**SCREENING REPORT** Page: 1

**Test Number:** 14872C00  **Report Date:** 2021-07-09

**Battery Name:** Duracell MN1500

**Chemistry:** Zn/MnO₂ (Alk)

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**Request Number:** 210708-1

**Task Number:** 12847

**Lot Number:** 12965

**Form Factor:** Cylinder

**Purpose:** Evaluation Screen & Tab

**Project Engineer:** VHE/WCH

Criteria: PRE TAB Min. POST TABMin.

**OCV (Volt):** 1.61.6

**CCV (Volt):** N/A1.3

**Drain Time (Sec):** N/A5.0

**Resistor (Ω): :** N/A3.3

**Pre/Post OCV Tolerance for tabbing only (Volt):** < 0.002V

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**Battery Size (mm):** AA

**Discharge Temperature (°C):** 24

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**Number of Batteries Tested :** 18

**Number of Batteries Failed(\*):** 0

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**Date of Manufacture:** 11/10/2020

**Date of Receipt:** 03/17/2021

**Date Started:** 07/09/2021

**Date Completed:** 07/09/2021

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Prepared By: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_ Reviewed By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

Reviewed By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

**SCREENING REPORT** Page: 1

**Test Number:** 14872C00  **Report Date:** 2021-07-09

**Battery Name:** Duracell MN1500

**Chemistry:** Zn/MnO₂ (Alk)

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**Request Number:** 210708-1

**Task Number:** 12847

**Lot Number:** 12965

**Form Factor:** Cylinder

**Purpose:** Evaluation Screen & Tab

**Project Engineer:** VHE/WCH

Criteria: PRE TAB Min. POST TABMin.

**OCV (Volt):** 1.61.6

**CCV (Volt):** N/A1.3

**Drain Time (Sec):** N/A5.0

**Resistor (Ω): :** N/A3.3

**Pre/Post OCV Tolerance for tabbing only (Volt):** < 0.002V

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**Battery Size (mm):** AA

**Discharge Temperature (°C):** 24

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**Number of Batteries Tested :** 18

**Number of Batteries Failed(\*):** 0

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**Date of Manufacture:** 11/10/2020

**Date of Receipt:** 03/17/2021

**Date Started:** 07/09/2021

**Date Completed:** 07/09/2021

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Prepared By: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_ Reviewed By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

Reviewed By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

**Test Number:** 14872C00

Note(s):  
  
1. Report Date:  
  
2. Test Responsibility:  
   
 a. Data file preparation:  
 b. Technical review:  
 c. Final review:

**SCREENING REPORT**

**Test Number:** 14872C00  **Date:**2021-07-09

**Sample Name:** Duracell MN1500

**Chemistry:** Zn/MnO₂ (Alk)

**Pre-Tab** **Voltage Statistic Table**

All samples OCV Passing Samples OCV

**Maximum:** **1.632 Maximum:** **1.632**

**Minimum:** **1.621 Minimun:** **1.621**

**Median:** **1.626 Median:** **1.626**

**Mean (M):** **1.626 Mean(M):** **1.626**

**Stander Deviation (SD):** **0.0034 Stander Deviation(SD):** **0.0034**

**Total Samples:** **18**

**Total Passing Criterion:** **18 OCV > or =** *1.600* **V**

**Total Failing Criterion:** **0 Absolute OCV difference for before and After**

**95% confidence Interval** 1.624 / 1.627 **Tab is <** 0.002 **V**

**Outlier Min/Max** 1.613/ 1.637

**Total Outlier:** 0

**Note:** Outlier in Raw Data Report will be marked with symbol (\*)

Fail sample in Raw Data Report will be marked with symbol (!)

**CUMULATIVE TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| **All Sample OCV** | | **\*Passing Sample OCV** | |
| Voltage Range | Samples | Voltage Range | Sample |
| 1.632-1.629 | 1 | 1.632-1.629 | 1 |
| 1.629-1.626 | 8 | 1.629-1.626 | 8 |
| 1.626-1.623 | 2 | 1.626-1.623 | 2 |
| 1.623-1.620 | 7 | 1.623-1.620 | 7 |
| 1.620-1.617 | 0 | 1.620-1.617 | 0 |

**SCREENING REPORT**

**Test Number:** 14872C00  **Date:**2021-07-09

**Sample Name:** Duracell MN1500

**Chemistry:** Zn/MnO₂ (Alk)

**Post-Tab** **Voltage Statistic Table**

All samples OCV CCV Passing Samples OCV CCV

**Maximum:** **1.632 1.536**  **Maximum: 1.632 1.536**

**Minimum:** **1.621 1.500**   **Minimun: 1.621 1.500**

**Median:** **1.626 1.521**   **Median: 1.626 1.521**

**Mean (M):** **1.626 1.522**   **Mean(M): 1.626 1.522**

**Stander Deviation (SD):** **0.00347 0.00977**  **Stander Deviation(SD): 0.00347 0.00977**

**Total Samples:** **18**  **18**   **OCV > or = *1.600* V**

**Total Passing Criterion:** **18** **18**   **CCV > or = *1.300* V @ 3.3 Ohms for 5.0 Seconds.**

**Total Failing Criterion:** **0**  **0**   **Absolute OCV difference for before and After**

**95% confidence Interval** 1.624 / 1.627 1.517/1.527  **Tab is <** 0.002 **V**

**Outlier Min/Max** 1.613/ 1.637 1.501/1.545

**Total Outliers:** 0 1

**Note:** Outlier in Raw Data Report will be marked with symbol (\*)

Fail sample in Raw Data Report will be marked with symbol (!)

**CUMULATIVE TABLE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **All Sample OCV** | | **All Sample CCV** | | **\*Passing Sample OCV** | | **\*Passing Sample CCV** | |
| Voltage Range | Samples | Voltage Range | Samples | Voltage Range | Samples | Voltage Range | Samples |
| 1.632-1.629 | 1 | 1.536-1.529 | 4 | 1.632-1.629 | 1 | 1.536-1.529 | 4 |
| 1.629-1.626 | 8 | 1.529-1.522 | 4 | 1.629-1.626 | 8 | 1.529-1.522 | 4 |
| 1.626-1.623 | 2 | 1.522-1.515 | 6 | 1.626-1.623 | 2 | 1.522-1.515 | 6 |
| 1.623-1.620 | 7 | 1.515-1.508 | 2 | 1.623-1.620 | 7 | 1.515-1.508 | 2 |
|  |  | 1.508-1.501 | 1 | 1.620-1.617 | 0 | 1.508-1.501 | 1 |
|  |  | 1.501-1.494 | 1 |  |  | 1.501-1.494 | 1 |

**SCREENING REPORT**

**Test Number:** 14872C00 **Raw Data** **Chemistry:** Zn/MnO₂ (Alk)

**Sample Name:** Duracell MN1500 **Load:**  /3.3Ω

**Sort Order:** Bar Code Number **Load Time:**  /5.0Sec(S)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Bar Code Number | Manufacturer  Number | Manufacture Date | Pre-Tab OCV |  | Post-Tab OCV | Post-Tab CCV | Inspection |
| 471455 | 1 | 11/10/2020 | 1.622 |  | 1.622 | 1.521 | OK |
| 471456 | 2 | 11/10/2020 | 1.622 |  | 1.622 | 1.526 | OK |
| 471457 | 3 | 11/10/2020 | 1.621 |  | 1.621 | 1.517 | OK |
| 471458 | 4 | 11/10/2020 | 1.622 |  | 1.622 | 1.529 | OK |
| 471459 | 5 | 11/10/2020 | 1.621 |  | 1.621 | 1.500 \* | OL |
| 471460 | 6 | 11/10/2020 | 1.622 |  | 1.621 | 1.526 | OK |
| 471461 | 7 | 11/10/2020 | 1.629 |  | 1.629 | 1.535 | OK |
| 471462 | 8 | 11/10/2020 | 1.627 |  | 1.627 | 1.519 | OK |
| 471463 | 9 | 11/10/2020 | 1.628 |  | 1.628 | 1.533 | OK |
| 471464 | 10 | 11/10/2020 | 1.628 |  | 1.628 | 1.530 | OK |
| 471465 | 11 | 11/10/2020 | 1.632 |  | 1.632 | 1.536 | OK |
| 471466 | 12 | 11/10/2020 | 1.622 |  | 1.622 | 1.527 | OK |
| 471467 | 13 | 11/10/2020 | 1.626 |  | 1.626 | 1.515 | OK |
| 471468 | 14 | 11/10/2020 | 1.628 |  | 1.628 | 1.522 | OK |
| 471469 | 15 | 11/10/2020 | 1.628 |  | 1.628 | 1.519 | OK |
| 471470 | 16 | 11/10/2020 | 1.628 |  | 1.628 | 1.514 | OK |
| 471471 | 17 | 11/10/2020 | 1.626 |  | 1.626 | 1.521 | OK |
| 471472 | 18 | 11/10/2020 | 1.628 |  | 1.628 | 1.504 | OK |

Key: ^ for Tab Tolerance Fail(T), ! for Criteria Fall(F), \* for outlier(OH for High)(OL for Low)





















