

## Test Report

No. NGBEC2102284001

Date: 25 May 2021

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NINGHAI HENGJIU BATTERY CO.,LTD  
NO.158 -1 XIDIAN SOUTH ROAD, NINGHAI ,NINGBO,CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : LR44

SGS Job No. : NP21-002350 - NB  
Client Ref. Information : LR41,LR1130,LR927,LR1120,LR754,LR750.LR621,LR626,LR1131,AG1,AG3,AG5,AG10,AG13,AG12,AG8,27A,23A  
Date of Sample Received : 19 May 2021  
Testing Period : 19 May 2021 - 25 May 2021  
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).

### Result Summary :

Test Requested	Conclusion
Directive 2006/66/EC and its Article 4 amendment of Directive 2013/56/EU-Heavy Metals Content in Batteries and Accumulators	PASS

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

*Kell Li*

Kell Li  
Approved Signatory

scan to see the report



NGBEC2102284001



SGS-CSTC Standards Technical Services Co., Ltd.  
Ningbo Branch Chemical Laboratory

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Test Results :

### Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	NGB21-022840.001	Silvery battery

Remarks :

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

### 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.

Test Item(s)	Limit	Unit	MDL	001
Lead (Pb)	-	%	0.001	ND
Cadmium (Cd)	0.002	%	0.001	ND
Mercury (Hg)	0.0005	%	0.0001	ND
<b>Conclusion</b>	<b>PASS</b>			

Notes :

- (1) Results shown are of total weight of the battery sample.



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Ningbo Branch Chemical Laboratory

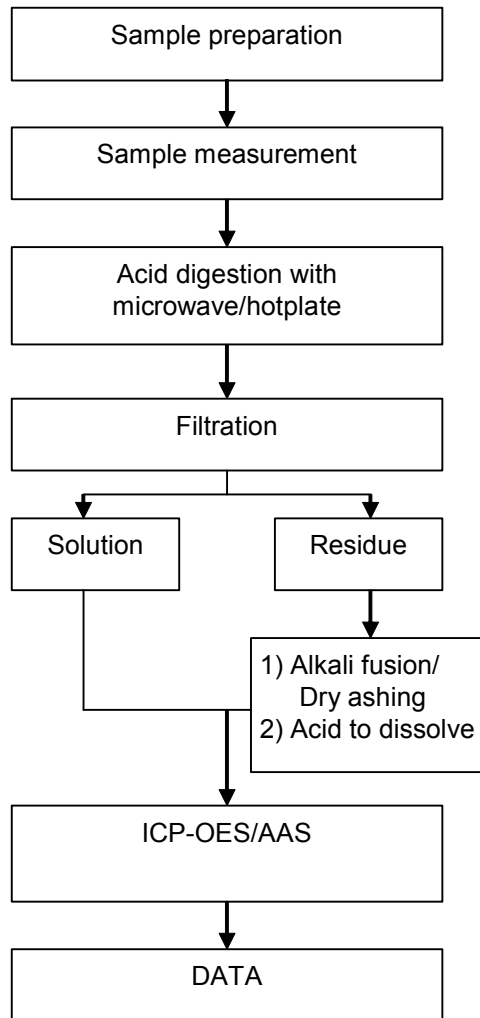
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sgs.china@sgs.com

## ATTACHMENTS

### Battery Testing Flow Chart



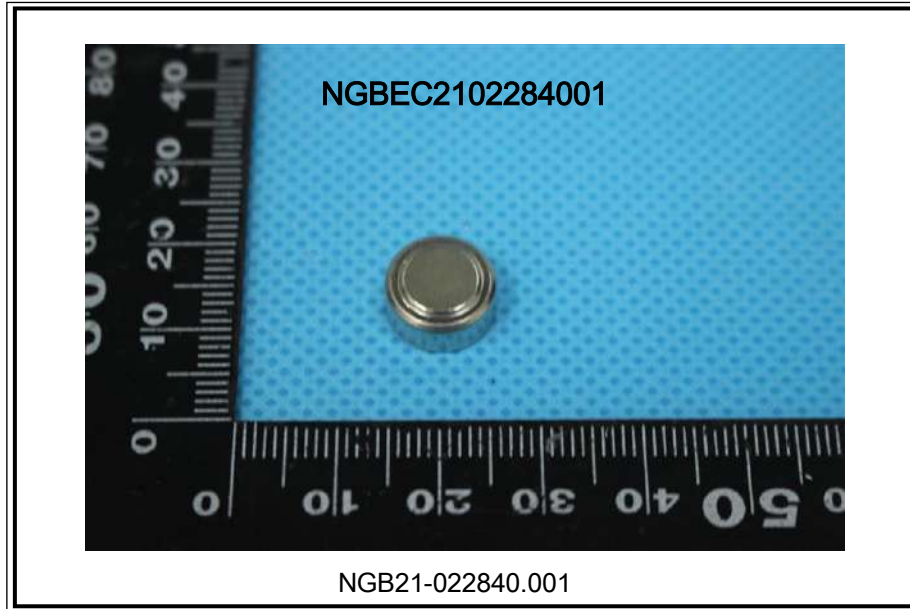
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Sample photo:



SGS authenticate the photo on original report only

\*\*\* End of Report \*\*\*



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**货物运输条件鉴定书**  
Certification  
for Safe Transport of Chemical Goods

**非限制性货物**

**样品名称：** LR44碱性扣式电池（AG13）

**Sample Name:** LR44 ALKALINE BUTTON CELL (AG13)

**委托单位：** 宁海县恒久电池有限公司  
NINGHAI HENGJIU BATTERY CO., LTD

**生产单位：** 宁海县恒久电池有限公司  
NINGHAI HENGJIU BATTERY CO., LTD



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**SICIT 上海化工院检测有限公司**  
Shanghai Institute of Chemical Industry Testing Co., Ltd



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样品名称 Sample Name	中文 Chinese	LR44碱性扣式电池 (AG13)
	英文 English	LR44 ALKALINE BUTTON CELL (AG13)
委托单位 Consignor	宁海县恒久电池有限公司 NINGHAI HENGJIU BATTERY CO.,LTD	
生产单位 Manufacturer	宁海县恒久电池有限公司 NINGHAI HENGJIU BATTERY CO.,LTD	
检验方法、程序 Inspection Methods and Procedures	国际航空运输协会《危险品规则》63版 IATA Dangerous Goods Regulations (DGR) 63rd Edition	
样品外观与气味 Appearance & Odor	银色钮扣状金属外壳, 无臭 Silvery Button metal shell, odorless	
IDENTIFICATION 鉴定结论 CONCLUSION	1. 危险性识别 (Hazards identification)  无。 None.	
	2. 空运按照IATA DGR办理的类项 (Suggestion according to IATA DGR)  根据特殊规定A123, 可按非限制性货物条件办理。 The substance is not subject to IATA DGR according to special provision A123.	
	3. 包装类别 (Packing Group)  无。 None.	
	<div> <div>检验日期: 2022-01-10 Inspection Date:</div> <div>签发日期: 2022-01-10 Issue Date:</div> <div>生效日期: 2022-05-10 Effective Date:</div> </div>	
备注 Comment	无。 None.	

批准  
Approver:

王康

审核  
Checker:

董学胜

主检  
Appraiser:

孙倩



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鉴定项目 Identification Items	鉴定结果 Identification Results
爆炸危险性鉴定 Identification of Explosive Hazards	该货物不属于爆炸品。 The product is not classified in Explosives.
易燃危险性鉴定 Identification of Flammable Hazards	该货物不属于易燃危险品。 The product is not classified in Flammable Substance.
氧化危险性鉴定 Identification of Oxidative Hazards	该货物不属于氧化剂和有机过氧化物。 The product is not classified in Oxidizing Substances and Organic Peroxides.
毒害及传染危险性鉴定 Identification of Toxic & Infectious Hazards	该货物不属于毒害品和感染性物质。 The product is not classified in Toxic and Infectious Substances.
放射危险性鉴定 Identification of Radioactive Hazard	该货物无放射危险性。 The product is not classified in Radioactive Material.
腐蚀危险性鉴定 Identification of Corrosive Hazard	该货物不属于腐蚀品。 The product is not classified in Corrosives.
其他危险性鉴定 Identification of other Hazards	电池必须具有适当的防短路措施,若是以电池为动力的装置、设备或车辆还须采取有效的防止意外启动措施。 The battery must be protected appropriately to prevent a short circuits and any battery powered device, equipment or vehicle must be effectively prepared to prevent unintentional activation.
-验证码:744612-	



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Certification for Safe Transport of Chemical Goods

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\*\*\*报告结束\*\*\*





海运  
By Sea



NO.202200519305900



中国认可  
检验  
INSPECTION  
CNAS B0071

# 货物运输条件鉴定书

## Certification for Safe Transport of Chemical Goods

### 非限制性货物

样品名称： LR44碱性扣式电池（AG13）

Sample Name: LR44 ALKALINE BUTTON CELL (AG13)

委托单位： 宁海县恒久电池有限公司  
NINGHAI HENGJIU BATTERY CO., LTD

生产单位： 宁海县恒久电池有限公司  
NINGHAI HENGJIU BATTERY CO., LTD



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海运  
By Sea



海运  
By Sea

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样品名称 Sample Name	中文 Chinese	LR44碱性扣式电池 (AG13)
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生产单位 Manufacturer	宁海县恒久电池有限公司 NINGHAI HENGJIU BATTERY CO., LTD	
检验方法、程序 Inspection Methods and Procedures	国际海事组织《国际海运危险货物规则》(2020版) IMO International Maritime Dangerous Goods Code (2020 Edition)	
样品外观与气味 Appearance & Odor	银色纽扣状金属外壳, 无臭 Silvery Button metal shell, odorless	
IDENTIFICATION 鉴定结论 CONCLUSION	<p>1. 危险性识别 (Hazards identification)</p> <p>无。 None.</p> <p>2. 海运按照IMO IMDG Code办理的类项 (Suggestion according to IMO IMDG Code)</p> <p>可按非限制性货物条件办理。 The substance is not subject to IMO IMDG Code.</p> <p>3. 包装类别 (Packing Group)</p> <p>无。 None.</p>	
	<p>检验日期: 2022-01-10      签发日期: 2022-01-10      生效日期: 2022-01-10</p> <p>Inspection Date:      Issue Date:      Effective Date: (S)</p>	
备注 Comment	无。None.	

批准  
Approver:

王军

审核  
Checker:

董学胜

主检  
Appraiser:

孙清



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氧化危险性鉴定 Identification of Oxidative Hazards	该货物不属于氧化剂和有机过氧化物。 The product is not classified in Oxidizing Substances and Organic Peroxides.
毒害及传染危险性鉴定 Identification of Toxic & Infectious Hazards	该货物不属于毒害品和感染性物质。 The product is not classified in Toxic and Infectious Substances.
放射危险性鉴定 Identification of Radioactive Hazard	该货物无放射危险性。 The product is not classified in Radioactive Material.
腐蚀危险性鉴定 Identification of Corrosive Hazard	该货物不属于腐蚀品。 The product is not classified in Corrosives.
其他危险性鉴定 Identification of other Hazards	电池必须具有适当的防短路措施,若是以电池为动力的装置、设备或车辆还须采取有效的防止意外启动措施。 The battery must be protected appropriately to prevent a short circuits and any battery powered device, equipment or vehicle must be effectively prepared to prevent unintentional activation.
-验证码:100863-	



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## MATERIAL SAFETY DATA SHEET

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name: BUTTON ALKALINE BATTERY 1.5V  
Model: LR521, LR621, LR726, LR41, LR626, LR754, LR921, LR926, LR1120, LR936  
LR1131, LR721, LR43, LR44  
Company: NINGHAI HENGJIU BATTERY Co., Ltd.  
Address: NO.158-1, Xidian South Road, Xidian Town, Ninghai, Zhejiang, 315613,P.R.China  
Email: hjcell@163.com  
Fax: 86-574-65177885  
Emergency Phone: 86-18757427013  
Msds Date: 2022-01

### SECTION 2: INFORMATION ON INGREDIENTS

Product name: BUTTON ALKALINE BATTERY 1.5V

Ingredient	Concentration	CAS NO.	EC No.
Manganese	16%	7439-96-5	231-105-1
Zinc	26%	7440-66-6	231-175-3
Potassium hydroxide	3%	1310-58-3	215-181-3
Water	10%	7732-18-5	231-791-2
Iron	17%	7439-89-6	231-096-4

### SECTION 3: HAZARDS IDENTIFICATION

#### Hazards Identification:

The battery is not restricted to IATA DGR according to special provision A123 and is not restricted to IMDG CODE according to special provision 304.

#### Emergency Overview:

Avoid contact and inhalation the interials.Emit toxic fumes under fire conditions.

### SECTION 4: FIRST-AID MEASURES

#### Skin Exposure:

If the internal battery materials of an opened battery cell come into contact with the skin, immediately flush with plenty of water.

#### Eye Exposure:

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes.Assure adequate flushing by separating the eyelids with fingers.Call a physician.

#### Inhalation Exposure:

If potential for exposure to nickel fumes or dusts occurs , remove immediately to fresh air and seek medical attention.

#### Oral Exposure:

If swallowed, do not induce vomiting.Seek immediate medical attention.



## SECTION 5: FIRE FIGHTING MEASURES

### Extinguishing Media:

Suitable: Dry chemical, carbon dioxide and appropriate foam.

### Firefighting:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific hazards: Emit toxic fumes under fire conditions.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Procedure of Personal Precaution:

Exercise appropriate precautions to minimize direct contact with skin and eyes.

### Methods for Cleaning up:

Sweep up with spade, place into a dry, clean, lidded container for disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

## SECTION 7: HANDLING AND STORAGE

### Handling:

Wear appropriate protective clothing and safety gloves. Avoid contact and inhalation the internal materials. Keep away from ignition sources, heat and flame. Incompatibilities: strong oxidizing agents, corrosives and foods. Such batteries must be packed in inner packaging in such a manner as to effectively prevent short circuits. No smoking at working site.

### Storage:

Store in a cool, well-ventilated area. Keep away from ignition sources, heat and flame. Store in a tightly closed container. Incompatibilities: strong oxidizing agents, corrosives and foods.

## SECTION 8: EXPOSURE CONTROL/PPE

### Engineering controls:

Use ventilation equipment if available. Safety shower and eye bath.

### Personal Protective Equipment:

Respiratory System: Wear protective mask if needed.

Eyes: Wear safety goggles if needed.

Clothing: Wear appropriate protective clothing.

Hand: Wear safety gloves.

### Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

## SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

**Appearance:** Silvery button metal shell

**Odor:** Odorless

**Melting Point/°C:** >350°C

**PH Value:** 11-12

**Solubility:** Partial soluble in water

## SECTION 10:STABILITY AND REACTIVITY

### Stability:

Stable under normal temperatures and pressures.

### Conditions to Avoid:

Avoid exposure to heat and open flame.Do not puncture,crush or incinerate.Prevent short circuits.

Prevent movement which could lead to short circuits.Do not attempt to recharge this battery.

### Materials to Avoid:

Strong oxidizing agents,corrosives.

### Hazardous Polymerization:

Will not occur.

### Hazardous Decomposition Products:

When exposed to extreme heat/fire,batteries may rupture leaking corrosive material and/or emit toxic fumes.Burning batteries may emit toxic fumes of zinc oxide and manganese oxide.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Toxicity Data:

Not available.

### Irritation Data:

The internal battery materials may cause irritation to eyes and skin.

## SECTION 12: ECOLOGICAL INFORMATION

No data available.

## SECTION 13: DISPOSAL CONSIDERATION

### Appropriate Method of Disposal of Substance:

Contact a licensed professional waste disposal service to dispose of this material.Do not incinerate.

## SECTION 14: TRANSPORT INFORMATION

**IATA:** Not restricted to IATA DGR according to special provision A123.

**IMO:** Not restricted to IMDG CODE according to special provision 304.

## SECTION 15: REGULATORY INFORMATION

Manganese Dioxide Battery is unregulated for purpose of transportation by U.S.Department of Transportation (DOT),International Civil Aviation Administration (ICAA),International Air Transport Association (IATA) and the International Maritime Dangerous Goods regulations (IMDG).The only DOT requirement for shipping these batteries is Special Provision 130 which states:"Batteries,dry,are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (for example,by the effective insulation of exposed terminals)."The only requirements for shipping these batteries by ICAO and IATA is Special Provision A123 which states:"An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a short-circuit(e.g.in the case of batteries,by the effective insulation of exposed terminals:or in the case of equipment,by disconnection of the battery and protection of exposed terminals)is forbidden from transportation."The International Maritime Dangerous

## NINGHAI HENGJIU BATTERY CO.,LTD

### BUTTON ALKALINE BATTERY 1.5V

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Goods Code (IMDG) regulate them for ocean transportation under Special Provision 304 which says:“Batteries,dry, containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provisions of this Code provided the batteries are securely packed and protected against short-circuits. Examples of such batteries are : alkaline-manganese, zinc-carbon, nickel metal hydride and nickel-cadmium batteries.”The requirements for shipping these batteries,in all modes of transportation,arethat they be separated from each other to prevent short-circuits and to prevent movement that could lead to short-circuits.Products must also be packed in strong packaging that can withstand the rigors normal to transportation.

### SECTION 16: OTHER INFORMATION

**Lastest Edition:** 2022.01.03

**Made By:** NINGHAI HENGJIU BATTERY CO.,LTD

