Test Report issued under the responsibility of:

TEST REPORT

Report reference No..... :	CCTI-2019062453R
Sample received date ..... :	Jun. 24, 2019
Testing period..... :	Jun. 24, 2019 - Jun. 27, 2019
Total number of pages..... :	8
Testing Laboratory name..... :	Shenzhen CCTI Technology Co., Ltd.
Address..... :	Room 301, 3rd Floor, Office Building, Fushan Industrial Zone, Qiaotou Community, Fuhai Street,Bao'an District,Shenzhen, China.
Applicant's name ..... :	Kaifeng City Beier Stainless Steel Ball Manufacturing Co., Ltd.
Address..... :	Zhazhai Village, Luowang Township, Xiangfu District, Kaifeng City.

Test Requested:		**Conclusion**
（1）	As specified by client, to screen Lead(Pb), Cadmium(Cd), Mercury(Hg), Chromium(Cr) and Bromine(Br) in the submitted sample(s) by XRF.	PASS
（2）	As specified by client, when screening results exceed the XRF screening limit in IEC62321-3-1:2013, further use of chemical methods are required to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium (Cr(VI)),Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs) in the submitted samples.	PASS
（3）	As specified by client, to test to test the Dibutyl phthalate(DBP), Bis(2 ethyl(hexyl)phthalate) (DEHP), Diisobutyl phthalate (DIBP), Benzyl butyl phthalate(BBP) in the submitted sample.	PASS

TRF Originator ..... :	CCTI Testing
Master TRF .....:	Dated 2018-03
Neto.....:	According to the RoHS Directive 2011/65/EU and Amendment (EU) 2015/863.

This test report is specially limited to the above client company and product model only. It may not be duplicated without prior written consent of CCTI Test.

Test item description .....:	plastic ball
Material……..……..:	PTFE
Trademark……:	N/A
Manufacturer's name .....:	Kaifeng City Beier Stainless Steel Ball Manufacturing Co., Ltd.
Address..... :	Zhazhai Village, Luowang Township, Xiangfu District, Kaifeng City.
Model and/or type reference……..:	N/A

※※※※※ For more detailed information, please refer to the next page ※※※※※

Testing procedure and testing location:

Testing Laboratory.....:	**Shenzhen CCTI Technology Co., Ltd.**
Address.....:	Room 301, 3rd Floor, Office Building, Fushan Industrial Zone, Qiaotou Community, Fuhai Street,Bao'an District, Shenzhen, China.
Date of Test.....:	Jun. 24, 2019 to Jun. 27, 2019
Tested by (name + signature).....:	Abby Long
Reviewed by (name + signature).....:	Jason Wang
Approved by (name + signature).....:	Corey Mao

Test Method:

A. Screening test by XRF spectroscopy

XRF screening limits in mg/kg for regulated elements according to IEC 62321-3-1:2013.

Element	Limit of IEC 62321-3-1:2013. Unit (mg/kg)		MDL	
	Polymers and metals	Composite material	Polymers	Other material
Pb	BL≤(700-3σ) <X <(1300+3σ) ≤OL	BL≤(500-3σ)<X <(1500+3σ) ≤OL	10 mg/kg	50 mg/kg
Cd	BL≤(70-3σ)<X <(130+3σ) ≤OL	LOD≤(50-3σ)<X <(150+3σ) ≤OL	10 mg/kg	50 mg/kg
Hg	BL≤(700-3σ)<X <(1300+3σ) ≤OL	BL≤(500-3σ)<X <(1500+3σ) ≤OL	10 mg/kg	50 mg/kg
Cr	BL≤(700-3σ)< X	BL≤(500-3σ)< X	10 mg/kg	50 mg/kg
Br	BL≤(300-3σ)< X	BL≤(250-3σ)< X	10 mg/kg	50 mg/kg

Note:

-BL = Under the XRF screening limit

-OL = Further chemical test will be conducted while result is above the screening limit

-X= The symbol “X” marks the region where further investigation is necessary

-3σ= The reproducibility of analytical instruments

-LOD= Detection limit

B. Chemical Test

Test Item(s)	Test Method	Measured Equipment(s)	MDL	Limit
Lead (Pb)	IEC 62321-5:2013 Ed.1.0	ICP-OES	2 mg/kg	1000 mg/kg
Cadmium (Cd)	IEC 62321-5:2013 Ed.1.0	ICP-OES	2 mg/kg	100 mg/kg
Mercury (Hg)	IEC 62321-4:2013 Ed.1.0	ICP-OES	2 mg/kg	1000 mg/kg
Hexavalent Chromium Cr(VI)	IEC 62321-7-1:2015 Ed.1.0	UV-VIS	/	1000 mg/kg
	IEC 62321-7-2:2017 Ed.1.0	UV-VIS	2 mg/kg	1000 mg/kg
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015 Ed.1.0	GC-MS	5 mg/kg	1000 mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015 Ed.1.0	GC-MS	5 mg/kg	1000 mg/kg
Phthalates	EN 14372:2004(E)	GC-MS	50mg/kg	1000 mg/kg

Test Results:

Tested Item(s)	Result Unit (mg/kg)	MDL Unit (mg/kg)	Limit Unit (mg/kg)
	1		
Lead (Pb)	N.D.	2	1000
Cadmium (Cd)	N.D.	2	100
Mercury (Hg)	N.D.	2	1000
Hexavalent Chromium (Cr(VI))	N.D.	2	1000
Polybrominated Biphenyls(PBBs)	N.D.	--	1000
Monobromobiphenyl	N.D.	5	--
Dibromobiphenyl	N.D.	5	--
Tribromobiphenyl	N.D.	5	--
Tetrabromobiphenyl	N.D.	5	--
Pentabromobiphenyl	N.D.	5	--
Hexabromobiphenyl	N.D.	5	--
Heptabromobiphenyl	N.D.	5	--
Octabromobiphenyl	N.D.	5	--
Nonabromobiphenyl	N.D.	5	--
Decabromobiphenyl	N.D.	5	--
Polybrominated Diphenyl Ethers(PBDEs)	N.D.	--	1000
Monobromodiphenyl ether	N.D.	5	--
Dibromodiphenyl ether	N.D.	5	--
Tribromodiphenyl ether	N.D.	5	--
Tetrabromodiphenyl ether	N.D.	5	--
Pentabromodiphenyl ether	N.D.	5	--
Hexabromodiphenyl ether	N.D.	5	--
Heptabromodiphenyl ether	N.D.	5	--
Octabromodiphenyl ether	N.D.	5	--
Nonabromodiphenyl ether	N.D.	5	--
Decabromodiphenyl ether	N.D.	5	--

Tested Item(s)	Result Unit (mg/kg)	MDL Unit (mg/kg)	Limit Unit (mg/kg)
	1		
Di-isobutyl phthalate(DIBP) CAS #:84-69-5	N.D.	50	1000
Dibutyl phthalate(DBP) CAS #:84-74-2	N.D.	50	1000
Benzylbutyl phthalate(BBP) CAS #:85-68-7	N.D.	50	1000
Di-2-ethylhexyl phthalate(DEHP) CAS #:117-81-7	N.D.	50	1000

Note:

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

-mg/kg = ppm = parts per million

-Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm^2 sample surface area used.

-Positive = Presence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is equal to or greater than 0.02 mg/kg with 50cm^2 sample surface area used.

-#=According to the directive (2011/65/ EU), Lead is exempted as copper alloy containing up to 4% lead by weight.

Remark:

- The screening results are only used for reference.

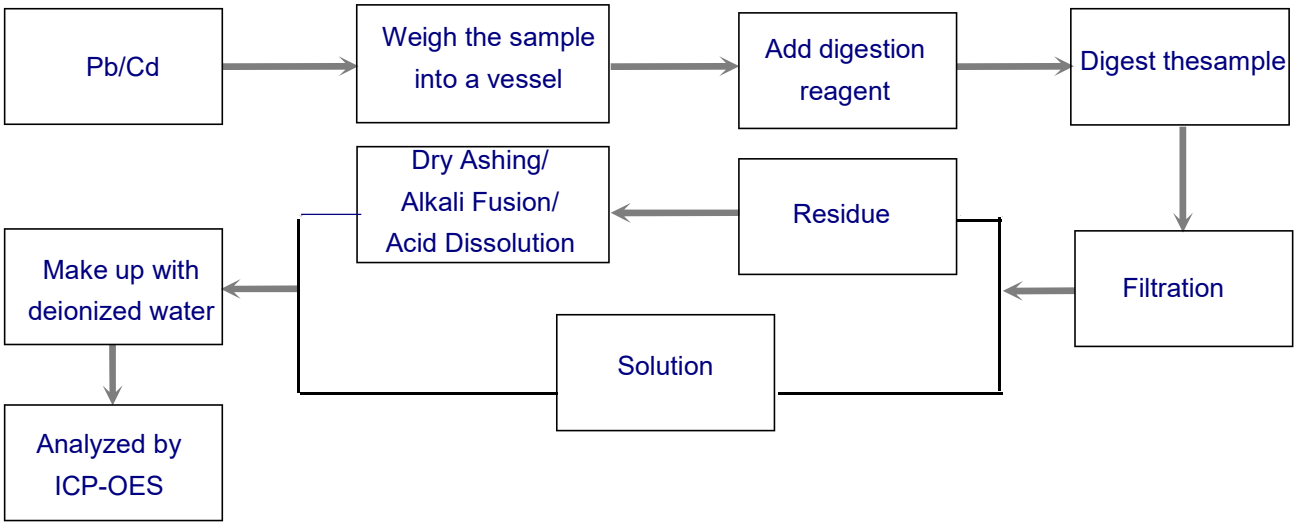
- When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br Exclusively;

- When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.

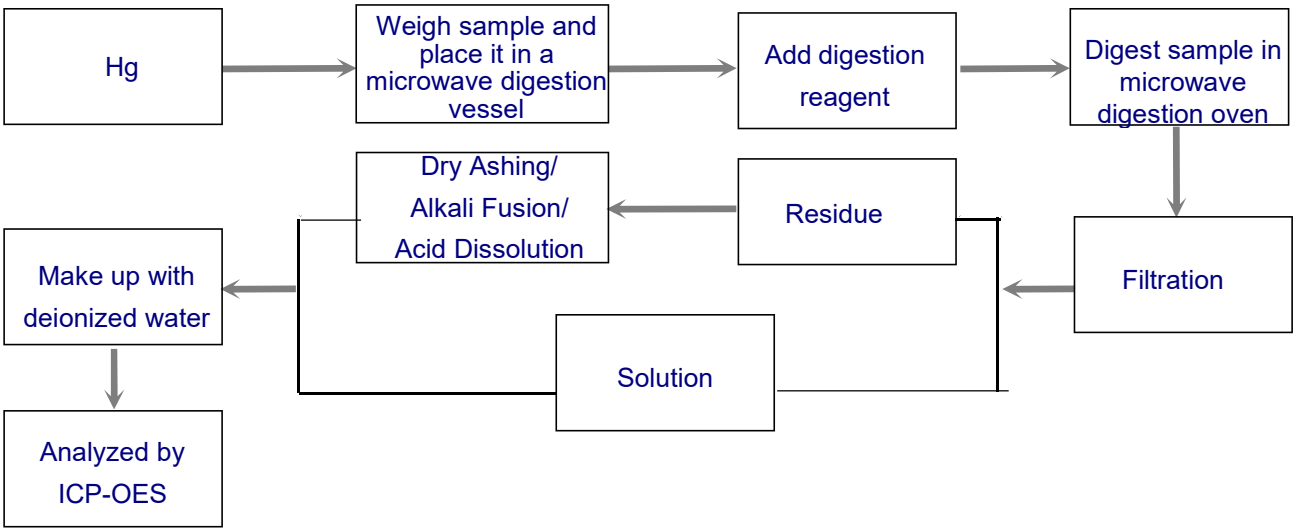
Test Process:

The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

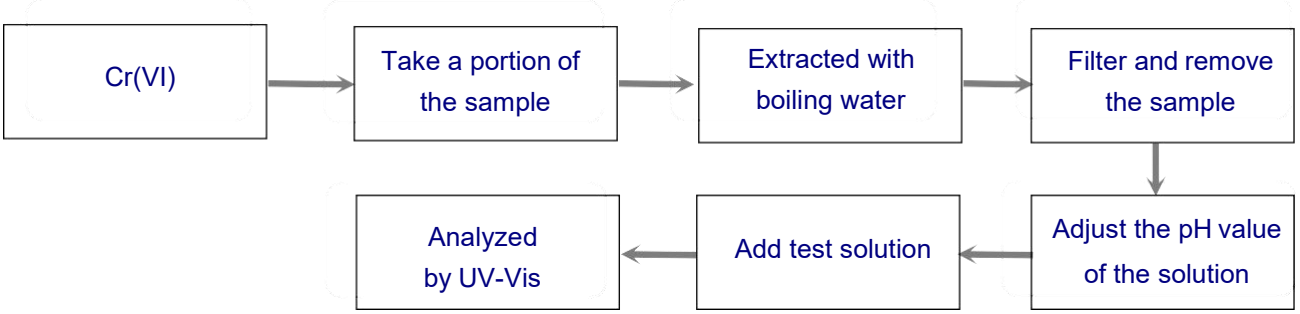
◆ **IEC 62321-5:2013 Ed.1.0**



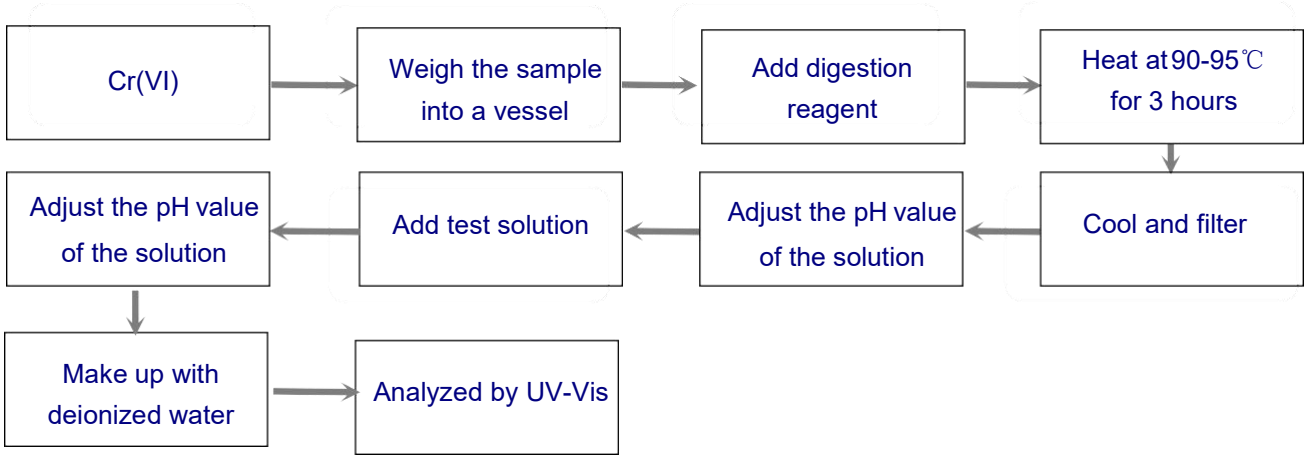
◆ **IEC 62321-4:2013 Ed.1.0**



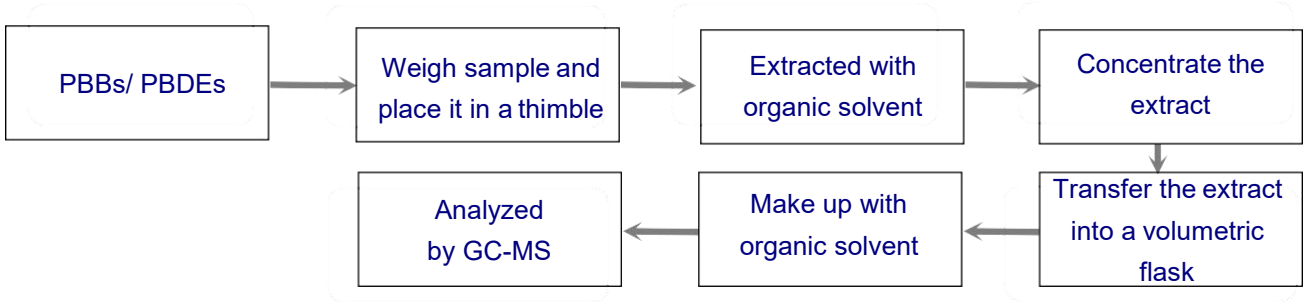
◆ **IEC 62321-7-1:2015 Ed.1.0**



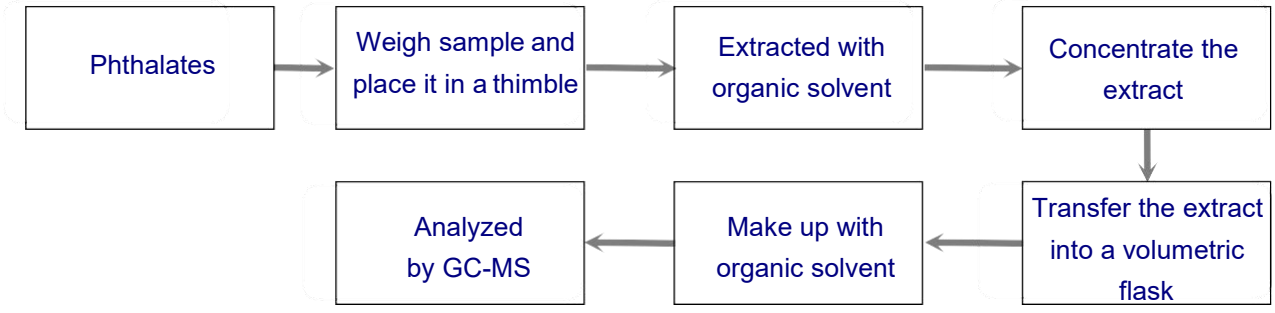
◆ **IEC 62321-7-2:2017 Ed.1.0**



◆ **IEC 62321-6:2015 Ed.1.0**

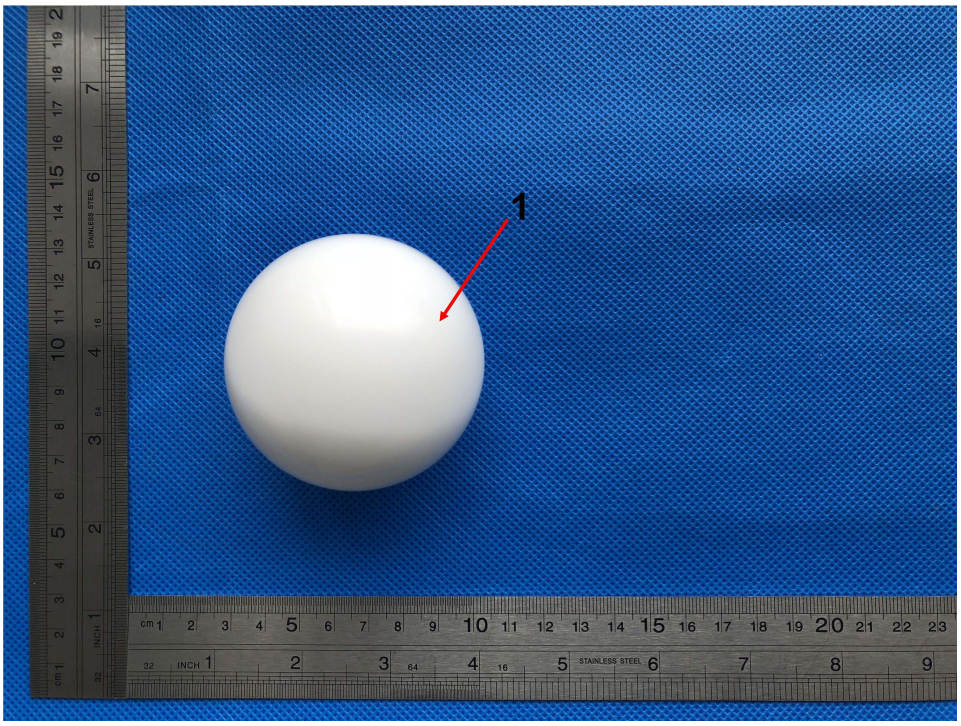


◆ **EN14372:2004(E)**



APPENDIX I
(Photos of the EUT)

EUT Photo 1



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