

This report supersedes all previous documents bearing the test report number T31920202375SC.

The following samples were submitted and identified on behalf of the client as:

1.5 VOLT 0.% HG MERCURY FREE ALKALINE ZINC MANGANESE BUTTON CELL

SGS Case No. : CA319202041899
 Style / Item No. : G 13 /LR44/357/A76, LR44(EXP), LR44(HG.PB), G 12/LR43/386/186, G 11/LR721/362/162, G 10/LR1130/189, G 9/LR936/394/194, G 8/LR1120/391/191, G7/LR927/395/195, G6/LR920/371/171, G5/LR754/393/193, G4/LR626/377/177, G3/LR41/393/192, G2/LR726/SR726/196, G1/LR621/364/164, G 0/LR521/SR521, LR932, LR732, LR632
 Sample Receiving Date : JAN 28, 2019
 Test Performing Date : JAN 28 – FEB 01, 2019

Test Requested		Conclusion
1.	European Directive 2006/66/EC and its amendments (Directive 2013/56/EU) – Lead, Cadmium and Mercury Content	PASS
2.	Mercury requirement in compliance with various USA States requirement	PASS
3.	US Public Law 104-142 (1996) Title II – Mercury-Containing Battery Management Act – Mercury Content	PASS

***** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) *****

Signed for and on behalf of
 SGS Hong Kong Ltd.



Che Wai Leuk, Jerry
 Technical Manager



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

H33194669



Test Results:

1. European Directive 2006/66/EC and its amendments (Directive 2013/56/EU) – Lead, Cadmium and Mercury Content

Method: With reference to IEC 62321-4:2013, IEC 62321-5:2013

Analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) / Atomic Absorption Spectrometer (AAS) / Direct Mercury Analyzer (DMA)

For Button Cells

Test Item(s)	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)
MDL (%)	0.001	0.001	0.0001
Labeling requirement (%)	> 0.004	> 0.002	--
Permissible Limit (%)	--	0.002	0.0005
Specimen Description	Result(s) (%)		
1. Alkaline Button Battery 0% Hg LR1130	ND	ND	ND

- Note:
- % = percentage by weight
 - ND = Not Detected (lower than MDL)
 - 1% = 10000 mg/kg = 10000 ppm
 - > = greater than

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

H33194670

2. Mercury Requirement in Compliance with Various USA States Requirement

Method: With reference to EPA 3052: 1996 / Acid Digestion

Analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) / Direct Mercury Analyzer (DMA)

Test Item(s)	Mercury (Hg)
MDL (mg/kg)	1
Requirement (mg/kg)	Prohibited
Specimen Description	Result(s) (mg/kg)
1. Alkaline Button Battery 0% Hg LR1130	ND

- Note:
- mg/kg = milligram per kilogram
 - ND = Not Detected (lower than MDL)
 - 1% = 10000 mg/kg = 10000 ppm

Region	Act/Regulation	Scope	Effective Date
Connecticut State	Public Act 06-181 (HB 5446, 2006)	Button cell batteries containing mercury	July 1, 2011
		Button cell batteries used in Medical device for delivering insulin	January 1, 2015
		Silver oxide button cell batteries	July 1, 2012
Maine State	Public Law, Chapter 86 (LD 1026, 124th Maine State Legislature)	Mercury-added button cell batteries: 1. Zinc- air button cell battery 2. Alkaline manganese button cell battery 3. Silver oxide button cell stamped with the designation SR357, SR 364, SR371, SR377, SR395, SR44W, SR621SW, SR626SW, SR920SW or SR927SW	January 1, 2012
		Mercury-added silver oxide button cell batteries	January 2, 2015
Rhode Island State	H 6396, Chapter 387 (2007)	Mercury-added button cell batteries	July 1, 2011
		Silver oxide button cell batteries	January 1, 2012

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

H33194671

3. US Public Law 104-142 (1996) Title II – Mercury-Containing Battery Management Act – Mercury Content

Method: IEC 62321-4:2013

Analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) / Direct Mercury Analyzer (DMA)

For Battery except Alkaline Manganese Button Cell

Test Item(s)	Mercury (Hg)
MDL (mg/kg)	1
Requirement (mg/kg)	Prohibited
Specimen Description	Result(s) (mg/kg)
1. Alkaline Button Battery 0% Hg LR1130	ND

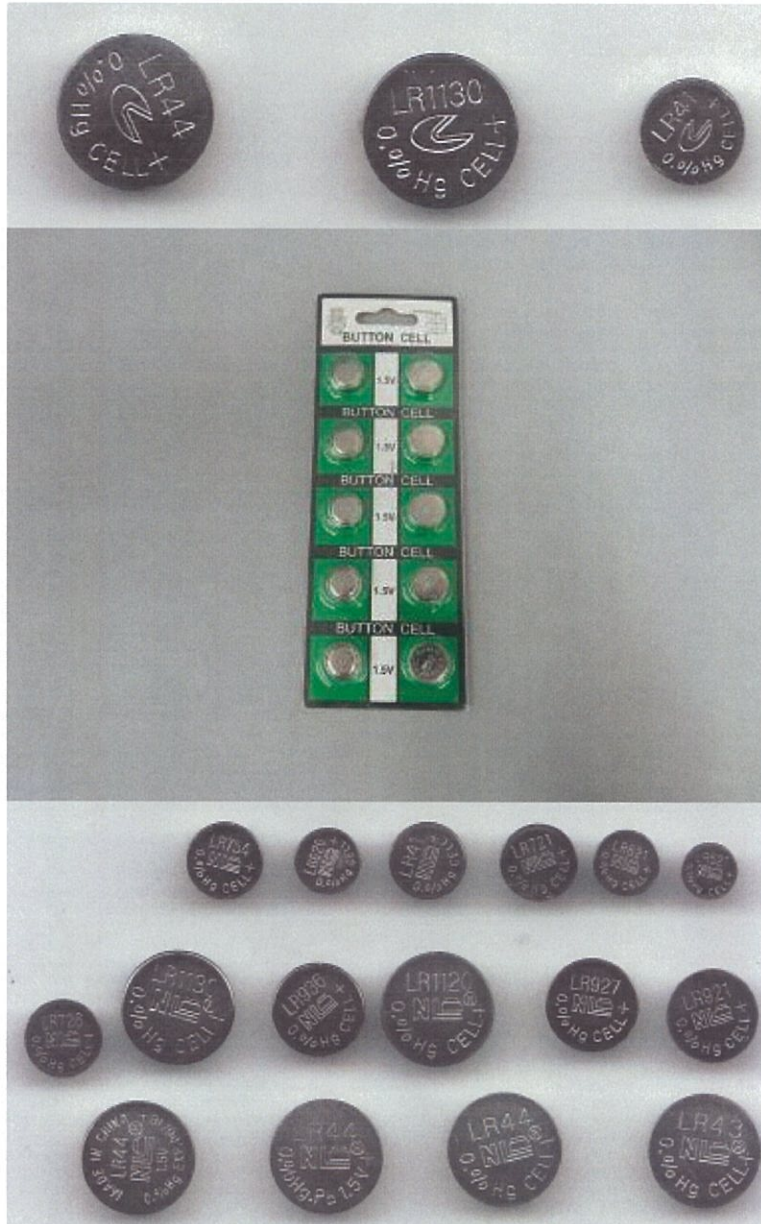
- Note:
- mg/kg = milligram per kilogram
 - ND = Not Detected (lower than MDL)
 - 1% = 10000 mg/kg = 10000 ppm

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

H33194672

Sample Photo:



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

H33194673



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

H33194674



SGS authenticate the photo on original report only

*** End of Report ***

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

H33194675