

# TEST REPORT

**Applicant** : Sharkoon Technologies GmbH  
**Address** : Grüninger Weg 48, 35415 Pohlheim, Germany

**Report on the submitted samples said to be:**

**Sample Name(s)** : Wireless gaming mouse  
**Trade Mark** : N/A  
**Tested Model No.** : SKILLER SGM25W  
**Sample Received Date** : September 04, 2025  
**Testing Period** : September 04, 2025 ~ September 11, 2025  
**Date of Report** : October 15, 2025  
**Testing Location** : Room 101-106/202-206, Building 037, No.166, Jinhua Road, Meixu Street, Ningbo High-tech Zone, Yinzhou District, Ningbo, Zhejiang, China  
**Results** : Please refer to next page(s).

TEST REQUEST	CONCLUSION
As specified by client, based on the performed tests on submitted sample, the result of Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), PBBs, PBDEs, Dibutyl Phthalate(DBP), Butylbenzyl Phthalate(BBP), Di-2-ethylhexyl Phthalate(DEHP) and Diisobutyl phthalate(DIBP) content comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.	<b>PASS</b>

Signed for and on behalf of LCS

*Miranda Mo*

Miranda Mo/Laboratory Manager



**A. EU RoHS Directive 2011/65/EU and its amendment directives**

Test method: Refer to IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF).

Test result(s):

Sample No.	Sample Description	Screening Result(s)						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr <sup>▼</sup>	Br <sup>▼</sup>		
						PBBs	PBDEs	
1	White adhesive plastic paper	BL	BL	BL	BL	BL	BL	2025-09-04
2	Transparent plastic film	BL	BL	BL	BL	BL	BL	2025-09-04
3	Black soft plastic	BL	BL	BL	BL	BL	BL	2025-09-04
4	White plastic	BL	BL	BL	BL	BL	BL	2025-09-04
5	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
6	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
7	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
8	Black soft plastic	BL	BL	BL	BL	BL	BL	2025-09-04
9	White plastic	BL	BL	BL	BL	BL	BL	2025-09-04
10	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
11	White plastic	BL	BL	BL	BL	BL	BL	2025-09-04
12	Silver metal	BL	BL	BL	BL	/	/	2025-09-04
13	Silver metal	BL	BL	BL	BL	/	/	2025-09-04
14	Silver metal	BL	BL	BL	BL	/	/	2025-09-04
15	Black PCB board	BL	BL	BL	X	X	X	2025-09-04
16	LED lamp beads	BL	BL	BL	BL	BL	BL	2025-09-04
17	Silver metal	OL	BL	BL	BL	/	/	2025-09-04
18	Solder	BL	BL	BL	BL	/	/	2025-09-04
19	Grey plastic	BL	BL	BL	BL	BL	BL	2025-09-04
20	White plastic	BL	BL	BL	BL	BL	BL	2025-09-04
21	Gold metal	BL	BL	BL	BL	/	/	2025-09-04
22	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
23	Silver metal	BL	BL	BL	BL	/	/	2025-09-04
24	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
25	White plastic	BL	BL	BL	BL	BL	BL	2025-09-04
26	White plastic paper	BL	BL	BL	BL	X	X	2025-09-04
27	White sticker	BL	BL	BL	BL	BL	BL	2025-09-04
28	Yellow sticker	BL	BL	BL	X	BL	BL	2025-09-04
29	Red thread leather	BL	BL	BL	BL	BL	BL	2025-09-04
30	Red thread leather	BL	BL	BL	BL	BL	BL	2025-09-04



Ningbo LCS Standard Technology Service Co., Ltd.

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Sample No.	Sample Description	Screening Result(s)						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr <sup>▼</sup>	Br <sup>▼</sup>		
						PBBs	PBDEs	
31	Black thread leather	BL	BL	BL	BL	BL	BL	2025-09-04
32	Silver metal wire	BL	BL	BL	BL	/	/	2025-09-04
33	Blue plastic	BL	BL	BL	BL	BL	BL	2025-09-04
34	Gold metal	BL	BL	BL	BL	/	/	2025-09-04
35	White plastic	BL	BL	BL	BL	BL	BL	2025-09-04
36	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
37	Gold metal	BL	BL	BL	BL	/	/	2025-09-04
38	Grey plastic	BL	BL	BL	BL	BL	BL	2025-09-04
39	White plastic	BL	BL	BL	BL	BL	BL	2025-09-04
40	White plastic	BL	BL	BL	BL	BL	BL	2025-09-04
41	Silver metal	BL	BL	BL	BL	/	/	2025-09-04
42	Grey plastic	BL	BL	BL	BL	BL	BL	2025-09-04
43	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
44	Silver metal needles	BL	BL	BL	BL	/	/	2025-09-04
45	Clear glass	BL	BL	BL	BL	BL	BL	2025-09-04
46	Silver metal	BL	BL	BL	BL	/	/	2025-09-04
47	Black triode	BL	BL	BL	BL	BL	BL	2025-09-04
48	Yellow capacitor	BL	BL	BL	BL	BL	BL	2025-09-04
49	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
50	White plastic	BL	BL	BL	BL	BL	BL	2025-09-04
51	Black PCB board	BL	BL	BL	X	X	X	2025-09-04
52	Black plastic paper	BL	BL	BL	BL	BL	BL	2025-09-04
53	Solder	OL	OL	BL	X	/	/	2025-09-04
54	Silver metal	BL	BL	BL	X	/	/	2025-09-04
55	Gold metal	BL	BL	BL	X	/	/	2025-09-04
56	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
57	Black soft plastic	BL	BL	BL	BL	BL	BL	2025-09-04
58	Black thread leather	BL	BL	BL	BL	BL	BL	2025-09-04
59	Black cloth rope	BL	BL	BL	BL	BL	BL	2025-09-04
60	Black plastic	BL	BL	BL	BL	BL	BL	2025-09-04
61	Gold metal	BL	BL	BL	BL	/	/	2025-09-04



## Note:

- Results were obtained by XRF for primary screening, 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 below warning value according to IEC 62321-3-1:2013(Unit: mg/kg).

Element	Polymers	Metals	Composite material
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br	$BL \leq (300-3\sigma) < X$	N/A	$BL \leq (250-3\sigma) < X$

## Remark:

- BL= Below Limit
  - OL= Over Limit
  - X= The range of needing to do further testing
  - $3\sigma$ = The reproducibility of analytical instruments
  - N/A= Not applicable
  - LOD= Detection limit
- The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
  - The maximum permissible limit is quoted from the document RoHS Directive 2011/65/EU with amendment (EU) 2015/863.
  - ▼=For restricted substances PBBs and PBDEs, the results show the total Br content, the restricted substance was Cr(VI), and the results showed the total Cr content.



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
Dibutyl Phthalate(DBP)	1000
Butylbenzyl Phthalate(BBP)	1000
Di-(2-ethylhexyl) Phthalate(DEHP)	1000
Diisobutyl phthalate(DIBP)	1000

#### Disclaimers:

This XRF Screening 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 screening 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.

#### **B. EU RoHS Directive 2011/65/EU with amendment (EU) 2015/863 on Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), PBBs, PBDEs, DBP, BBP, DEHP & DIBP content**

##### Test method:

##### Lead(Pb) & Cadmium(Cd) Content:

Refer to IEC 62321-5:2013, by acid digestion and analysis was performed by inductively coupled plasma optical emission spectrometer (ICP-OES) or atomic absorption spectrometer (AAS).

##### Mercury(Hg) Content:

Refer to IEC 62321-4:2013+AMD1:2017 CSV, by acid digestion and analysis was performed by inductively coupled plasma optical emission spectrometer (ICP-OES).

##### Hexavalent Chromium(Cr(VI)) Content:

Refer to IEC 62321-7-1:2015 or IEC 62321-7-2:2017, analysis was performed by UV-visible spectrophotometer (UV-Vis).

##### PBBs & PBDEs Content:

Refer to IEC 62321-6:2015, by solvent extraction and analysis was performed by gas chromatography-mass spectrometer (GC-MS).

##### Phthalates(DBP, BBP, DEHP & DIBP) Content:

Refer to IEC 62321-8:2017, by solvent extraction and analysis was performed by gas chromatography-mass spectrometer (GC-MS).



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Test result(s):

**1) Lead(Pb) & Cadmium(Cd)**

Tested Item	MDL (mg/kg)	Test Result(s) (mg/kg)		Limit (mg/kg)
		17	53	
Lead(Pb) Content	5	82	137	1000

Tested Item	MDL (mg/kg)	Test Result(s) (mg/kg)		Limit (mg/kg)
		17	53	
Cadmium(Cd) Content	5	37	30	100

**2) Mercury(Hg)**

Tested Item	MDL (mg/kg)	Test Result(s) (mg/kg)		Limit (mg/kg)
		17	53	
Mercury(Hg) Content	5	N.D.	N.D.	1000

**3) Hexavalent Chromium(Cr(VI))**

Tested Item	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		15	28	43	51	
Hexavalent Chromium(Cr(VI)) Content	8	N.D.	N.D.	N.D.	N.D.	1000

**4) Hexavalent Chromium(Cr(VI))(for coating on metal- water-extraction\*\*)**

Tested Item	MDL ( $\mu\text{g}/\text{cm}^2$ )	Test Result(s)			
		53	54	55	17
Hexavalent Chromium(Cr(VI)) Content★	0.10 (LOQ)	Negative	Negative	Negative	Negative

**5) Phthalates(DBP, BBP, DEHP & DIBP)**

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		1+2+4+5+6	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000



Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		3+8+57	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		7+9+10+11+15	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		19+20+22+24+25	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		26+27+28+33+35	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000



Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		29+30+31+58	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		36+38+39+40+42	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		43+49+50+51+52	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		56+59+60	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000



**6) Polybrominated Biphenyls(PBBs) & Polybrominated Diphenyl Ethers(PBDEs)**

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)			Limit (mg/kg)
		15	26	51	
<b>Polybrominated Biphenyls(PBBs) Content</b>					
Monobromobiphenyl	5	N.D.	N.D.	N.D.	/
Dibromobiphenyl	5	N.D.	N.D.	N.D.	/
Tribromobiphenyl	5	N.D.	N.D.	N.D.	/
Tetrabromobiphenyl	5	N.D.	N.D.	N.D.	/
Pentabromobiphenyl	5	N.D.	N.D.	N.D.	/
Hexabromobiphenyl	5	N.D.	N.D.	N.D.	/
Heptabromobiphenyl	5	N.D.	N.D.	N.D.	/
Octabromobiphenyl	5	N.D.	N.D.	N.D.	/
Nonabromodiphenyl	5	N.D.	N.D.	N.D.	/
Decabromodiphenyl	5	N.D.	N.D.	N.D.	/
Total content	/	N.D.	N.D.	N.D.	1000
<b>Polybrominated Diphenylethers(PBDEs) Content</b>					
Monobromodiphenyl ether	5	N.D.	N.D.	N.D.	/
Dibromodiphenyl ether	5	N.D.	N.D.	N.D.	/
Tribromodiphenyl ether	5	N.D.	N.D.	N.D.	/
Tetrabromodiphenyl ether	5	N.D.	N.D.	N.D.	/
Pentabromodiphenyl ether	5	N.D.	N.D.	N.D.	/
Hexabromodiphenyl ether	5	N.D.	N.D.	N.D.	/
Heptabromodiphenyl ether	5	N.D.	N.D.	N.D.	/
Octabromodiphenyl ether	5	N.D.	N.D.	N.D.	/
Nonabromodiphenyl ether	5	N.D.	N.D.	N.D.	/
Decabromodiphenyl ether	5	N.D.	N.D.	N.D.	/
Total content	/	N.D.	N.D.	N.D.	1000



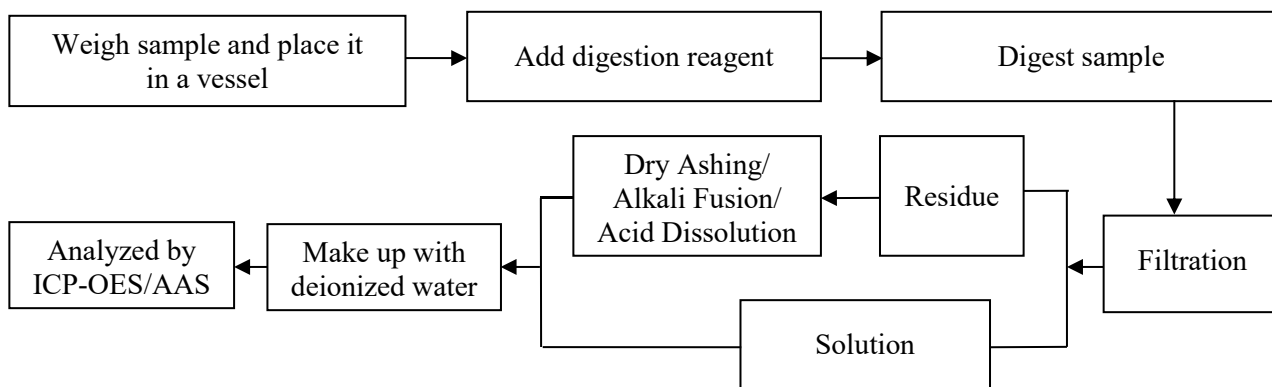
## Note:

- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL or LOQ)
- mg/kg= milligram per kilogram=ppm
- $\mu\text{g}/\text{cm}^2$  = micrograms per square centimeter
- LOQ = Limit Of Quantification, The LOQ of Hexavalent chromium is  $0.10 \mu\text{g}/\text{cm}^2$
- \*\*=Boiling-water-extraction:
  - ★ = a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than  $0.13 \mu\text{g}/\text{cm}^2$ . The sample coating is considered to contain Cr(VI).
  - b. The sample is negative for Cr(VI) if Cr(VI) is N.D.(concentration less than  $0.10 \mu\text{g}/\text{cm}^2$ ). The sample coating is considered a non- Cr(VI) based coating.
  - c. The result between  $0.10 \mu\text{g}/\text{cm}^2$  and  $0.13 \mu\text{g}/\text{cm}^2$  is considered to be inconclusive, unavoidable coating variations may influence the determination.
- Information on storage conditions and production date of the tested samples is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.
- According to customer's requirement, only the appointed materials have been tested.

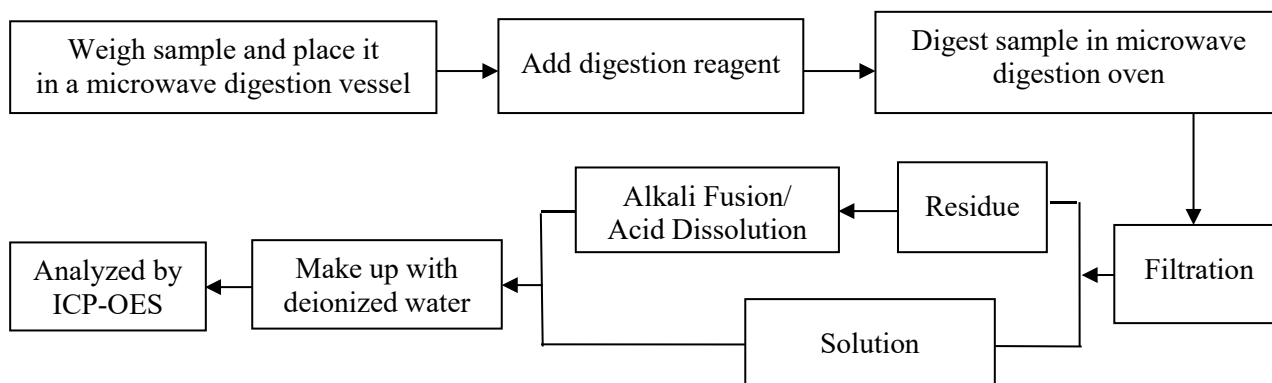


### Test Process

1. Lead(Pb) & Cadmium(Cd): IEC 62321-5:2013

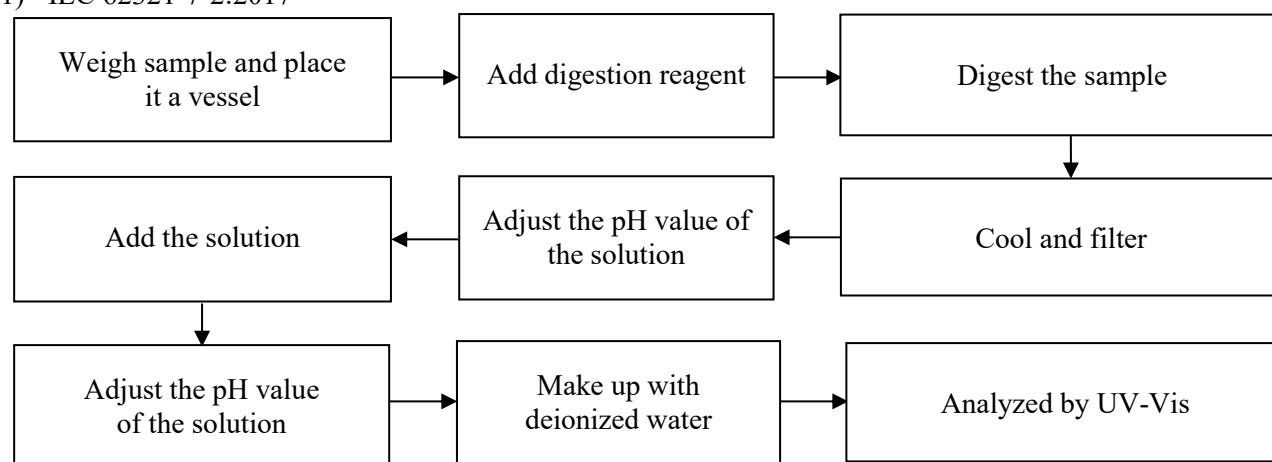


2. Mercury(Hg): IEC 62321-4:2013+AMD1:2017 CSV

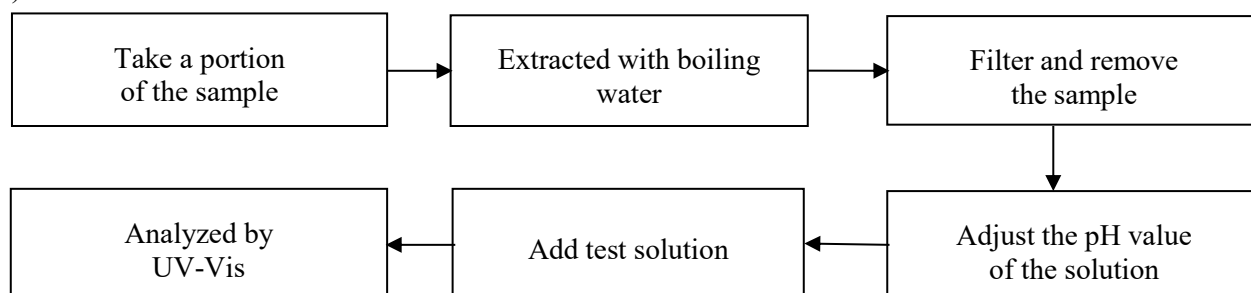


3. Hexavalent Chromium(Cr(VI))

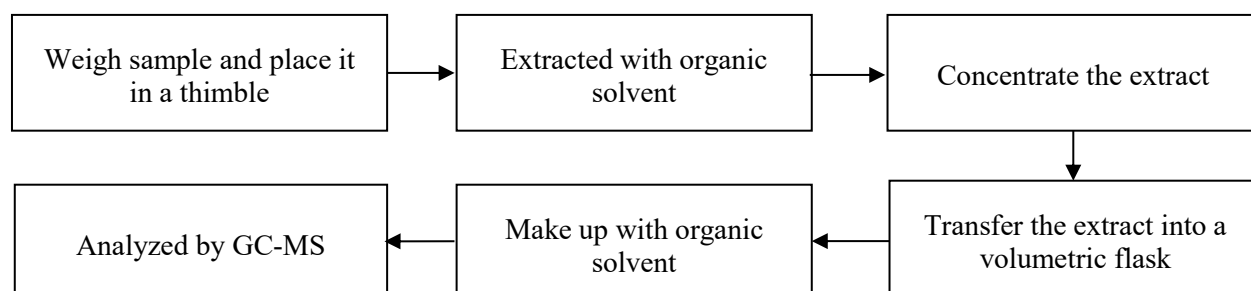
1) IEC 62321-7-2:2017



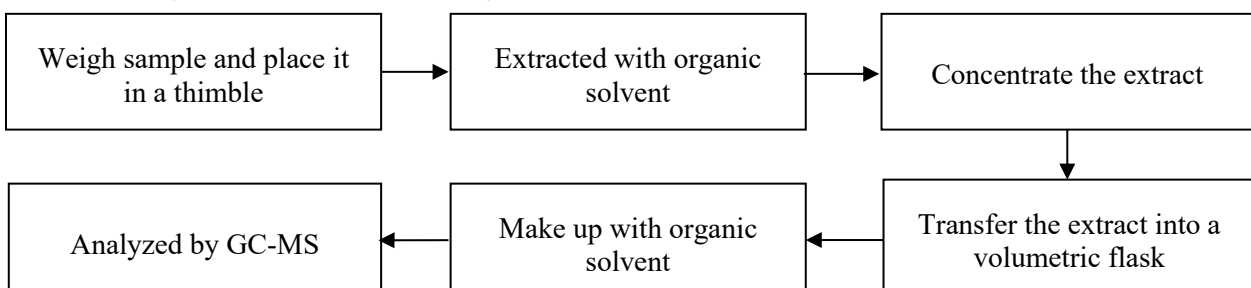
## 2) IEC 62321-7-1:2015



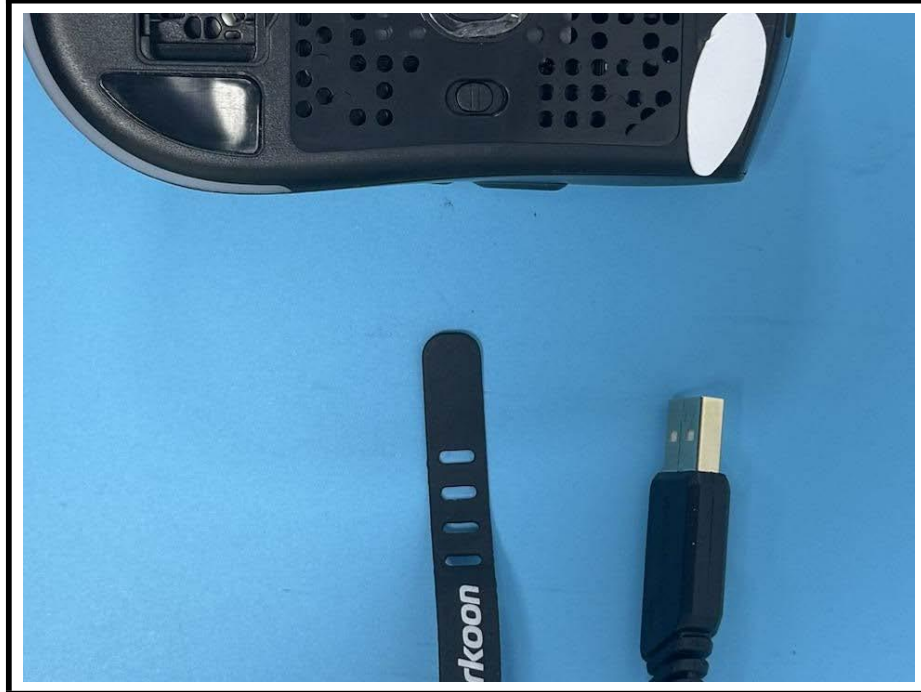
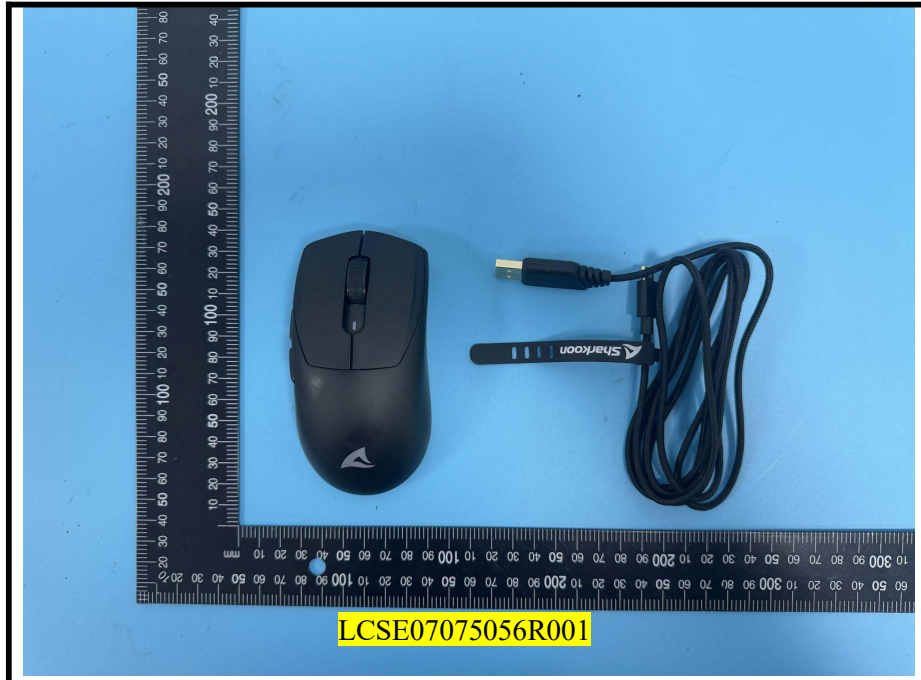
## 4. Polybrominated Biphenyls(PBBs) &amp; Polybrominated Diphenyl Ethers(PBDEs) : IEC 62321-6:2015



## 5. Phthalates(DBP, BBP, DEHP &amp; DIBP) : IEC 62321-8:2017



### The photo(s) of the sample





**Statement:**

1. The test report is invalid without the signature of the approver and the special seal for the company's report;
2. The company name, address and sample information shown on the report were provided by the applicant who should be responsible for the authenticity which are not verified by LCS;
3. The test results in this report are only responsible for the tested samples;
4. Without written approval of LCS, this report can't be reproduced except in full;
5. In case of any discrepancy between the corresponding Chinese and English contents in the test report, the Chinese version shall prevail.

**Revision History**

Revision	Issue Date	Revision Content	Revised By
001	2025.10.15	According to customer's requirement modify sample name Other information remains unchanged. The LCSE07075056R001 report replaces the original LCSE07075056R report, and the original report is invalid.	Xiaohuimei

\*\*\* End of Report \*\*\*

