



ROHS TEST REPORT

Report Reference No.....: ZKT-2019073337R

Date of issue.....: Jul. 26, 2019

Total number of pages.....: 9

Testing Laboratory.....: Shenzhen ZKT Technology Co., Ltd.

Address.....: 2F, Building 1, Maozhoushan Industrial Park, Houting Community, Shajing Street, Bao'an District, Shenzhen, China

Applicant's name.....: PAUL STRICKER, SA - PORTUGAL

Address.....: Nucleo Industrial de Murte, Lote 5 3060-372 Murte, PORTUGAL

Test Requested:

(1)	Heavy Metals and Flame Retardants Content – European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	Conclusion PASS
(2)	Phthalates content – European Council Directive 2011/65/EU and Change-Directive (EU) 2015/863 on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS

Test Report Form No.....: -

Test Report Form(s) Originator.....: ZKT Testing

Master TRF.....: Dated: 2017-06

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 ZKT Test.

Test item description.....: Flashlight

Trade Mark.....: N/A

Manufacturer.....: [REDACTED]

Model/Type reference.....: 94739



Testing procedure and testing location:

Testing Laboratory.....: Shenzhen ZKT Technology Co., Ltd.

Address.....: 2F, Building 1, Maozhousha Industrial Park, Houting Community, Shajing Street, Bao'an District, Shenzhen, China

Date of Test.....: July 17, 2019 to July 25, 2019

Tested by (name + signature).....: Peter Huang

Reviewed by (name + signature).....: Simon Gong

Approved by (name + signature).....: Awen He



**Test Method:**

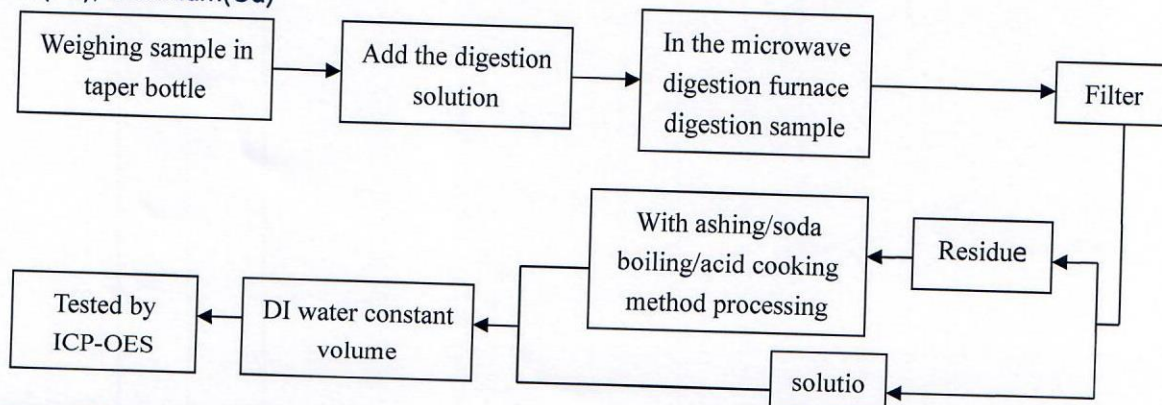
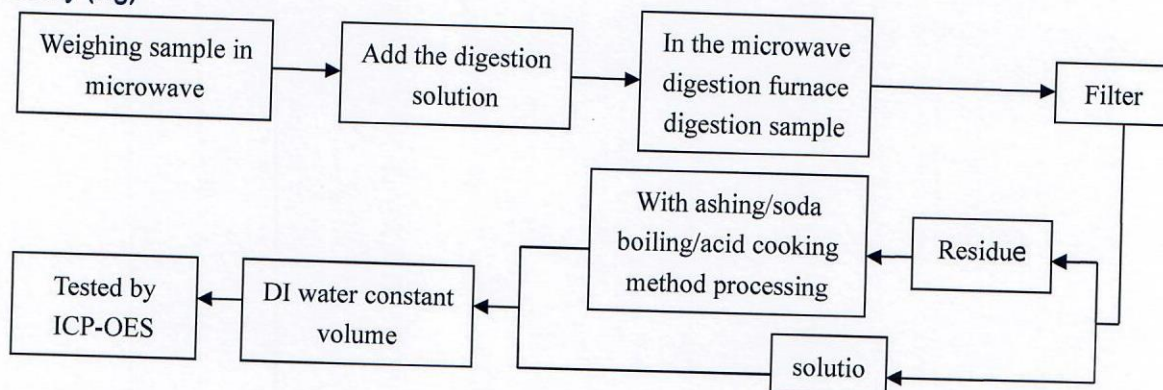
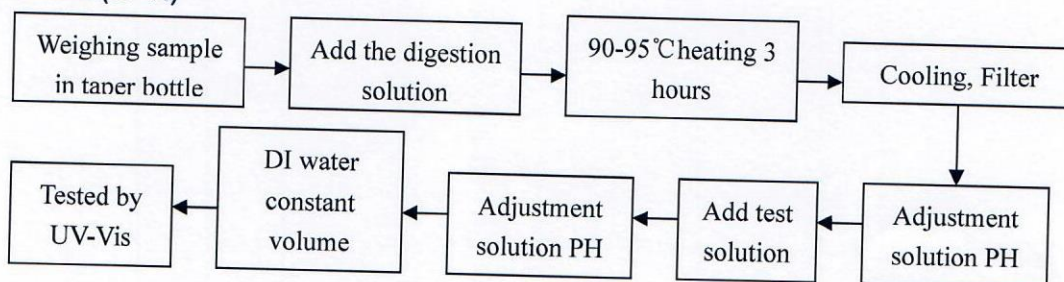
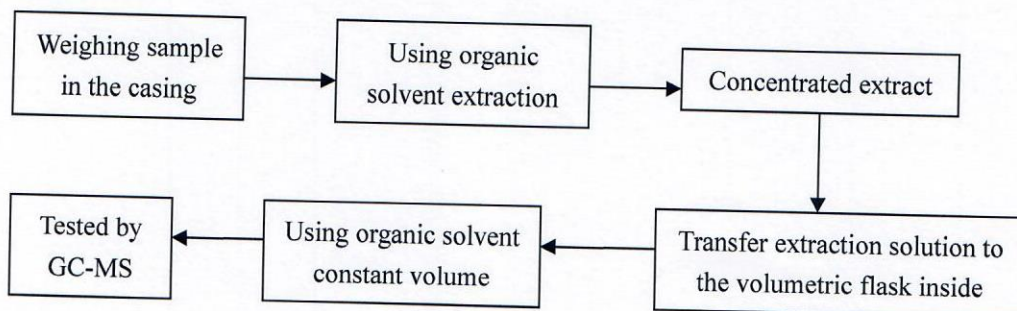
Heavy Metals and Flame Retardants Content – European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Testing item	Pretreatment method	Measuring instrument	MDL
Lead(Pb)	EN 62321-5:2014	ICP-OES	2 mg/kg
Cadmium(Cd)	EN 62321-5:2014	ICP-OES	2 mg/kg
Mercury(Hg)	EN 62321-4:2014	ICP-OES	2 mg/kg
Chromium(Cr VI)	EN 62321:2012	UV-Vis	2 mg/kg
PBBs/ PBDEs	EN 62321:2012	PY-GC-MS	5 mg/kg

Testing item	Pretreatment method	Measuring instrument	MDL
HBCDD	EPA3540:1996	GC-MS	10 mg/kg

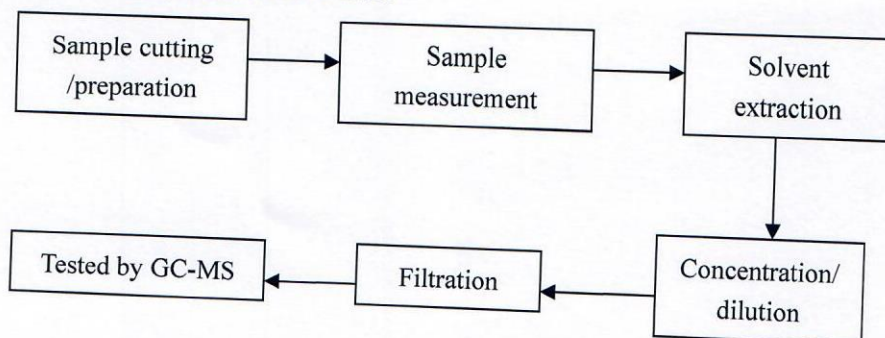
Phthalates content – European Council Directive 2011/65/EU and Change-Directive (EU) 2015/863 on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Test Method: Sample was extracted with organic solvent and then analyzed by Gas Chromatograph Mass Spectrometer.

Testing item	Pretreatment method	Measuring instrument	MDL
DEHP/DBP/BBP/ DIBP	EN 14372:2004	GC-MS	0.003 mg/kg

**Test Flow:****1. Lead(Pb), Cadmium(Cd)****2. Mercury (Hg)****3. Chromium(Cr VI)****4. PBBs/ PBDEs**



5. HBCDD/ DEHP/ BBP/ DBP/ DIBP



Testing Item	Unit	ROHS Limit	Result					
			1	2	3	4	5	6
Lead(Pb)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium(Cd)	mg/kg	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury(Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(Cr VI)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum of PBBs/ PBDEs	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	/	N.D.
Monobromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Dibromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Tribromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Tetrabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Pentabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Hexabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Heptabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Octabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Nonabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Decabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Monobromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Dibromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Tribromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Tetrabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Pentabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Hexabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Heptabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Octabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Nonabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Decabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	/	N.D.
Hexabromocyclododecane (HBCDD)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	/	N.D.
Bis-(2-ethylhexyl) Phthalate (DEHP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	/	N.D.
Benzylbutyl Phthalate (BBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	/	N.D.
Dibutyl Phthalate (DBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	/	N.D.
Di-isobutyl phthalate (DIBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	/	N.D.

Sample Description:

- 1 PCB
- 2 IC
- 3 SMD CAPACITOR



4 SMD RESISTOR

5 Metal part

6 Reflective material

Testing Item	Unit	ROHS Limit	Result					
			7	8	9	10	11	12
Lead(Pb)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium(Cd)	mg/kg	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury(Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(Cr VI)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum of PBBs/ PBDEs	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromocyclododecane (HBCDD)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bis-(2-ethylhexyl) Phthalate (DEHP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzylbutyl Phthalate (BBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl Phthalate (DBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Di-isobutyl phthalate (DIBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Sample Description:

7 USB interface



- 8 Silica gel(Bule)
- 9 Battery
- 10 LED
- 11 Silica gel(Black)
- 12 internal lead wire

Notes:

1mg/kg=1ppm = 0.0001%
N.D. = Not Detected (<MDL)
MDL = Method Detection Limit
/=Not Regulated
---=Not Applicable

Breakdown of product



ANNEX A: Photo-documentation

EUT Photo 1



***** END OF REPORT *****