



TEST REPORT

Report No.: STR16046064R

Date: 2016-05-19

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Applicant : Lancol high tech company Ltd

Applicant Address : No 550, Gangda Avenue, North Section, Modern Industrial Port, Chengdu, China.

The following sample was submitted by the client as:

Manufacturer : Lancol high tech company Ltd
Address : No 550, Gangda Avenue, North Section, Modern Industrial Port, Chengdu, China.
Sample Description : Conductance Battery Tester
Style/Item No. : MICRO-768A, MICRO-10, MICRO-30, MICRO-100, MICRO-200, MICRO-300, MICRO-468, MICRO-568, MICRO-768, MICRO-1200
Brand Name : LANCOL
Sample Receiving Date : May. 03, 2016 & May. 13, 2016
Test Period : May. 03, 2016 to May. 19, 2016

Test Requested:

As requested by the applicant, test(s) was/were performed as below:


Test Summary	Conclusion
1 European Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (XRF screening and chemical confirm)	PASS

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

Tested by: *May Li*
May li

Reviewed by: *Boly Peng*
Boly Peng

Approved by: *Ailis Ma*
Ailis Ma



Declaration:

- (1) The report shall not be reproduced partly without the written approval of the laboratory, except in full produced.
- (2) All the results shown in the report apply to the tested sample, any erasion on the report is invalid
- (3) All tested sample will be kept for one month, if there is any doubt about the test result, please inform within this period

Shenzhen SEM. Test Technology Co., Ltd.

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RoHS hazardous substances test

Test method:

IEC 62321-3-1:2013, XRF screening

IEC 62321-4-2013 for Hg, analyzed by ICP-OES

IEC 62321-5-2013 for Cd and Pb, analyzed by ICP-OES

IEC 62321:2008 Annex C and/or IEC 62321-7-1:2015 for Cr⁶⁺, analyzed by UV-VIS

IEC 62321-6-2015 for PBBs and PBDEs, analyzed by GC-MS

1. XRF results:

No.	Name of the sample	Part name	Sample Description	Results				
				Pb	Cd	Hg	Cr	Br
1-1-1	Shell	Gum cover	Red rubber	BL	BL	BL	BL	BL
1-2-1		Shell	Black plastic	BL	BL	BL	BL	BL
1-3-1		Rear cover	Black plastic	BL	BL	BL	BL	BL
1-4-1		Tape	Gray tape	BL	BL	BL	BL	BL
1-5-1		Battery jar	Silvery metal	BL	BL	BL	IN	NA
1-5-2			Soldering tin	BL	BL	BL	BL	NA
1-6-1		Battery wire	Red wire	BL	BL	BL	BL	BL
1-6-2			Black wire	BL	BL	BL	BL	BL
1-6-3			Copper metal	BL	BL	BL	BL	NA
1-7-1		Cable socket	White plastic	BL	BL	BL	BL	BL
1-7-2			Silvery metal	BL	BL	BL	BL	NA
1-8-1		Screw	Black metal	BL	BL	BL	IN	NA
1-9-1		Key	Black rubber	BL	BL	BL	BL	BL
1-10-1		Print cup	Gray plastic	BL	BL	BL	BL	BL
1-10-2			Black rubber	BL	BL	BL	BL	BL
1-10-3			White plastic	BL	BL	BL	BL	BL
1-10-4			Silvery metal	BL	BL	BL	IN	NA
1-11-1		Socket	White plastic	BL	BL	BL	BL	BL
1-11-2			Silvery metal	Exempted	BL	BL	BL	NA
1-11-3			Lead	Exempted	BL	BL	BL	NA
1-11-4	Silver metal nut		Exempted	BL	BL	BL	NA	
1-12-1	Wire	Red wire	BL	BL	BL	BL	BL	
1-12-2		White wire	BL	BL	BL	BL	BL	
1-12-3		Silvery metal	BL	BL	BL	BL	NA	
1-13-1	Small PCB	Soldering tin	BL	BL	BL	BL	NA	
1-13-2		PCB	BL	BL	BL	BL	IN	



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1-14-1		Display screen	Acrylic	BL	BL	BL	BL	BL	
1-14-2			Glass	BL	BL	BL	BL	NA	
1-14-3			Black plastic	BL	BL	BL	BL	BL	
1-14-4			LED	BL	BL	BL	BL	NA	
1-14-5			Black metal	BL	BL	BL	BL	NA	
1-15-1		PIN	Black plastic	BL	BL	BL	BL	BL	
1-15-2			Silvery metal	BL	BL	BL	BL	NA	
1-16-1		IC 7660	Black plastic	BL	BL	BL	BL	BL	
1-16-2			Silvery metal	BL	BL	BL	BL	NA	
1-17-1		Tantalum capacitor	Body	BL	BL	BL	BL	BL	
1-17-2			Silvery metal	BL	BL	BL	BL	NA	
1-18-1		PCB (Display screen)	Soldering tin	BL	BL	BL	BL	NA	
1-18-2			PCB	BL	BL	BL	BL	IN	
1-19-1		Clasp	Copper metal bolt	Exempted	BL	BL	BL	NA	
1-19-2			Copper metal screw	Exempted	BL	BL	BL	NA	
2-1-1		PCB	Cable socket	White plastic	BL	BL	BL	BL	BL
2-1-2				Silvery metal column	BL	BL	BL	BL	NA
2-1-3				Silvery metal lead	Exempted	BL	BL	BL	NA
2-2-1			Silvery metal	BL	BL	BL	BL	NA	
2-2-2			Spring	BL	BL	BL	BL	NA	
2-2-3	Printing device		White plastic	BL	BL	BL	BL	BL	
2-2-4			Black plastic	BL	BL	BL	BL	BL	
2-2-5			Copper metal	BL	BL	BL	BL	NA	
2-3-1	Buttons (S1)		Blue plastic	BL	BL	BL	BL	BL	
2-3-2			Black plastic	BL	BL	BL	BL	BL	
2-3-3			White plastic	BL	BL	BL	BL	BL	
2-3-4			Silvery metal	BL	BL	BL	BL	NA	
2-4-1	Buttons		Black plastic	BL	BL	BL	BL	BL	
2-4-2			Silvery metal	BL	BL	BL	BL	NA	
2-5-1	Flexible Flat Cable		White plastic	BL	BL	BL	BL	BL	
2-5-2			Silvery metal	BL	BL	BL	BL	NA	
2-5-3			FPC	BL	BL	BL	BL	NA	
2-6-1	Battery jar		Silvery metal	BL	BL	BL	BL	NA	
2-6-2			Soldering tin	BL	BL	BL	BL	NA	
2-6-3			White plastic	BL	BL	BL	BL	BL	



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2-7-1	Socket	White plastic	BL	BL	BL	BL	BL
2-7-2		Silvery metal	BL	BL	BL	BL	NA
2-8-1	Diode	Black plastic	BL	BL	BL	BL	BL
2-8-2		Silvery metal	BL	BL	BL	BL	NA
2-9-1	Screw	Black metal	BL	BL	BL	BL	NA
2-9-2		Silvery metal	BL	BL	BL	BL	NA
2-10-1	Crystal oscillator	Silvery metal	BL	BL	BL	BL	NA
2-11-1	Wire	Brown wire	BL	BL	BL	BL	BL
2-11-2		Red wire	BL	BL	BL	BL	BL
2-11-3		Orange wire	BL	BL	BL	BL	BL
2-11-4		Yellow wire	BL	BL	BL	BL	BL
2-11-5		Green wire	BL	BL	BL	BL	BL
2-11-6		Blue wire	BL	BL	BL	BL	BL
2-11-7		White wire	BL	BL	BL	BL	BL
2-11-8		Silvery metal	BL	BL	BL	BL	NA
2-12-1	IC 12370	Black plastic	BL	BL	BL	BL	BL
2-12-2		Silvery metal	BL	BL	BL	BL	NA
2-13-1	IC U7	Black plastic	BL	BL	BL	BL	BL
2-13-2		Silvery metal	BL	BL	BL	BL	NA
2-14-1	IC 730Z	Black plastic	BL	BL	BL	BL	BL
2-14-2		Silvery metal	BL	BL	BL	BL	NA
2-15-1	IC U2	Black plastic	BL	BL	BL	BL	BL
2-15-2		Silvery metal	BL	BL	BL	BL	NA
2-16-1	IC 152AA	Black plastic	BL	BL	BL	BL	BL
2-16-2		Silvery metal	BL	BL	BL	BL	NA
2-17-1	IC MAX232	Black plastic	BL	BL	BL	BL	BL
2-17-2		Silvery metal	BL	BL	BL	BL	NA
2-18-1	IC U1	Black plastic	BL	BL	BL	BL	BL
2-18-2		Silvery metal	BL	BL	BL	BL	NA
2-19-1	IC ATM	Black plastic	BL	BL	BL	BL	BL
2-19-2		Silvery metal	BL	BL	BL	BL	NA
2-20-1	IC 1501	Black plastic	BL	BL	BL	BL	BL
2-20-2		Silvery metal	BL	BL	BL	BL	NA
2-21-1	IC U14	Black plastic	BL	BL	BL	BL	BL
2-21-2		Silvery metal	BL	BL	BL	BL	NA



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2-22-1		Audion	Black plastic	BL	BL	BL	BL	BL	
2-22-2			Silvery metal	BL	BL	BL	BL	NA	
2-23-1		Socket	Black plastic	BL	BL	BL	BL	BL	
2-23-2			Silvery metal	BL	BL	BL	BL	NA	
2-23-3			Lead	Exempted	BL	BL	BL	NA	
2-24-1		Capacitance	Silvery metal	BL	BL	BL	BL	NA	
2-24-2			Body	BL	BL	BL	BL	NA	
2-25-1		Ceramic capacitor	Silvery metal	BL	BL	BL	BL	NA	
2-25-2			Body	BL	BL	BL	BL	NA	
2-26-1		Soldering tin	Silvery metal	BL	BL	BL	BL	NA	
2-27-1		PCB	PCB	BL	BL	BL	BL	IN	
3-1-1		PCB601519 44	Shell	Gray plastic	BL	BL	BL	BL	BL
3-1-2				Red plastic	BL	BL	BL	BL	BL
3-2-1			Screw	Black metal	BL	BL	BL	BL	NA
3-2-2	Silvery metal			BL	BL	BL	BL	NA	
3-3-1	Clamp		Copper metal	BL	BL	BL	BL	NA	
3-3-2			Silvery metal	BL	BL	BL	BL	NA	
3-3-3			FPC	BL	BL	BL	BL	NA	
3-3-4			Spring	BL	BL	BL	BL	NA	
3-3-5			Gray plastic	BL	BL	BL	BL	BL	
3-3-6			Red plastic	BL	BL	BL	BL	BL	
3-4-1	Ceramic capacitor		Silvery metal	BL	BL	BL	BL	NA	
3-4-2			Body	BL	BL	BL	BL	NA	
3-5-1	Battery connectors		Black leather	BL	BL	BL	BL	BL	
3-5-2			Silvery metal	BL	BL	BL	BL	NA	
3-6-1	Battery wire		Red wire	BL	BL	BL	BL	BL	
3-6-2			Black wire	BL	BL	BL	BL	BL	
3-6-3			Copper metal	BL	BL	BL	BL	NA	
3-7-1	PVC		PVC	BL	BL	BL	BL	BL	
3-8-1	Socket		White plastic	BL	BL	BL	BL	BL	
3-8-2			Silvery metal	BL	BL	BL	BL	NA	
3-9-1	Display screen		Acrylic	BL	BL	BL	BL	BL	
3-9-2			Glass	BL	BL	BL	BL	NA	
3-9-3			Black plastic	BL	BL	BL	BL	BL	
3-9-4			LED	BL	BL	BL	BL	NA	



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3-9-5		PCB	BL	BL	BL	BL	BL
3-10-1	Key	Silvery metal	BL	BL	BL	BL	NA
3-10-2		Black plastic	BL	BL	BL	BL	BL
3-11-1	IC 7	Black plastic	BL	BL	BL	BL	BL
3-11-2		Silvery metal	BL	BL	BL	BL	NA
3-12-1	IC 1	Black plastic	BL	BL	BL	BL	BL
3-12-2		Silvery metal	BL	BL	BL	BL	NA
3-13-1	IC 4	Black plastic	BL	BL	BL	BL	BL
3-13-2		Silvery metal	BL	BL	BL	BL	NA
3-14-1	IC 5	Black plastic	BL	BL	BL	BL	BL
3-14-2		Silvery metal	BL	BL	BL	BL	NA
3-15-1	IC 3	Black plastic	BL	BL	BL	BL	BL
3-15-2		Silvery metal	BL	BL	BL	BL	NA
3-16-1	Soldering tin	Silvery metal	BL	BL	BL	BL	NA
3-17-1	PCB	PCB	BL	BL	BL	BL	BL
4-1-1	Clamp	Black plastic	BL	BL	BL	BL	BL
4-1-2		Red plastic	BL	BL	BL	BL	BL
4-1-3		Silvery metal	BL	BL	BL	BL	NA
4-1-4		Copper metal	BL	BL	BL	BL	NA
4-2-1	Soldering tin	Silvery metal	BL	BL	BL	BL	NA
4-3-1	Wire jacket	Red wire	BL	BL	BL	BL	BL
4-3-2		Black wire	BL	BL	BL	BL	BL
4-4-1	Socket	Silvery metal	BL	BL	BL	BL	NA
4-4-2		Black plastic	BL	BL	BL	BL	BL
4-4-3		Lead	BL	BL	BL	BL	NA
4-5-1	Wire	Red wire	BL	BL	BL	BL	BL
4-5-2		Black wire	BL	BL	BL	BL	BL
4-5-3		Yellow wire	BL	BL	BL	BL	BL
4-5-4		Green wire	BL	BL	BL	BL	BL
4-5-5		Copper metal	BL	BL	BL	BL	NA



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2. Chemical confirm results:

Test Item(s)	Result (mg/kg)					Limit (mg/kg)
	1-5-1	1-8-1	1-10-4	---	---	
Hexavalent Chromium (Cr ⁶⁺)	Negative	Negative	Negative	Negative	Negative	--
Comment	PASS	PASS	PASS	PASS	PASS	--

Test Item(s)	Result (mg/kg)					Limit (mg/kg)
	1-13-2	1-18-2	2-27-1	---	---	
Mono-PBB	ND	ND	ND	ND	ND	--
Di-PBB	ND	ND	ND	ND	ND	--
Tri-PBB	ND	ND	ND	ND	ND	--
Tetra-PBB	ND	ND	ND	ND	ND	--
Penta-PBB	ND	ND	ND	ND	ND	--
Hexa-PBB	ND	ND	ND	ND	ND	--
Hepta-PBB	ND	ND	ND	ND	ND	--
Octa-PBB	ND	ND	ND	ND	ND	--
Nona-PBB	ND	ND	ND	ND	ND	--
Deca-PBB	ND	ND	ND	ND	ND	--
Sum of PBBs	ND	ND	ND	ND	ND	1000
Mono-PBDE	ND	ND	ND	ND	ND	--
Di- PBDE	ND	ND	ND	ND	ND	--
Tri- PBDE	ND	ND	ND	ND	ND	--
Tetra- PBDE	ND	ND	ND	ND	ND	--
Penta- PBDE	ND	ND	ND	ND	ND	--
Hexa- PBDE	ND	ND	ND	ND	ND	--
Hepta- PBDE	ND	ND	ND	ND	ND	--
Octa- PBDE	ND	ND	ND	ND	ND	--
Nona- PBDE	ND	ND	ND	ND	ND	--
Deca- PBDE	ND	ND	ND	ND	ND	--
Sum of PBDEs	ND	ND	ND	ND	ND	1000
Comment	PASS	PASS	PASS	PASS	PASS	--



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Remark:

1. BL = below limit
2. OL = over limit
3. IN = inconclusive, chemical confirm test is recommended
4. NA = not applicable
5. mg/kg = milligram per kilogram = ppm
6. Method Detection Limit (MDL) :10mg/kg for Pb, Cd, Hg and Cr⁶⁺; 10mg/kg for PBB and PBDE
7. ND = not detected
8. Negative = The Cr⁶⁺ concentration is below the limit of quantification. The coating is considered a non-Cr⁶⁺ based coating.
9. Positive = The Cr⁶⁺ concentration is above the limit of quantification and the statistical margin of error, The sample coating is considered to contain Cr⁶⁺.

Note:

1. When perform screening tests, it is the result on total Br while test item on restricted substances is PBBs/PBDEs, it is the result on total Cr while test item on restricted substances is Cr⁶⁺.
2. Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr⁶⁺) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration falls into the inconclusive area according to IEC 62321-3-1:2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	BL≤(70-3σ)<X<(130+3σ) ≤OL	BL≤(70-3σ)<X<(130+3σ) ≤OL	LOD<X<(150+3σ) ≤OL
Pb	BL≤(700-3σ) <X<(1300+3σ) ≤OL	BL≤(700-3σ)<X<(1300+3σ) ≤OL	BL≤(500-3σ) <X<(1500+3σ) ≤OL
Hg	BL≤(700-3σ) <X<(1300+3σ) ≤OL	BL≤(700-3σ)<X<(1300+3σ) ≤OL	BL≤(500-3σ) <X<(1500+3σ) ≤OL
Br	BL≤(300-3σ)<X	---	BL≤(250-3σ)<X
Cr	BL≤(700-3σ)<X	BL≤(700-3σ)<X	BL≤(500-3σ)<X

3. The XRF screening test for RoHS elements. The reading may be different to the actual content in the sample be of non-uniformity composition.
4. "Exempted" indicates the tested components were exempted to contain lead up to 4% according to annex III of 2011/65/EU.
5. Results of tested component 1-12-2 were based on component part resubmitted by the applicant.

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Tested sample photo:



--- End of Report ---