

Test Report

No.: SZXEC25004803301

Date: Dec 17, 2025

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Client Name: GUANGDONG LIWANG NEW ENERGY CO.,LTD.

Client Address: NO 10,LIANTANGJIAO 2ND ROAD,TANGXIA TOWN,DONGGUAN CITY,GUANGDONG PROVINCE,CHINA

Sample Name: Alkaline Zinc-Manganese Dioxide Battery

Model No.: LR03

Client Ref. Information: LR6,LR14,LR20,LR1,6LR61

Sample Type: Portable battery (non-zinc-air button cell)

The above sample(s) and information were provided by the client.

SGS Job No.: SZP25-062432

Sample Receiving Date: Dec 09, 2025

Testing Period: Dec 09, 2025 ~ Dec 17, 2025

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

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

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

Test Requirement	Conclusion
US Mercury-Containing Battery Management Act Public Law 104-142(1996)-Mercury (Hg)	Pass
Annex I of Regulation (EU) 2023/1542– Heavy Metals Content in batteries and waste batteries	Pass

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

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May Bei

Approved Signatory

Scan to see the report



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Shenzhen Branch

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Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A	SZX25-0048033-0001	"Alkaline Zinc-Manganese Dioxide Battery"
SN2	A2	SZX25-0048033-0001.C002	"Battery"

Remarks:

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

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

Test Method: SGS In House Method, analysis was performed by ICP-OES or Hg-analyzer.

Test Item(s)	Limit	Unit(s)	MDL	A2
Mercury(Hg)	*	mg/kg	0.1	ND
Conclusion				Pass

Notes:

- (1) *Limit shown is with reference to the US Mercury - Containing Battery Management Act Public Law No 104-142 (1996).
- (2) Mercury Reference Information: (requirement of the US Mercury – Containing Battery Management Act Public Law No. 104-142 (1996)).
 - a) No person shall sell, offer for sale, or offer for promotional purposes any alkaline-manganese battery manufactured on or after the date of enactment of this Act, with a mercury content that was intentionally introduced (as distinguished from mercury that may be incidentally present in other materials), except that the limitation on mercury content in alkaline-manganese button cells shall be 25 milligrams of mercury per button cell.
 - b) No person shall sell, offer for sale, or offer for promotional purposes any zinc-carbon battery manufactured on or after the date of enactment of this Act, that contains mercury that was intentionally introduced.
 - c) No person shall sell, offer for sale, or offer for promotional purposes any button cell mercuric-oxide battery for use in the United States on or after the date of enactment of this Act.
 - d) On or after the date of enactment of this Act, no person shall sell, offer for sale, or offer for promotional purposes a mercuric-oxide battery for use in the United States.

Table 1

	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	-

Annex I of Regulation (EU) 2023/1542– Heavy Metals Content in batteries and waste batteries

Test Method: SGS In House Method, analysis was performed by ICP-OES or AAS or Hg-analyzer.



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Test Item(s)	Limit	Unit(s)	MDL	A
Lead(Pb)	0.01	%	0.0010	ND
Cadmium(Cd)	0.002	%	0.0010	ND
Mercury(Hg)	0.0005	%	0.0001	ND
Conclusion				Pass

Notes:

(1) Restriction on substances

Column 1 Designation of the substance or group of substances	Column 2 Conditions of restriction
1. Mercury CAS No 7439-97-6 EC No 231-106-7 and its compounds	Batteries, whether or not incorporated into appliances, light means of transport or other vehicles, shall not contain more than 0,0005 % of mercury (expressed as mercury metal) by weight
2. Cadmium CAS No 7440-43-9 EC No 231-152-8 and its compounds	Portable batteries, whether or not incorporated into appliances, light means of transport or other vehicles, shall not contain more than 0,002 % of cadmium (expressed as cadmium metal) by weight
3. Lead CAS No 7439-92-1 EC No 231-100-4 and its compounds	1. From 18 August 2024, portable batteries, whether or not incorporated into appliances, shall not contain more than 0,01 % of lead (expressed as lead metal) by weight. 2. The restriction set out in point 1 shall not apply to portable zinc-air button cells until 18 August 2028.

(2) According to the EU New Battery Regulation (EU) 2023/1542, portable batteries (non portable zinc-air button cells) containing between 0,004 %-0.01 % lead, shall be marked with the chemical symbol for the metal concerned: Pb.

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule ($w=0$) stated in ILAC-G8:09/2019.



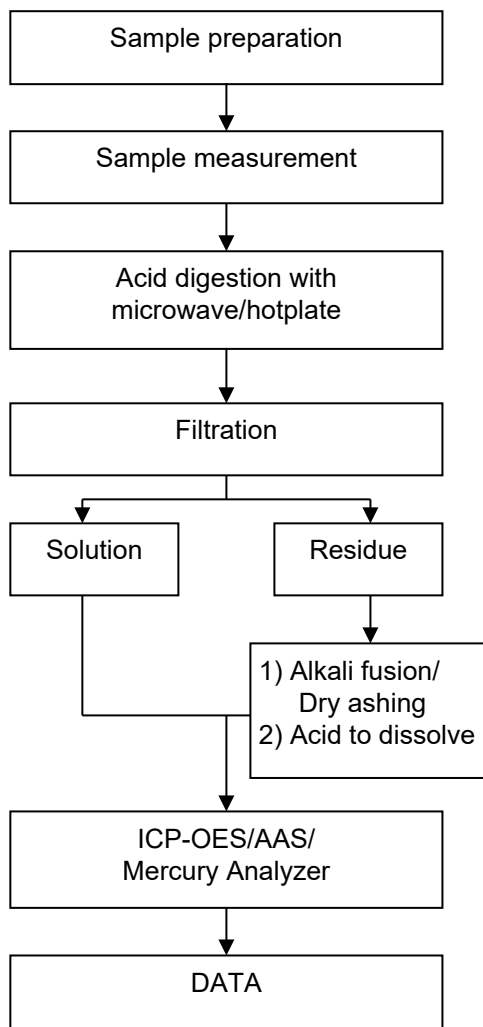
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Battery Testing Flow Chart



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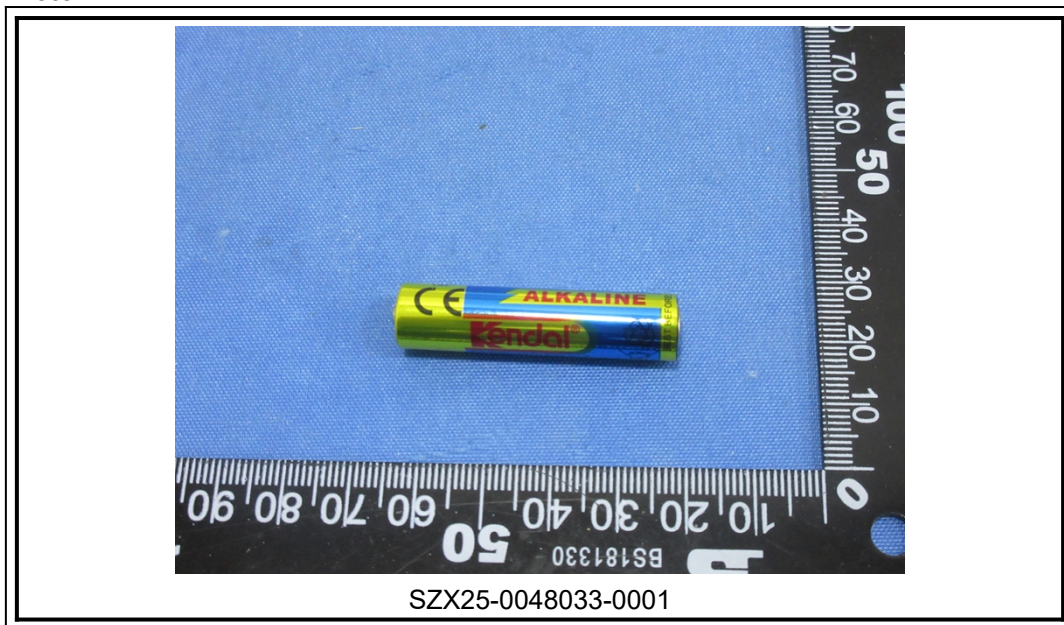
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Sample Photo:



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