



# Shenzhen Toby Technology Co., Ltd.

10/F., A Block, Jiada R & D Bldg., No.5 Songpingshan Road,  
Science & Technology Park, Nanshan District, Shenzhen, China

Tel: (86) 755-26509301/02 Fax: (86) 755-26509195 Http: //www.tongbiao.com

## CONSOLIDATED TEST REPORT

### Sample information:

1. Applicant: LILING Z. X. D MICROMOTORCO.
2. Applicant Address: NO. 59, WANNIRORD, XISHANTOWN, LILINGCITY, HUNAN, CHINA
3. Sample Name: Coreless Permanent magnet DC Motor
4. Type No. : § 7 Coreless Permanent magnet DC Motor
5. Manufacturer: LILING Z. X. D MICROMOTORCO.
6. Manufacturer Address: NO. 59, WANNIRORD, XISHANTOWN, LILINGCITY, HUNAN, CHINA
7. Sample received date: Jan. 13, 2011
8. Testing period: Jan. 13-18, 2011

### Testing Required:

- 1) As specified by client, to determine the lead, Cadmium, Mercury and Hexavalent Chromium content in the submitted sample in accordance with Directive 2002/95/EC (RoHS).
- 2) As specified by client, to determine the PBB & PBDE content in the submitted sample in accordance with Directive 2002/95/EC (RoHS).

### Test Standards:

Testing Item	Pretreatment method	Measuring method	Report Limit
Lead (Pb)	IEC 62321, section 8/9	IEC62321 (ICP-OES)	2ppm
Cadmium (Cd)	IEC 62321, section 8/9	IEC62321 (ICP-OES)	2ppm
Mercury (Hg)	IEC 62321, section 7	IEC62321 (CV-AAS)	2ppm
Chromium (Cr <sup>6+</sup> )	IEC 62321, Annex B/C	IEC62321 (UV-VIS)	0.02ppm* 2ppm
PBBs/ PBDEs	IEC 62321, Annex A	IEC62321 (GC-MS)	5ppm

Note: \* 0.02ppm refers to the MQL of sample extraction liquid.

### Remarks:

1. The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the company.
2. Characterization & Condition of sample: Normal.
3. Ambient Condition During Testing: (15~22) °C, (50~68) % RH.

### Conclusion:

When tested as all below, the result shown on these reports do not exceed the limit in commission decision of 18 Aug 2005 amending Directive 2002/95/EC (ROHS) notified under document 2005/618/EC.

Signed for Shenzhen TOBY

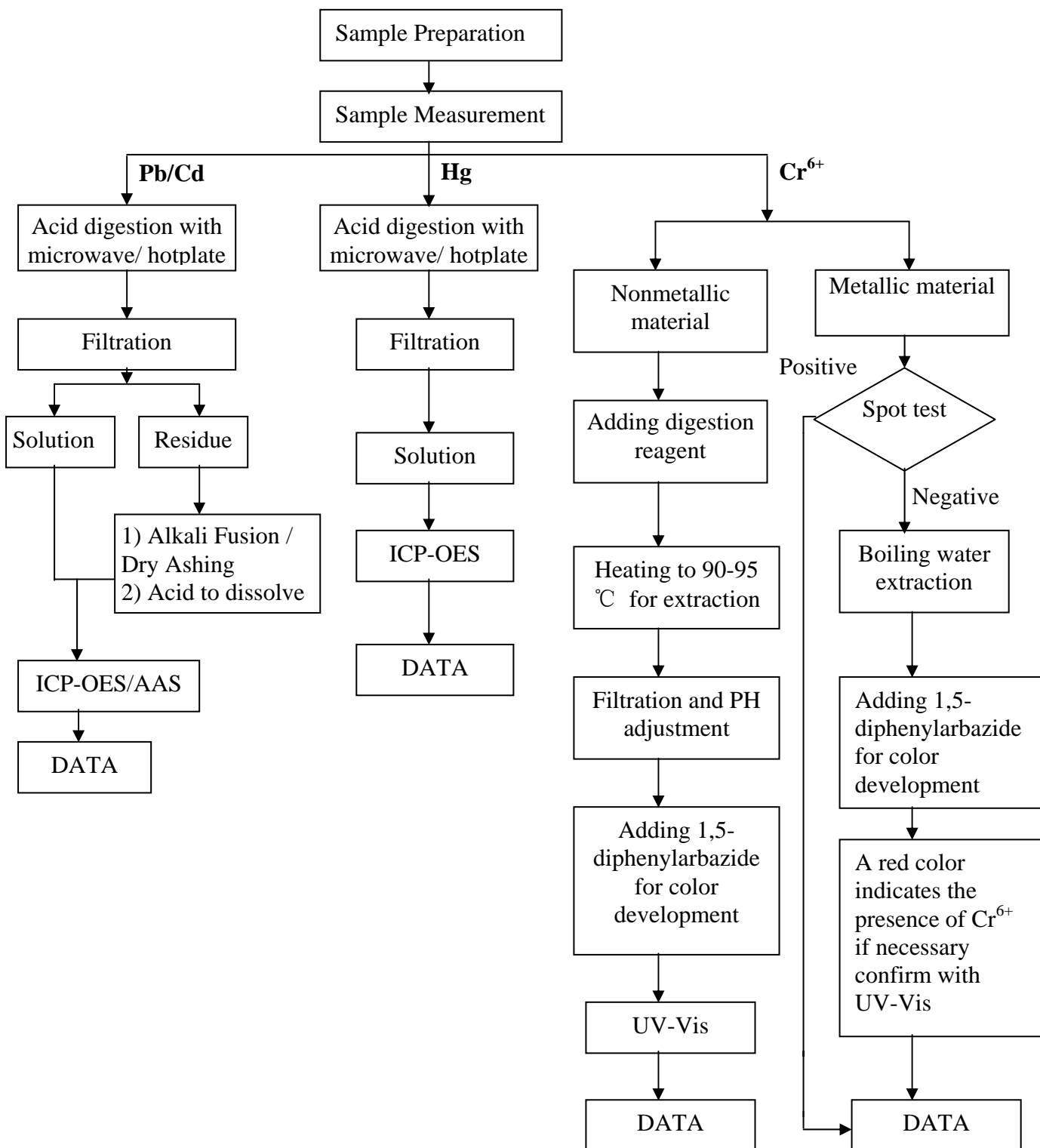
Justin Zhang  
Manager



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**Test flow:**

**1. To Determine Lead/Cadmium/Mercury/ Hexavalent Chromium Content:**

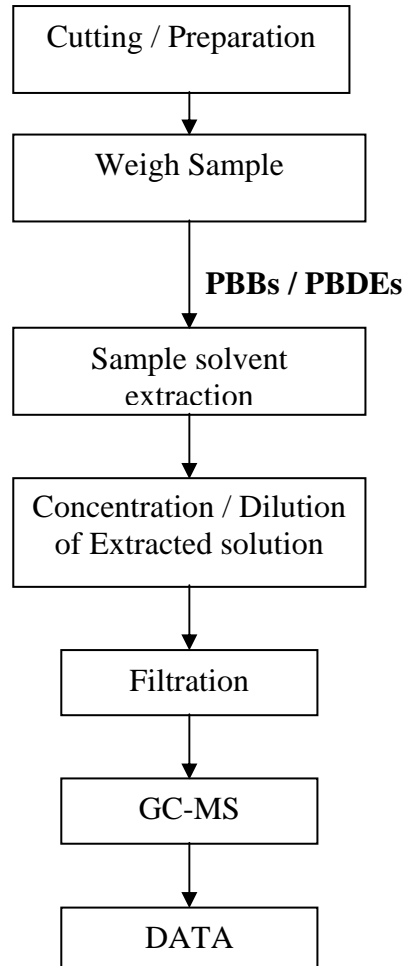




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### 2. To Determine PBBs/PBDEs Content:





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NO.	SAMPLES NAME	SPECIFICATION	TEST REPORT NO.	DESCRIPTION
1	PVC WIRE	-----	CANEC0904221508	GREEN PLASTIC W/BLACK PRINTING (JACKET)
2	COMMUTATOR	-----	CANEC0905862702	BRASSY METAL
3	ENAMELED WIRE	-----	RLSZC000466630001C	COPPER ENAMELED WIRE
4	TUBE	-----	F690501/LF-CTSAYAA1 0-01105	KEPITAL
5	MAGNETIC	-----	CANEC1000564501	DK-GREY SHEET
6	BEARING	-----	RLSZC000468870002C	COPPER WIRE
7	BRUSH	-----	CQ0906099/CHEM	SILVER-GRAY METAL
8	COVER BOARD	-----	CANEC0903673301	GREY SURFACED METAL
9	IRON CORE	-----	CANEC1000155802	SILVERY METAL
10	STOPPER PIECES	-----	1001233	BLACK RUBBER



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### 1) Test Result: Heavy Metals (Pb, Cd, Cr<sup>6+</sup>, Hg) Tests

Element	Pb	Cd	Cr <sup>6+</sup>	Hg
Limit:	1000 (mg/kg)	100 (mg/kg)	1000 (mg/kg)	1000 (mg/kg)
1	N. D.	N. D.	N. D.	N. D.
2	32	N. D.	N. D.	N. D.
3	N. D.	N. D.	N. D.	N. D.
4	N. D.	N. D.	N. D.	N. D.
5	60	N. D.	N. D.	N. D.
6	N. D.	N. D.	N. D.	N. D.
7	N. D.	N. D.	N. D.	N. D.
8	N. D.	N. D.	N. D.	N. D.
9	N. D.	N. D.	N. D.	N. D.
10	N. D.	N. D.	N. D.	N. D.

◆ “N. D.” means “Not Detected”, method detection limit=2mg/kg.

◆ “ \* ” means be exempted from RoHS Directive.



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## 2) Test Result: Brominated Flame Retardants (PBBs&PBDEs) Tests

PBBs	1	3	4	5	10
MONOBROMOBIPHENYL	N. D.	N. D.	N. D.	N. D.	N. D.
DIBROMOBIPHENYL	N. D.	N. D.	N. D.	N. D.	N. D.
TRIBROMOBIPHENYL	N. D.	N. D.	N. D.	N. D.	N. D.
TETRABROMOBIPHENYL	N. D.	N. D.	N. D.	N. D.	N. D.
PENTABROMONIPHENYL	N. D.	N. D.	N. D.	N. D.	N. D.
HEXQBROMOBIPHENYL	N. D.	N. D.	N. D.	N. D.	N. D.
HEPTABROMOBIPHENYL	N. D.	N. D.	N. D.	N. D.	N. D.
OCTABROMOBIPHENYL	N. D.	N. D.	N. D.	N. D.	N. D.
NONABROMOBIPHENYL	N. D.	N. D.	N. D.	N. D.	N. D.
DECABROMOBIPHENYL	N. D.	N. D.	N. D.	N. D.	N. D.
Sum of PBBs	N. D.	N. D.	N. D.	N. D.	N. D.
PBDEs	1	3	4	5	10
MONOBROMODIPHENYL ETHER	N. D.	N. D.	N. D.	N. D.	N. D.
DIBROMODIPHENYL ETHER	N. D.	N. D.	N. D.	N. D.	N. D.
TRIBROMODIPHENYL ETHER	N. D.	N. D.	N. D.	N. D.	N. D.
TETRABROMODIPHENYL ETHER	N. D.	N. D.	N. D.	N. D.	N. D.
PENTABROMONIPHENYL ETHER	N. D.	N. D.	N. D.	N. D.	N. D.
HEXABROMODIPHENYL ETHER	N. D.	N. D.	N. D.	N. D.	N. D.
HEPTABROMODIPHENYL ETHER	N. D.	N. D.	N. D.	N. D.	N. D.
OCTABROMODIPHENYL ETHER	N. D.	N. D.	N. D.	N. D.	N. D.
NONABROMODIPHENYL ETHER	N. D.	N. D.	N. D.	N. D.	N. D.
DECABROMODIPHENYL ETHER	N. D.	N. D.	N. D.	N. D.	N. D.
Sum of PBDEs	N. D.	N. D.	N. D.	N. D.	N. D.

◆ PBBs Limit = 1000 ppm, PBDEs Limit = 1000 ppm

◆ “N. D.” means “Not Detected”, method detection limit = 5mg/kg.



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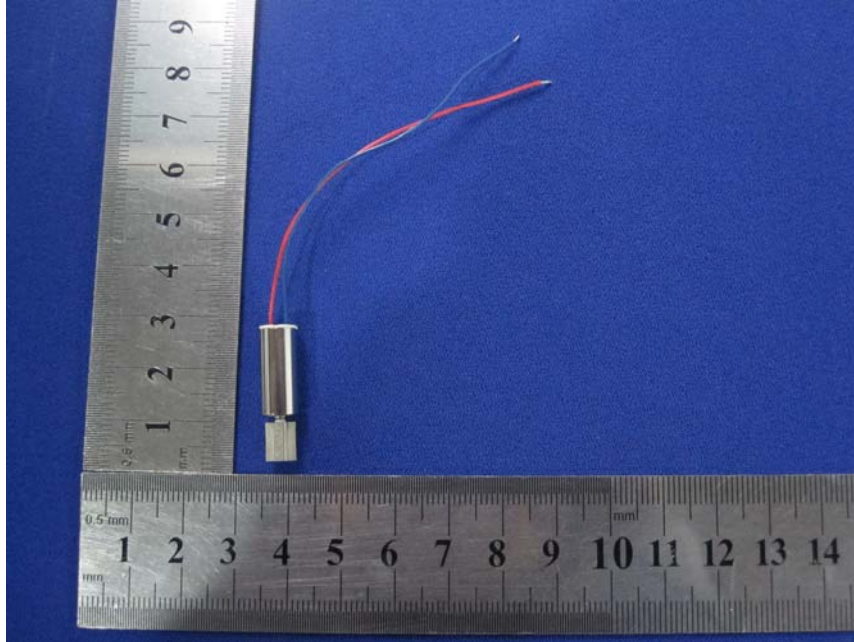
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### Appearance Photo of Sample



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