade: -  
Quantity Submitted: 6 PCS PER STYLE Requested Age Grade: -  
Testing Period: 07/21/2023-07/31/2023 Tested Age Grade: -

### OVERALL RESULT:

**PASS**

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 RESULTS SUMMARY:**

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

CONCLUSION	TEST(S) CONDUCTED
PASS	CPSIA Section 101 & 16 CFR 1303, Total Lead in Paints and Surface Coatings
PASS	California Proposition 65, Total Lead in Paints and Surface Coatings
PASS	California Proposition 65, Total Lead in Substrate Materials
PASS	Canadian Consumer Products Containing Lead Regulations (SOR/2018-83), Total Lead Content
PASS	Client’s requirement, Bisphenol A content
PASS	Client’s Requirement, Phthalates content
PASS	FDA GRAS Specifications, Total Chromium in Stainless Steel Food Containers
PASS	Client’s Requirement, Leachable Lead and Cadmium from Food Contact Articles – Lip and Rim
PASS	FDA 21 CFR 177.1210, Closures with Sealing Gaskets
PASS	FDA 21 CFR 177.2420, Polyester Resins, Cross-Linked
PASS	FDA 21 CFR 180.22 and 181.32, Acrylonitrile/Styrene Copolymers



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**DETAILED RESULTS:**

**CPSIA Section 101 & 16 CFR 1303, Total Lead in Paints and Surface Coatings**

Test Method: CPSC-CH-E1003-09.1  
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	4+5	6+10	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	32	24	---	---	---	<b>90</b>
<b>Conclusion</b>	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.



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**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.	4+5	6+10	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	32	24	---	---	---	<b>90</b>
<b>Conclusion</b>	PASS	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.	1+2	3	9	---	---	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	---	---	<b>100</b>
<b>Conclusion</b>	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 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+2	3	4+5	6+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	32	24	---	90
<b>Conclusion</b>	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.



**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	2	9	---	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	---	<b>Not Detected</b>
<b>Conclusion</b>	PASS	PASS	PASS	---	

**Note:**

mg/kg=milligram per kilogram

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



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**DETAILED RESULTS:**

**Client's Requirement, Phthalates content**

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

Specimen No.		1+2	4+5	6+10	9	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-octyl phthalate (DnOP)	117-84-0	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
<b>Conclusion</b>		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:**

**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.	3	---	---	---	---	Limit (% m/m)
Test Item	Result (% m/m)	Result (% m/m)	Result (% m/m)	Result (% m/m)	Result (% m/m)	
Total Chromium (Cr)	19.71	---	---	---	---	<b>GT 16</b>
<b>Conclusion</b>	PASS	---	---	---	---	

*Note:*  
% m/m = Percent by mass  
GT = Greater than

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



**DETAILED RESULTS:**

**Client’s Requirement, Leachable Lead and Cadmium from Food Contact Articles – Lip and Rim**

Test Method: ASTM C927-80(Reapproved 2019)  
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	11-A	11-B	11-C	11-D	11-E	11-F	Average (mg/L)	Limit (mg/L)
Test Item	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)		
Volume of acid used (mL)	300	300	300	300	300	300		
Leachable Lead (Pb)	ND	ND	ND	ND	ND	ND	NA	<b>4.0</b>
Leachable Cadmium (Cd)	ND	ND	ND	ND	ND	ND	NA	<b>0.4</b>
<b>Conclusion</b>	PASS	PASS	PASS	PASS	PASS	PASS	NA	

Specimen No.	12-A	12-B	12-C	12-D	12-E	12-F	Average (mg/L)	Limit (mg/L)
Test Item	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)		
Volume of acid used (mL)	300	300	300	300	300	300		
Leachable Lead (Pb)	ND	ND	ND	ND	ND	ND	NA	<b>4.0</b>
Leachable Cadmium (Cd)	ND	ND	ND	ND	ND	ND	NA	<b>0.4</b>
<b>Conclusion</b>	PASS	PASS	PASS	PASS	PASS	PASS	NA	

**Note:**  
 mL = Millilitres  
 NA = Not applicable  
 LT = Less than  
 ND = Not detected (Reporting Limit: Pb=0.2 mg/L, Cd=0.02 mg/L)

**Remark:**  
 The limit is quoted from Society of Glass & Ceramic Decorated Products.



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**DETAILED RESULTS:**

**Client’s Requirement, Leachable Lead and Cadmium from Food Contact Articles – Lip and Rim**

Test Method: ASTM C927-80(Reapproved 2019)  
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	13-A	13-B	13-C	13-D	13-E	13-F	Average (mg/L)	Limit (mg/L)
Test Item	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)		
Volume of acid used (mL)	300	300	300	300	300	300		
Leachable Lead (Pb)	ND	ND	ND	ND	ND	ND	NA	<b>4.0</b>
Leachable Cadmium (Cd)	ND	ND	ND	ND	ND	ND	NA	<b>0.4</b>
<b>Conclusion</b>	PASS	PASS	PASS	PASS	PASS	PASS	NA	

Specimen No.	14-A	14-B	14-C	14-D	14-E	14-F	Average (mg/L)	Limit (mg/L)
Test Item	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)		
Volume of acid used (mL)	300	300	300	300	300	300		
Leachable Lead (Pb)	ND	ND	ND	ND	ND	ND	NA	<b>4.0</b>
Leachable Cadmium (Cd)	ND	ND	ND	ND	ND	ND	NA	<b>0.4</b>
<b>Conclusion</b>	PASS	PASS	PASS	PASS	PASS	PASS	NA	

**Note:**  
 mL = Millilitres  
 NA = Not applicable  
 LT = Less than  
 ND = Not detected (Reporting Limit: Pb=0.2 mg/L, Cd=0.02 mg/L)

**Remark:**  
 The limit is quoted from Society of Glass & Ceramic Decorated Products.



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**DETAILED RESULTS:**

**FDA 21 CFR 177.1210, Closures with Sealing Gaskets**

Test Method: FDA 21 CFR 177.1210

Specimen No.			7	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	0.25 hours	ND	10	50
8% Ethanol extractive (mg/kg)	Fill boiling	Cooling to 100°F	ND	10	50
<b>Conclusion</b>			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 177.1210, Closures with Sealing Gaskets**

Test Method: FDA 21 CFR 177.1210

Specimen No.			8	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	0.25 hours	ND*	10	50
8% Ethanol extractive (mg/kg)	Fill boiling	Cooling to 100°F	ND	10	50
<b>Conclusion</b>			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.

\*The chloroform-soluble extractive analysis was conducted.



**DETAILED RESULTS:**

**FDA 21 CFR 177.2420, Polyester Resins, Cross-Linked**

Test Method: FDA 21 CFR 177.2420

Specimen No.		2		RL	Limit
Test Item	Test Condition		Result		
	Temp.	Duration			
Distilled water extractive (mg/in <sup>2</sup> )	150°F	2 hours	ND	<b>0.01</b>	<b>0.1</b>
<b>Conclusion</b>			PASS		

*Note:*

Temp. = Temperature

°F = Degree Fahrenheit

mg/in<sup>2</sup> = 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 177.2420 (c).



**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.			1	RL	Limit
Test Simulant	Test Condition		Result		
	Temp.	Duration			
3% Acetic acid extractive (mg/in <sup>2</sup> )	120°F	2 hours	ND	<b>0.001</b>	<b>0.003</b>
<b>Conclusion</b>			PASS		

*Note:*  
 Temp. = Temperature  
 °F = Degree Fahrenheit  
 mg/in<sup>2</sup> = 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).



**SPECIMEN DESCRIPTION:**

Specimen No.	Specimen Description	Location
1	Transparent plastic	Main lid (1625-67BK/NY/WH/1626-47GY/BK/WH/NY)
2	Transparent plastic	Slider lid (1625-67BK/NY/WH/1626-47GY/BK/WH/NY)
3	Silvery metal	Interior/exterior (1625-67BK/NY/WH/1626-47GY/BK/WH/NY)
4	Black coating	Main body (1625-67BK/1626-47BK)
5	Navy coating	Main body (1625-67NY/1626-47NY)
6	White coating	Main body (1625-67WH/1626-47WH)
7	Translucent soft plastic	Sealing ring (1625-67BK/NY/WH)
8	Translucent soft plastic	Sealing ring (1626-47GY/BK/WH/NY)
9	Translucent soft plastic	Sealing ring (1625-67BK/NY/WH/1626-47GY/BK/WH/NY)
10	Grey coating	Main body (1626-47GY)
11	Grey coated silvery metal	Lip (1626-47GY)
12	Black coated silvery metal	Lip (1626-47BK)
13	White coated silvery metal	Lip (1626-47WH)
14	Navy coated silvery metal	Lip (1626-47NY)



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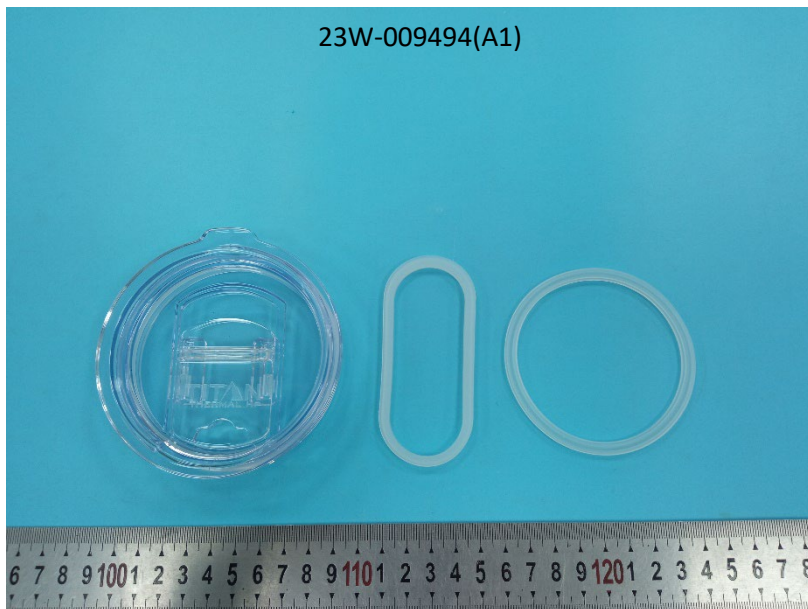
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**SAMPLE PHOTO:**



-End Report-



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