

Test Report

No. CANEC1827055510

Date: 07 Jan 2019

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GUANGDONG LIWANG NEW ENERGY CO.,LTD

SHIMA VILLAGE,TANGXIA TOWN,DONGGUAN CITY GUANGDONG PROVINCE CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : Carbon Zinc-Manganese Dioxide Battery

SGS Job No. : CP18-069718 - SZ

Model No. : R6P

Client Ref. Info. : R03,R14P,R20P,R1,6F22

Date of Sample Received : 28 Dec 2018

Testing Period : 28 Dec 2018 - 04 Jan 2019

Test Requested : Selected test(s) as requested by client.

Test Method : Please refer to next page(s).

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

Conclusion : The submitted battery sample does not exceed the limit mentioned in European Directive 2006/66/EC and its Article 4 amendment of Directive 2013/56/EU.

When tested as specified by the client, the tested parameters comply with the Mercury content requirement of the US Mercury – Containing Battery Management Act Public Law No. 104-142 (1996).

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch



Violet,Shi
Approved Signatory



Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN18-270555.007	Battery
SN2	CAN18-270555.025	Battery

Remarks :

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

European Directive 2006/66/EC and its Article 4 amendment of Directive 2013/56/EU– Heavy Metals Content in Batteries and Accumulators

Test Method : Acid digestion method, analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>007</u>
Cadmium (Cd)	0.0020	%(w/w)	0.0010	ND
Lead (Pb)	-	%(w/w)	0.0010	ND
Mercury (Hg)	0.0005	%(w/w)	0.0001	ND

Notes :

- (1) Results shown are of total weight of the battery sample.
- (2) According to the European Directive 2006/66/EC and its Article 4 amendment of Directive 2013/56/EU, all types of battery shall include the chemical symbol Lead when containing more than 0.004% of Pb.

US Mercury-Containing Battery Management Act Public Law 104-142(1996))-Mercury (Hg)

Test Method : Acid digestion method, analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>025</u>
Mercury (Hg)	*	mg/kg	0.1	ND

Notes :



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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

(1) Limit shown is with reference to the US Mercury – Containing Battery Management Act Public Law No.104-142 (1996).

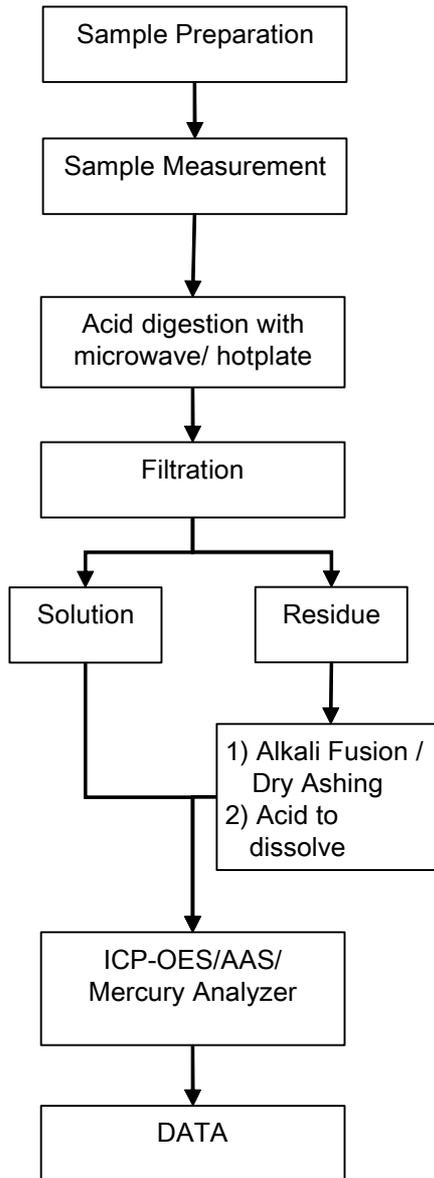
Table 1

Battery type	MDL	Limit*
Alkaline-manganese button cell	0.1mg/cell	25mg/cell
Zinc-Carbon battery	0.1mg/kg	ND
Alkaline-manganese battery	0.1mg/kg	ND
Other battery	0.1mg/kg	-

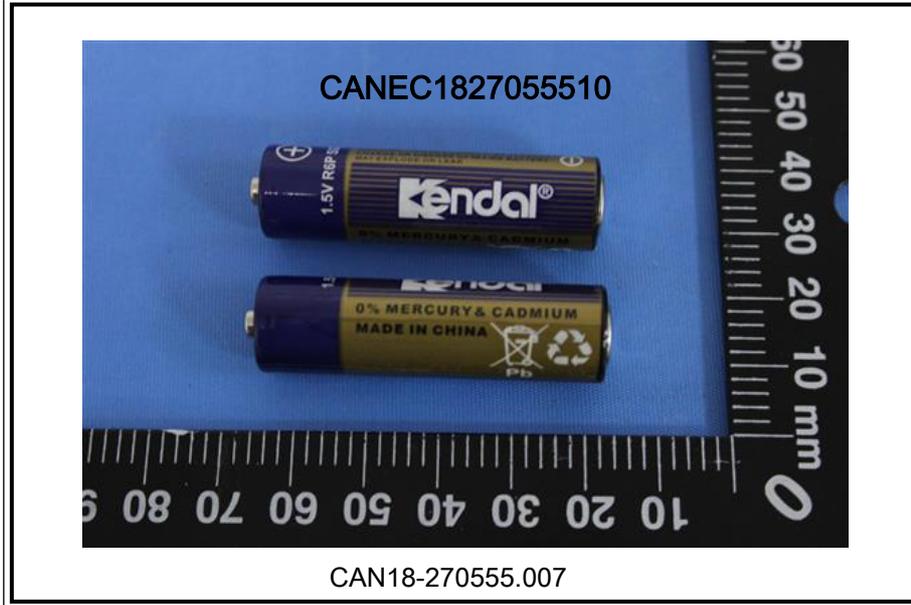


ATTACHMENTS

Battery Testing Flow Chart



Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

