



# TEST REPORT

Report No.:AZT24052308C-E0

Date of issue: June 03, 2024

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**Applicant** : JYC POWER CO., LIMITED  
**Address** : FLAT/RM 1512,15F,LUCKY CENTRE,NO. 165-171 WAN CHAI ROAD,WAN CHAI,HK  
**Manufacturer** : JYC BATTERY MANUFACTURER CO., LTD  
**Address** : WENGCHENG INDUSTRIAL PARK,GUANDU DEVELOPMENT ZONE,WENGYUAN,SHAOGUAN,GUANGDONG

Report on the submitted samples said to be:

**Sample Name** : Valve Regulated Lead Acid Battery  
**Tested model** : 12V7AH  
4V4AH,4V6AH,6V1.3AH,6V4AH,6V4.5AH,6V5AH,6V7AH,6V10AH,6V12AH, 12V0.8AH,12V1.2AH,12V1.3AH,12V2AH,12V2.2AH,12V2.3AH,12V2.5AH, 12V2.6AH,12V2.9AH,12V3.2AH,12V3.3AH,12V4AH,12V4.5AH,12V5AH, 12V5.5AH,12V6AH,12V6.2AH,12V7AH,12V7.2AH,12V7.5AH,12V8AH, 12V8.5AH,12V9AH,12V10AH,12V12AH,12V14AH,12V17AH,12V18AH, 12V20AH,12V24AH,12V26AH,12V28AH,12V30AH,12V33AH,12V35AH, 12V36AH,12V38AH,12V40AH,12V45AH,12V50AH,12V55AH,12V58AH, 12V60AH,12V65AH,12V70AH,12V75AH,12V80AH,12V85AH,12V90AH, 12V92AH,12V100AH,12V105AH,12V110AH,12V120AH,12V130AH, 12V132AH,12V150AH,12V155AH,12V180AH,12V200AH,12V210AH , 12V220AH,12V230AH,12V235AH,12V250AH,12V255AH,12V260AH, 12V280AH,12V300AH,OPZS 6V600AH,OPZS 6V600AH,HR1237W,HR1235W  
**Series models** :  
**Date of Sample Received** : May 23, 2024  
**Testing Period** : May 23, 2024 ~ June 03, 2024  
**Results** : Please refer to next page(s).

## TEST REQUEST

According to the customer's request, based on the performed tests on submitted sample, the result of Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs, PBDEs, Dibutyl Phthalate (DBP), Benzyl butyl Phthalate (BBP), Bis(2-ethylhexyl) Phthalate (DEHP), Diisobutyl phthalate (DIBP) content comply with the limit as set of RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863.

## CONCLUSION

Pass

Signed for and on behalf of AZT

Jack Zhong



Shenzhen AZT Technology Co., Ltd.

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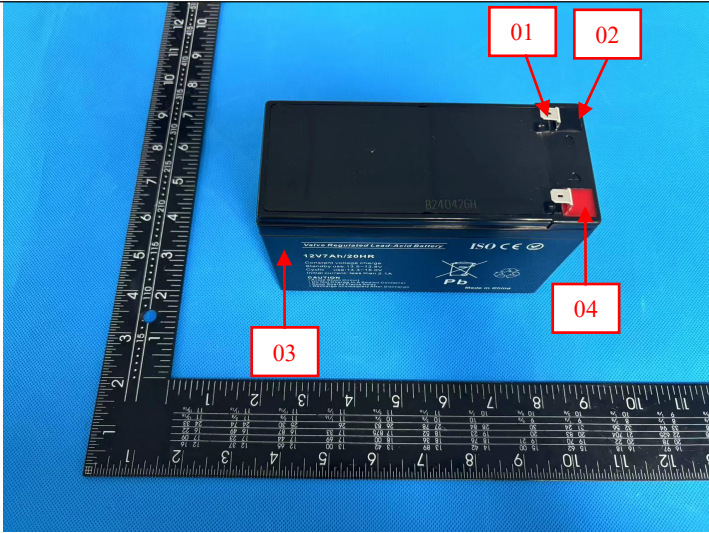

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## Test Item Description And Photo List

No.	Tested Part(s)	The photo of the sample
1	Silvery metal	
2	Black glue	
3	Black plastic	
4	Red glue	
5	Black rubber	
6	White cotton	



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## Results:

### A. RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863 on XRF

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

No.	Tested Part(s)	Results					
		Cd	Pb	Hg	Cr▼	Br▼	
						PBBs	PBDEs
1	Silvery metal	BL	BL	BL	BL	/	/
2	Black glue	BL	BL	BL	BL	BL	BL
3	Black plastic	BL	BL	BL	BL	BL	BL
4	Red glue	BL	BL	BL	BL	BL	BL
5	Black rubber	BL	BL	BL	BL	BL	BL
6	White cotton	BL	BL	BL	BL	BL	BL

## Note:

- (1) 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.

### XRF screening limits for different materials:

Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	$BL \leq 70 - 3\sigma < X < 130 + 3\sigma \leq OL$	$BL \leq 70 - 3\sigma < X < 130 + 3\sigma \leq OL$	$BL \leq 50 - 3\sigma < X < 150 + 3\sigma \leq OL$
Pb	mg/kg	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma < X < 1500 + 3\sigma \leq OL$
Hg	mg/kg	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma < X < 1500 + 3\sigma \leq OL$
Cr	mg/kg	$BL \leq 700 - 3\sigma < X$	$BL \leq 700 - 3\sigma < X$	$BL \leq 500 - 3\sigma < X$
Br	mg/kg	$BL \leq 300 - 3\sigma < X$	--	$BL \leq 250 - 3\sigma < X$

## Note:

BL = Below Limit  
OL = Over Limit  
X = Inconclusive

- (2) The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
- (3) The maximum permissible limit is quoted from the RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863.
- (4) ▼=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.



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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 diphenyl ethers (PBDEs)	1000
Dibutyl Phthalate (DBP)	1000
Benzyl butyl Phthalate (BBP)	1000
Bis(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.



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## **B. RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863 - Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs, PBDEs, DBP, BBP, DEHP, DIBP content.**

### Test method:

#### Lead & Cadmium Content:

With reference to IEC 62321-5:2013, analysis was performed by Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES).

#### Mercury Content:

With reference to IEC 62321-4:2013+AMD1:2017 CSV, analysis was performed by Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES).

#### Hexavalent Chromium Content:

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

#### PBBs & PBDEs Content:

With reference to IEC 62321-6:2015, analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

#### DBP, BBP, DEHP, DIBP Content:

With reference to IEC 62321-8:2017, analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

### **1) The test results of DBP, BBP, DEHP & DIBP**

Test Items	CAS No.	Unit	MDL	Results		Limit
				2+3+4	5	
Dibutyl Phthalate (DBP)	84-74-2	mg/kg	50	N.D.	N.D.	1000
Benzyl butyl Phthalate (BBP)	85-68-7	mg/kg	50	N.D.	N.D.	1000
Bis(2-ethylhexyl) Phthalate (DEHP)	117-81-7	mg/kg	50	N.D.	N.D.	1000
Diisobutyl Phthalate (DIBP)	84-69-5	mg/kg	50	N.D.	N.D.	1000

### Remark:

- mg/kg = ppm
- N.D. = Not detected
- MDL= Method detected limited
- The samples were mixed for phthalic acid test
- Tested part(s) was/were specified by client
- Flow chart appendix is included
- Photo appendix is included



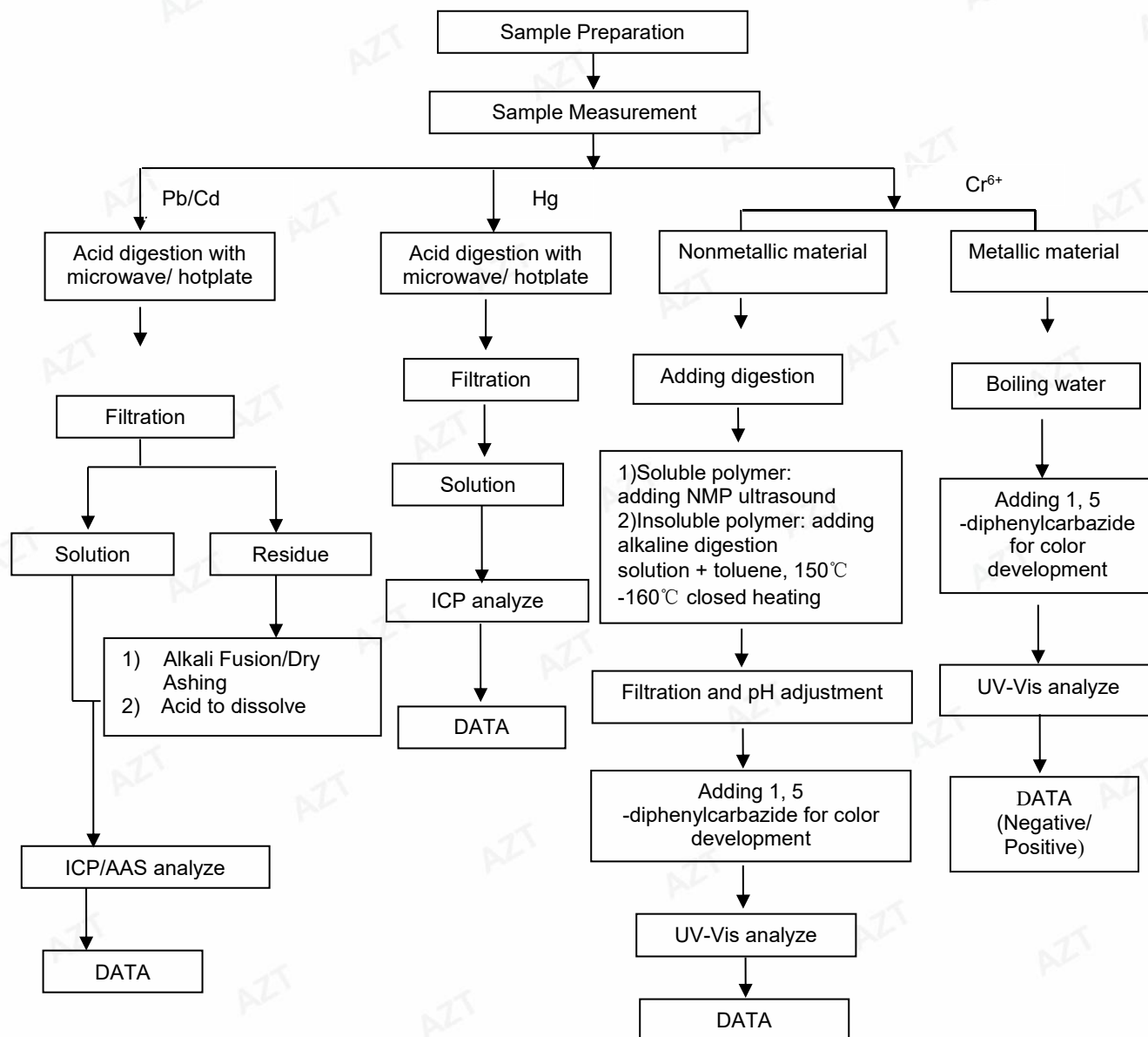
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## Appendix

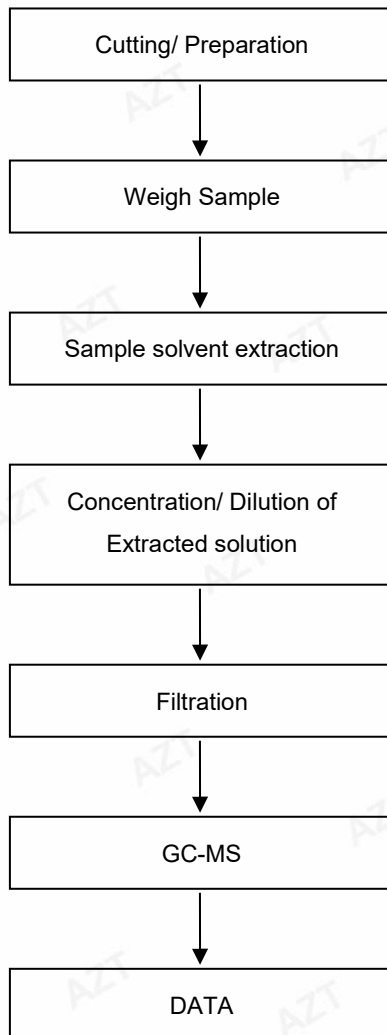
### Pb/Cd/Hg/Cr<sup>6+</sup> Testing Flow Chart





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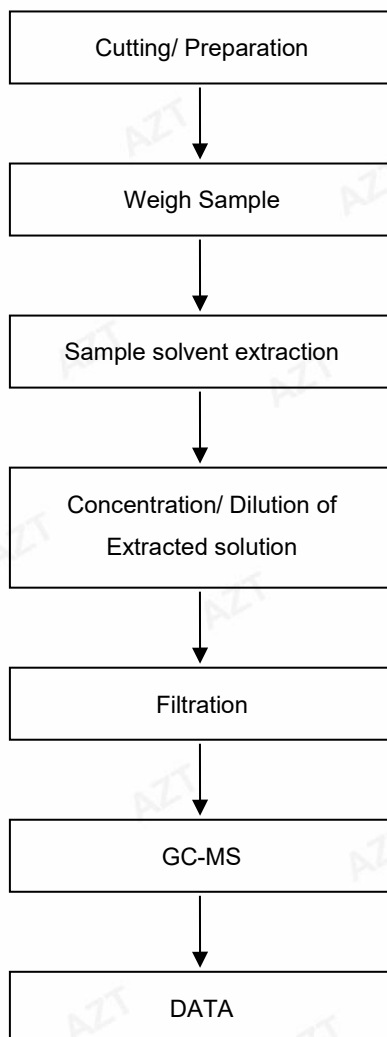
## PBBs/PBDEs Testing Flow Chart





# TEST REPORT

## Phthalates Testing Flow Chart







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## The photo of the sample



AZT authenticate the photo on original report only

### Statement:

1. This test report is invalid without the signature of the approver and the special seal of the company's report.
2. The copy of the test report is invalid if the "special seal for testing" or "Special Seal for testing" or the official seal of the testing unit is not re-stamped.
3. After the test report is altered, the test report is invalid.
4. If there is any objection to the test report, please submit written comments to the laboratory within 15 days from the date of receipt of the report.
5. This test is only responsible for samples provided by customers.
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\*\*\* End of Report \*\*\*



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