

**NAME:** Battery life data

**TYPE:** Designed experiment

**SIZE:** 108 observations, 5 variables in *each* data file

**ARTICLE TITLE:** Comparing the lifetimes of two brands of batteries

**DESCRIPTIVE ABSTRACT:**

The data give the battery life of two brands of 1.5 volt alkaline batteries. Data from three different tests are provided. In each test, nine batteries of each brand are tested and the time (or number of “pulses”) to six various voltage levels are recorded. The data are used by a supermarket to make claims about their own brand of battery to those of a popular competitor’s.

**SOURCES:**

The data are publically available, and were obtained from [http://www.aldi.com.au/au/html/product\\_range/20061.htm](http://www.aldi.com.au/au/html/product_range/20061.htm), accessed 05 September 2012.

**VARIABLE DESCRIPTIONS:**

A header line contains the names of the variables. The data are comma delimited. There are no missing values.

Brand: The battery brand: one of Energizer or Ultracell

Voltage: The voltage levels of interest; one of 1.3, 1.2, 1.1 (for Tests 1 and 2) or 1.05 (for Test 3), 1.0, 0.9 or 0.8

Time (for Test 2 only): The time in decimal hours to reach the specified voltage level

Pulses (Tests 1 and 3): The number of “pulses” taken to reach the pre-defined voltage levels.

Battery: An identifier, which is the battery number

**STORY BEHIND THE DATA:**

The data come from an advertising campaign conducted by ALDI supermarkets in Australia. The advertising claims that “Ultracell AA Alkaline batteries [the ALDI brand batteries] outperformed the Energizer Max AA Alkaline batteries in 2 of 3 battery life tests.” The data upon which these claims are made are available, and these claims are re-assessed using the data. It appears that ALDI have undersold their product.

**PEDAGOGICAL NOTES:**

These data can be used for teaching in basic statistics, using tools such as *t*-tests or other similar tests, plotting data, identification of outliers, and repeated measures. A key issue with these results is how to communicate the results accurately but succinctly.

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