

REPORT

Lab Number: (5105)069-0100

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TEST REPORT

BATTERY HOUSE
365 24TH STREET
LASALLE, IL 61301

ATTN: MIKE WOLLACK

LAB LOCATION: BUFFALO, NY
LAB NUMBER: (US)(5105)069-0100
CLIENT NO.: NOT LISTED
DEPARTMENT: ELECTRICAL

DATE IN: MARCH 10, 2005
DATE OUT: MARCH 23, 2005
MOD. LOG IN: N/A
WORKING DAYS: 9
ADDENDUM DATE: N/A

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OVERALL RATING	
PASS	_____ X _____
CORRECTIVE ACTION REQUIRED	_____
FAIL	_____

TESTING FOR
BATTERY - PRIMARY
MC-4735-US

DEVELOPMENT PRODUCTION CUSTOMER COMPLAINT OTHER

Sample Description:	Camelion "AA" Alkaline Batteries				
Final Packaging:	Yes (submitted for review)	<input checked="" type="checkbox"/>	No (not submitted for review)	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturer:	Camelion				
Country of Origin:	China		Style:	Not Listed	
Color:	Red and Brown		SKU Number:	Not Listed	
Re-test:	Yes:	<input checked="" type="checkbox"/>	No:	<input type="checkbox"/>	Charge Vendor:
					Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Previous Report No.:	(5105)041-0121				
Addendum Report:	Yes:	<input type="checkbox"/>	No:	<input checked="" type="checkbox"/>	
Reason For Addendum:	N/A				

TEST PROPERTY	PASS	C.A.R.	FAIL	COMMENTS
Labeling	X			
Physical Characteristics	X			
Construction Qualities	X			
Performance	X			
Colorfastness	-			
Flammability	-			
Analytical	-			

Sample Description:	Duracell "AA" Alkaline Batteries	Energizer "AA" Alkaline Batteries	Camelion "AA" Alkaline Batteries	CVS "AA" Alkaline Batteries
Vendor:	Not Listed	Not Listed	Not Listed	Not Listed
Manufacturer:	Duracell	Energizer	Camelion	CVS
Country of Origin:	USA	USA	China	USA
Sample Size:	1 Pack ; 8 Cells	1 Pack ; 8 Cells	11 Pieces	1 Pack ; 4 Cells
Style No(s):	4K1G1087	1104 U	Not Listed	1104 M
PO No:	Not Listed	Not Listed	Not Listed	Not Listed
Emulsion No:	Not Listed	Not Listed	Not Listed	Not Listed
Expiration Date:	March 2001	By 2011	By 03-2010	By 2011
UPC Code:	041333825014	039800032874	087399900029	050428289051

Sample Description:	DG "AA" Alkaline Batteries	Fuji "AA" Alkaline Batteries	Sony "AA" Alkaline Batteries	Walgreens "AA" Alkaline Batteries
Vendor:	Not Listed	Not Listed	Not Listed	Not Listed
Manufacturer:	DG	Fuji	Sony	Walgreens
Country of Origin:	USA	Indonesia	Indonesia	Indonesia
Sample Size:	1 Pack ; 4 Cell	1 Pack ; 4 Cells	1 Pack ; 4 Cells	1 Pack ; 6 Cells
Style No(s):	0310	7300	Not Listed	Not Listed
PO No:	Not Listed	Not Listed	Not Listed	Not Listed
Emulsion No:	Not Listed	Not Listed	Not Listed	Not Listed
Expiration Date:	By 2008	Jan 2011	07-2009	Jan 2011
UPC Code:	400007336261	074129730049	008562000285	049022173224

EXECUTIVE SUMMARY:

The Camelion sample(s) *MEETS* the requirements of Bureau Veritas Consumer Products Services, Inc. test specification *MC-4735-US Battery - Primary*.

Bureau Veritas
Consumer Products Services, Inc.



Dennis Ressman
Electrical Lab Supervisor,
Hardlines Department

Bureau Veritas
Consumer Products Services, Inc.



Glenn Sylvania
V.P. of Hardlines

/es



**BUREAU
VERITAS**

BV Lab Number: (5105)069-0100
 Technician Name: Manny Kulu
 Test Date: 2/22/2005
 Reviewed By/Date: DVG 3/22/2005

**BUREAU VERITAS TEST PROTOCOL FOR
MC-4735-US**

Battery - Primary

Evaluation	Citation/Method	No. Samples	Criteria	Results								Rating	
				Duracell	Energizer	Camelion	CVS	DG	Fuji	Sony	Walgreens		
SUPPLEMENTAL PROTOCOLS													
* CA Prop 65 Upon Request	Applicable Section from Protocol MC-6572-US	1	The sample shall be reviewed against the requirements of California Proposition 65 to determine if additional testing or labeling is required.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	--
LABELING													
**Fair Packaging and Labeling Act	F.P. & L. Act 16 CFR 500	align="center">1	Manufacturer, Packer, or Distributor's Name & Address (City, State & Zip)	M: Provided	M: Provided	M: Provided	M: Provided	M: Provided	M: Provided	M: Provided	M: Provided	M: Provided	--
			Product Identification	M: "AA" Alkaline	M: "AA" Alkaline	M: "AA" Alkaline	M: "AA" Alkaline	M: "AA" Alkaline	M: "AA" Alkaline	M: "AA" Alkaline	M: "AA" Alkaline	M: "AA" Alkaline	--
			Net quantity of contents shall be expressed in terms of weight or mass, measure, numerical count, or combination so as to give accurate information to facilitate consumer comparison (U.S. and metric units).	M: 1;PK;8 Cells	M: 1;PK;8 Cells	M: 11 Cells	M: 1;PK;4 Cells	M: 1;PK;8 Cells	M: 1;PK;4 Cells	M: 1;PK;4 Cells	M: 1;PK;4 Cells	M: 1;PK;6 Cells	--
**Country of Origin Marking	19 CFR 134.11	1	Shall indicate country of origin legibly, permanently, and in comparable size and close proximity to any mention of country other than country in which the article was manufactured or produced. Must be visible at point of purchase.	M: USA	M: USA	M: China	M: USA	M: USA	M: USA	M: Indonesia	M: Indonesia	M: Indonesia	--
Use Labeling	TM-HL-0002	1	Use / care instructions that are clear and understandable shall be provided in language appropriate to destination countries.	M: Provided English	M: Provided English French Spanish	M: Provided English French	M: Provided English	M: Provided English	M: Provided English	M: Provided English	M: Provided English	M: Provided English	--



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VERITAS**

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MC-4735-US
Battery - Primary

Evaluation	Citation/Method	No. Samples	Criteria	Results								Rating	
				Duracell	Energizer	Camelion	CVS	DG	Fuji	Sony	Walgreens		
Cautionary Statements	TM-HL-0002	All	Provides cautionary labeling as appropriate.	M: Provided	M: Provided	M: Provided	M: Provided	M: Provided	M: Provided	M: Provided	M: Provided	M: Provided	--
Battery / Package Marking	TM-HL-0002, Per ANSI C18.1M, PART 1-2001, Section 1.4.8	All	Shall display: 1) Name of the manufacturer or supplier 2) ANSI / NEDA designation or other ID; 3) Year / month, week/day of manufacture (May be code) or expiration of a guarantee period; 4) Nominal voltage; 5) Terminal polarity; 6) Battery electrochemical system (Carbon Zinc exempted); 7) Warnings or cautionary notes, where applicable. Caution for ingestion (For small batteries only – Use small cell or battery gauge; see Figure 1).	M: Provided “AA” Size By March 2011 1.5 volts + - Alkaline Provided	M: Provided “AA” Size By 2001 1.5 volts + - Alkaline Provided	M: Provided “AA” Size Best Before 03-2010 1.5 volts + - Alkaline Provided	M: Provided “AA” Size By 2011 1.5 volts + - Alkaline Provided	M: Provided “AA” Size By 2008 1.5 volts + - Alkaline Provided	M: Provided “AA” Size Jan 2011 1.5 volts + - Alkaline Provided	M: Provided “AA” Size 7-2009 1.5 volts + - Alkaline Provided	M: Provided “AA” Size Jan 2011 1.5 volts + - Alkaline Provided	M: Provided	--
PACKAGING													
Retail Shelf Packaging	Visual, UPC Test	All	Shall have final retail shelf packaging with scannable UPC stamp / label. Scanned numbers shall match as per supplied UPC label.	M: 04133382 5014	M: 03980003 2874	M: 08739990 0029	M: 05042828 9051	M: 40000733 6261	M: 07412973 0049	M: 00856200 0285	M: 049022173 224	M: 049022173 224	--
ANALYTICAL													
* Lead In Surface Coating	ASTM E1613-04 / E1645-01 (Mod.)	1	Shall not exceed 600 ppm (0.06% by weight) total lead.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	--



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Battery - Primary

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				Duracell	Energizer	Camelion	CVS	DG	Fuji	Sony	Walgreens		
* Mercury-Containing and Rechargeable Battery Management Act Pub. L. 104-142. 13 May 1996. Stat. 110.1333. (If requested)	Mercury Content Chemical Analysis (EPA Guidance, Best Practice) Title II – Mercury-Containing Battery Management Act.	1	Shall be less than 1 ppm (Best practice)	NT: Not Requested	NT: Not Requested	NT: Not Requested	NT: Not Requested	NT: Not Requested	NT: Not Requested	NT: Not Requested	NT: Not Requested	NT: Not Requested	--
PHYSICAL CHARACTERISTICS													
Dimensions:	American National Standard Institute (ANSI) C18.1M, PART 1-2001 Portable Primary Cells and Batteries	1	See below										
Case Height	ANSI C18.1M, PART 1-2001	1	ANSI C18.1M, PART 1-2001, Section 2.2 ff	M: No Claim R: 48.9 mm	M: No Claim R: 48.8 mm	M: No Claim R: 48.8 mm	M: No Claim R: 48.8 mm	M: No Claim R: 48.6 mm	M: No Claim R: 48.6 mm	M: No Claim R: 48.6 mm	M: No Claim R: 48.6 mm	M: No Claim R: 48.6 mm	--
Case Diameter or Width and Depth	ANSI C18.1M, PART 1-2001	1	ANSI C18.1M, PART 1-2001, Section 2.2 ff.	M: No Claim R: 14.1 mm	M: No Claim R: 14.1 mm	M: No Claim R: 14.1 mm	M: No Claim R: 14.1 mm	M: No Claim R: 14.1 mm	M: No Claim R: 14.0 mm	M: No Claim R: 14.0 mm	M: No Claim R: 14.0 mm	M: No Claim R: 14.0 mm	--
Total Height	ANSI C18.1M, PART 1-2001	1	ANSI C18.1M, PART 1-2001, Section 2.2 ff.	M: No Claim R: 50.3 mm	M: No Claim R: 50.3 mm	M: No Claim R: 50.3 mm	M: No Claim R: 50.3 mm	M: No Claim R: 50.2 mm	M: No Claim R: 50.4 mm	M: No Claim R: 50.2 mm	M: No Claim R: 50.5 mm	M: No Claim R: 50.5 mm	--
Case Material	Visual	All	Report type of case material.	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	--
Chemistry	Visual	All	Report claimed battery chemistry.	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	--
Total Weight (Gms.)	TM-HL-0001	3	Report overall weight; shall meet label claims (If applicable) (-0% / +5%)	No Claim R: 24.6g	No Claim R: 24.2g	No Claim R: 23.9g	No Claim R: 24.7g	No Claim R: 24.6g	No Claim R: 23.1g	No Claim R: 22.5g	No Claim R: 22.8g	No Claim R: 22.8g	--



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**MC-4735-US
 Battery - Primary**

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				Duracell	Energizer	Camelion	CVS	DG	Fuji	Sony	Walgreens		
CONSTRUCTION & WORKMANSHIP													
Sharp Points / Edges	16 CFR 1500.48 / 1500.49 (mod.)	All	Shall have no sharp points / edges, other than those required for function.	M: None	M: None	M: None	M: None	M: None	M: None	M: None	M: None	M: None	--
Defects	TM-HL-0002	All	Shall have no discernible surface degradation, including crazing, shivering, denting, bubbles, cracks, stains, deformations, chips, fractures, heavy lines, waves, shear marks, scratches, scuff marks, indentations, or blisters.	M: No Defects	M: No Defects	M: No Defects	M: No Defects	M: No Defects	M: No Defects	M: No Defects	M: No Defects	M: No Defects	--
Workmanship	TM-HL-0002	All	Shall have no components missing, malformed, and / or fractured.	M: Good Workman-ship	M: Good Workman-ship	M: Good Workman-ship	M: Good Workman-ship	M: Good Workman-ship	M: Good Workman-ship	M: Good Workman-ship	M: Good Workman-ship	M: Good Workman-ship	--
Anode Positioning	ANSI C18.1M, PART 1-2001, Section 2.2	All	Anodes shall be properly centered.	M: Centered	M: Centered	M: Centered	M: Centered	M: Centered	M: Centered	M: Centered	M: Centered	M: Centered	--
Seals	ANSI C18.1M, PART 1-2001, Section 1.4.4.2	All	Shall be adequately sealed with no sign of leakage.	M: No Leaks	M: No Leaks	M: No Leaks	M: No Leaks	M: No Leaks	M: No Leaks	M: No Leaks	M: No Leaks	M: No Leaks	--
PERFORMANCE													
Functionality	TM-HL-0003	All	Shall function as intended as received	M: Functions as Intended	M: Functions as Intended	M: Functions as Intended	M: Functions as Intended	M: Functions as Intended	M: Functions as Intended	M: Functions as Intended	M: Functions as Intended	M: Functions as Intended	--
Rated Voltage (Volts)	Visual	All	Report rated voltage per claim or battery chemistry. Shall agree with number of cells, chemistry, and interconnection.	M: 1.5 volt	M: 1.5 volt	M: 1.5 volt	M: 1.5 volt	M: 1.5 volt	M: 1.5 volt	M: 1.5 volt	M: 1.5 volt	M: 1.5 volt	--
Resistive Load (Ohms)	ANSI C18.1M, PART 1-2001, Section 1.4.6.1	3	Parameter. Report load.	10ohms	10ohms	10ohms	10ohms	10ohms	10ohms	10ohms	10ohms	10ohms	--



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				Duracell	Energizer	Camelion	CVS	DG	Fuji	Sony	Walgreens		
Discharge Cycle	ANSI C18.1M, PART 1-2001, Section 1.4.6.2	3	Parameter. Report discharge cycle.	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous	--
Cut Off Voltage (Volts)	ANSI C18.1M, PART 1-2001, Section 2.2	3	Parameter. Report cut off Voltage for determination of service life.	0.9 volts	0.9 volts	0.9 volts	0.9 volts	0.9 volts	0.9 volts	0.9 volts	0.9 volts	0.9 volts	--
Initial Voltage	ANSI C18.1M, PART 1-2001, Section 2.2	3	Report battery initial open circuit voltage and percent of rated value. Shall not exceed 115% rated voltage.	M: 1.61v 107%	M: 1.63v 109%	M: 1.63v 109%	M: 1.63v 109%	M: 1.61v 107%	M: 1.61v 107%	M: 1.61v 107%	M: 1.61v 107%	M: 1.61v 107%	--
Terminal Voltage (Under Load) (Volts and % of nominal value)	Battery Tester	3	Report voltage under load and percent of rated value.	1.49v 99%	1.58v 105%	1.58v 105%	1.58v 105%	1.55v 103%	1.48v 99%	1.56v 104%	1.56v 104%	1.56v 104%	--
Current Draw (Average) (Milliamperes)	Calculated from initial voltage and load	3	Report.	161	163	163	163	161	161	161	161	161	--
Internal Resistance (Ohms)	Calculated from voltages and current draw	3	Report.	0.8	0.3	0.3	0.3	0.4	0.8	0.3	0.3	0.3	--
Service Life	ANSI C18.1M, PART 1-2001, Section 2.2	3	Report service life and ANSI typical minimum performance value. Shall meet minimum typical performance values of 810 minutes.	M: 1209 Minutes	M: 1210 Minutes	M: 1201 Minutes	M: 1203 Minutes	M: 1206 Minutes	M: 1073 Minutes	M: 1012 Minutes	M: 1055 Minutes	M: 1055 Minutes	--
Capacity (mA-h)	Battery energy calculated from discharge profile	3	Report. Shall compare favorably to claims.	None 2417 mA-h	None 2429 mA-h	None 2363 mA-h	None 2339 mA-h	None 2366 mA-h	None 2126 mA-h	None 2022 mA-h	None 2093 mA-h	None 2093 mA-h	--



BUREAU
VERITAS

BV Lab Number: (5105)069-0100
Technician Name: Manny Kulu

Key:

* Additional Charge For This Test ** Mandatory Requirement

Results Key:

M	Meets	NM	Does Not Meet
NA	Not Applicable	NT	Not Tested
C	Claimed	R	Recorded

No. Of Samples Required For Complete Testing:	4
No. Of (Fully Packed) Cartons For Transit Testing:	1
No. Of Working Days For Complete Testing:	7

Creation Date: May 11, 2004
Editorial Revision Date: November 19, 2004
Pricing Review Date:
Technical Review Date:

"AA" ALKALINE BATTERIES CONTINUOUS DISCHARGE PROFILE AT 10 OHM LOAD.

