

Test Report

Report No.: AGC05794180801-002

Date: Aug.27, 2018

Page 1 of 9

Applicant:

Address:

Report on the submitted sample(s) said to be:

Sample Name: Logo Light Up Tumbler

Sample Model: 62122

Sample Received Date: Aug.21, 2018

Testing Period: Aug.21, 2018 to Aug.27, 2018

Test Requested: Please refer to following page(s).

Test Method: Please refer to following page(s).

Test Result: Please refer to following page(s).

Approved by: 

Liulinwen, Lewis

Technical Director



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

Test Report

Report No.: AGC05794180801-002

Date: Aug.27, 2018

Page 2 of 9

Test Requested:

Conclusion

As specified by client, to determine the Pb, Cd, Hg, Cr⁶⁺, PBBs, PBDEs content in the submitted sample in accordance with EU RoHS Directive 2011/65/EU(RoHS) and its amendment directives on XRF and Chemical Method.

Pass

Test Methods:

A: Screening by X-ray Fluorescence Spectrometry (XRF) :With reference to IEC 62321-3-1:2013 Ed 1.0 Screening – Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry

B: Chemical test:

Test Item	Test Method	Measuring Instrument	MDL
Cadmium (Cd)	IEC 62321-5:2013 Ed 1.0	ICP-OES	2 mg/kg
Lead (Pb)	IEC 62321-5:2013 Ed 1.0	ICP-OES	2 mg/kg
Mercury (Hg)	IEC 62321-4:2017 Ed 1.1	ICP-OES	2 mg/kg
Non-metal Hexavalent Chromium (Cr ⁶⁺)	IEC 62321-7-2:2017 Ed 1.0	UV-Vis	1 mg/kg
Metal Hexavalent Chromium (Cr ⁶⁺)	IEC 62321-7-1:2015 Ed 1.0	UV-Vis	/
PBBs/PBDEs	IEC 62321-6:2015 Ed 1.0	GC-MS	5 mg/kg

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

AGC

Attestation of Global Compliance Std. & Tech.

No.18 C

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

Test Report

Report No.: AGC05794180801-002

Date: Aug.27, 2018

Page 3 of 9

Test Results:
A、EU RoHS Directive 2011/65/EU and its amendment directives on XRF

Seq. No.	Tested Part(s)	Results(mg/kg)				
		Cd	Pb	Hg	Cr	Br
1	Black coating(Cup shell)	BL	BL	BL	BL	BL
2	White plastic cup(Cup shell)	BL	BL	BL	BL	BL
3	Black plastic hand cover(Cup shell)	BL	BL	BL	BL	BL
4	White rubber ring(Cup shell)	BL	BL	BL	BL	BL
5	Black plastic base seat(Base)	BL	BL	BL	BL	BL
6	White seal ring(Base)	BL	BL	BL	BL	BL
7	Silver metal clip(Base)	BL	BL	BL	BL	-
8	Thumb screw(Base)	BL	BL	BL	BL	-
9	Silver screw(Base)	BL	BL	BL	X*	-
10	Button battery(Base)	BL	BL	BL	X*	BL
11	Black rubber button(Base)	BL	BL	BL	BL	BL
12	Black wire jacket(Circuit board)	BL	BL	BL	BL	BL
13	Wire core(Circuit board)	BL	BL	BL	BL	-
14	Tin solder(Circuit board)	BL	BL	BL	BL	-
15	Bare chip IC(Circuit board)	BL	BL	BL	BL	BL
16	Chip resistor(Circuit board)	BL	BL	BL	BL	BL
17	Red wire jacket(Circuit board)	BL	BL	BL	BL	BL
18	White plastic button(Switch)	BL	BL	BL	BL	BL
19	Grey plastic shell(Switch)	BL	BL	BL	BL	BL
20	Black plastic base seat(Switch)	BL	BL	BL	BL	BL
21	Pin(Sensor)	BL	BL	BL	BL	-
22	Sensor body(Sensor)	BL	BL	BL	BL	BL
23	Metal Cup(Cup)	BL	BL	BL	X*	-
24	Black rubber ring(Cup)	BL	BL	BL	X*	BL

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.



Attestation of Global Compliance Std. & Tech.

No.18 C

 Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
 Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

THIS DOCUMENT WAS REDACTED WITH THE PRODUCT TIP REDACTION TOOL ON 2018-09-06. AT THE TIME OF GENERATING THE DOCUMENT THE ORIGINAL DOCUMENT WAS AVAILABLE ONLY BY THE DOCUMENT OWNER.

Test Report

Report No.: AGC05794180801-002
Date: Aug.27, 2018

Page 4 of 9

Seq. No.	Tested Part(s)	Results(mg/kg)				
		Cd	Pb	Hg	Cr	Br
25	Transparent tape(Light board)	BL	BL	BL	BL	BL
26	Chip LED(Light board)	BL	BL	BL	BL	BL
27	Tin solder(Light board)	BL	BL	BL	BL	-
28	Chip resistor(Light board)	BL	BL	BL	BL	BL
29	Light board(Light board)	BL	BL	BL	BL	BL
30	Yellow wire jacket(Light board)	BL	BL	BL	BL	BL
31	Red wire jacket(Light board)	BL	BL	BL	X*	BL
32	Wire core(Light board)	BL	BL	BL	BL	-

Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	$BL \leq 70-3\sigma < X$ $< 130+3\sigma \leq OL$	$BL \leq 70-3\sigma < X$ $< 130+3\sigma \leq OL$	$BL \leq 50-3\sigma < X$ $< 150+3\sigma \leq OL$
Pb	mg/kg	$BL \leq 700-3\sigma < X$ $< 1300+3\sigma \leq OL$	$BL \leq 700-3\sigma < X$ $< 1300+3\sigma \leq OL$	$BL \leq 500-3\sigma < X$ $< 1500+3\sigma \leq OL$
Hg	mg/kg	$BL \leq 700-3\sigma < X$ $< 1300+3\sigma \leq OL$	$BL \leq 700-3\sigma < X$ $< 1300+3\sigma \leq OL$	$BL \leq 500-3\sigma < X$ $< 1500+3\sigma \leq OL$
Cr	mg/kg	$BL \leq 700-3\sigma < X$	$BL \leq 700-3\sigma < X$	$BL \leq 500-3\sigma < X$
Br	mg/kg	$BL \leq 300-3\sigma < X$	-	$BL \leq 250-3\sigma < X$

Note: BL= Below Limit

OL= Over limited

X= Inconclusive

“-“= Not regulated

*= Scanning by XRF and detected by chemical method. The test results of chemical method please refer to next pages.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.


Attestation of Global Compliance Std. & Tech.
No.18 C
 Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
 Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

Test Report

Report No.: AGC05794180801-002

Date: Aug.27, 2018

Page 5 of 9

Remark:

- i Results were obtained by XRF for primary scanning, and further chemical testing by ICP (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the above warning value according to IEC 62321-3-1:2013 Ed 1.0.
- ii The XRF scanning test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
- iii The maximum permissible limit is quoted from RoHS directive 2011/65/EU:

RoHS Restricted Substances	Maximum Concentration Value (mg/kg) (by weight in homogenous materials)
Cadmium (Cd)	100
Lead (Pb)	1000
Mercury (Hg)	1000
Hexavalent Chromium (Cr(VI))	1000
Polybrominated biphenyls (PBBs)	1000
Polybrominated diphenylethers (PBDEs)	1000

Disclaimers:

This XRF Scanning report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes.

The result shown in this XRF scanning report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

AGC

Attestation of Global Compliance Std. & Tech.

No.18 C

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

Test Report

Report No.: AGC05794180801-002

Date: Aug.27, 2018

Page 6 of 9

B、 The Test Results of Chemical Method:

1) The Test Results of non-metal Cr⁶⁺

Test Item(s)	Unit	Result(s)			Limit
		10	24	31	
Hexavalent Chromium(Cr ⁶⁺)	mg/kg	N.D.	N.D.	N.D.	1000

Note: N.D. = Not Detected or less than MDL
MDL = Method Detection Limit

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

AGC

Attestation of Global Compliance Std. & Tech.

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

No.18 C

Test Report

Report No.: AGC05794180801-002
Date: Aug.27, 2018

Page 7 of 9

2)The Test Results of metal Cr⁶⁺

Test Item(s)	MDL	Result(s)		Limit
		9	23	
Hexavalent Chromium (Cr ⁶⁺)	See note	Negative	Negative	#

Note:

- Negative = Absence of Cr(VI) on the tested areas
- MDL = Method Detection Limit
- Boiling-water-extraction:

Number	Colorimetric result (Cr(VI) concentration)	Qualitative result
1	The sample solution is < the 0,10 µg/cm ² equivalent comparison standard solution	The sample is negative for Cr(VI) – The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
2	The sample solution is ≥ the 0,10 µg/cm ² and ≤ the 0,13 µg/cm ² equivalent comparison standard solutions	The result is considered to be inconclusive – Unavoidable coating variations may influence the determination.
3	The sample solution is > the 0,13 µg/cm ² equivalent comparison standard solution	The sample is positive for Cr(VI) – The Cr(VI) concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

- # = Negative indicates the absence of Cr(VI) on the tested areas concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
- Uncertainty indicates the absence of Cr(VI) on the tested areas unavoidable coating variations may influence the determination.
- Positive indicates the presence of Cr(VI) on the tested areas concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).
- Storage conditions and production date of the tested sample are unavailable and thus result of Cr(VI) represent status of the sample at the time of testing.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.


Attestation of Global Compliance Std. & Tech.
No.18 C

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
 Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

THIS DOCUMENT WAS REDACTED WITH THE PRODUCT TIP REDACTION TOOL ON 2018-09-06. AT THE TIME OF GENERATING THE ORIGINAL DOCUMENT WAS AVAILABLE ONLY BE MADE AVAILABLE BY THE DOCUMENT OWNER.

Test Report

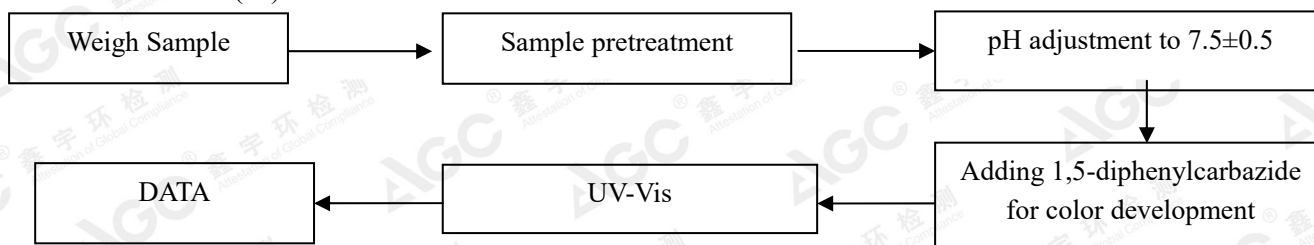
Report No.: AGC05794180801-002

Date: Aug.27, 2018

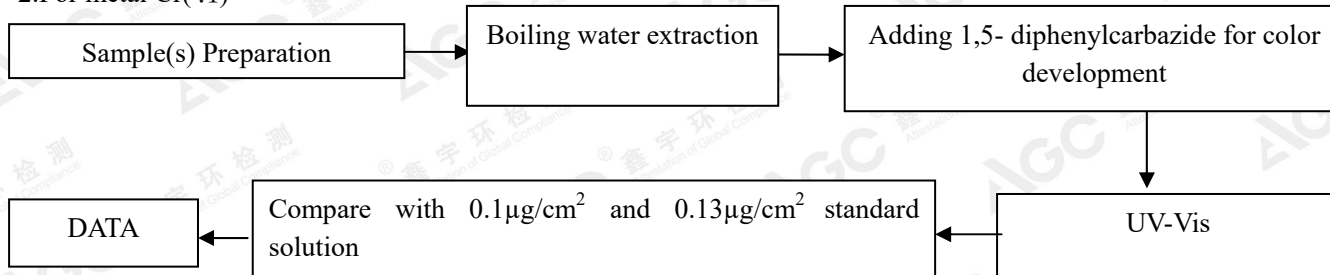
Page 8 of 9

Test Flow Chart

1.For non-metal Cr(VI)



2.For metal Cr(VI)



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

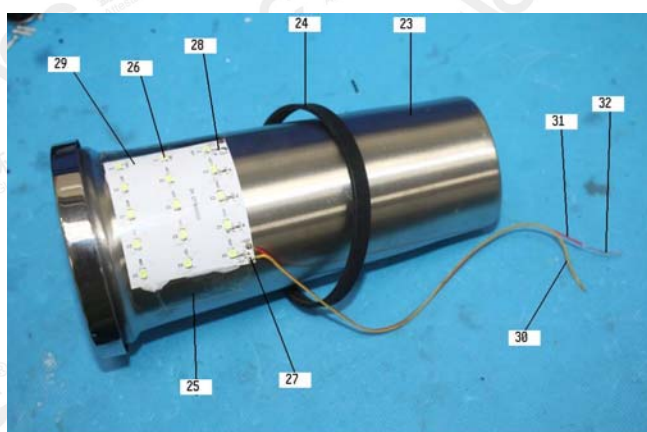
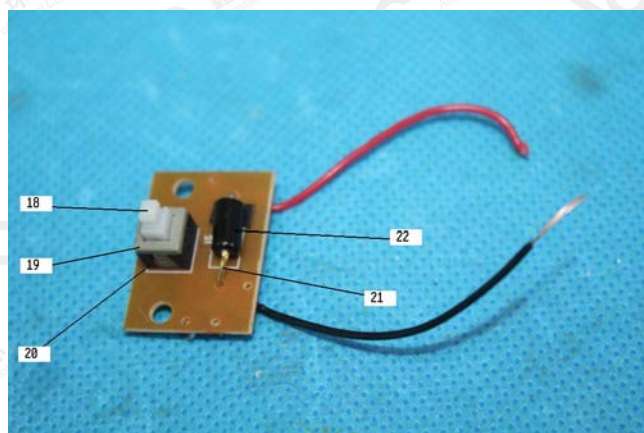
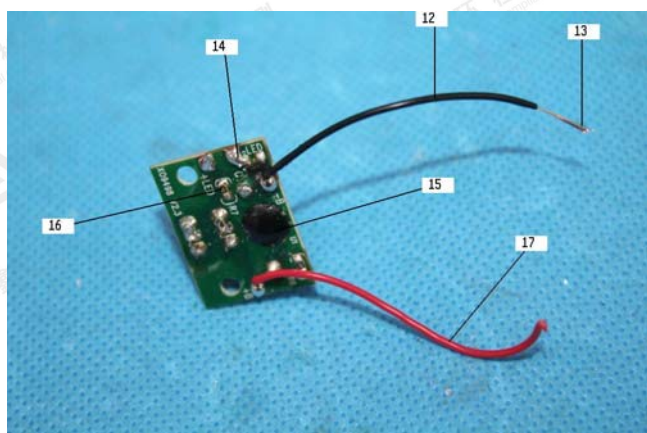
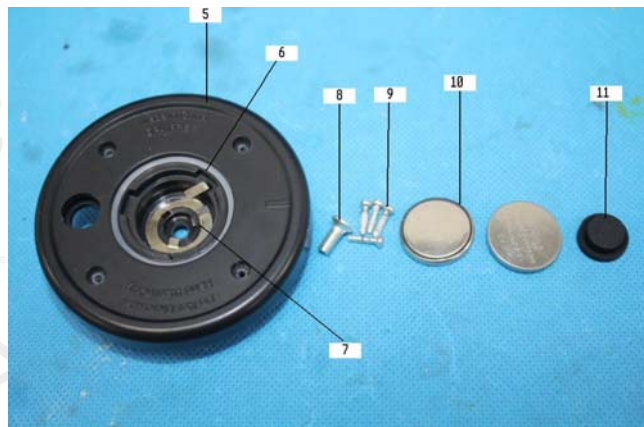
Test Report

Report No.: AGC05794180801-002

Date: Aug.27, 2018

Page 9 of 9

The photo of the sample



AGC05794180801-001

AGC authenticate the photo only on original report

*** End of Report ***

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

AGC

Attestation of Global Compliance Std. & Tech.

Tel: +86-755 8358 3833 Fax: +86-755 2531 6612 E-mail: agc01@agc-cert.com 400 089 2118
Add: Building 2, No.171, Meihua Road, Shangmeilin, Futian District, Shenzhen, Guangdong China

No.18 C