

"OAR-BMD Shewhart Test Tool"

This software is provided by Alan Cottrell of Xspect Inc.

The intention of this software is to allow you an easy QC charting method for entering your daily value against the baseline value and to automatically check the daily value of your BMD QC test against the Shewhart Test rules.

This software was originally written as a Microsoft Excel spreadsheet, but it should also be able to be used under "OpenOffice" or other free software spreadsheet programs.

The "input page" allows one to enter your site name, scanner model and serial number, the phantom and serial number that you are using, and then the base line value for that phantom. Once those are entered and saved, you can then, each day, record the date and the reading that you get from your daily QC test of the phantom. The phantom value is added in column C and the date in column B.

(Note: the software is released with a few dates and values already in columns B and C so that you may quickly see how the rules and the charts are displayed. Just delete these dates and values when you are ready to enter your own readings.)

The program compares the reading with each of the five rules of the Shewhart test and gives a pass/fail for each rule. If any of the readings create a "Fail" in any of the rules it indicates that the machine is violating its operating precision and should be checked.

The "chart page" shows charts of the values that you've entered against the dates. Actually, to simplify programming, the charts show the percentage difference of the daily value number compared your baseline number, against the index rather than the actual date.

This greatly simplified the programming since missing dates due to holidays and weekends and different baseline values of some brands of phantoms make the creation of a generalized simple charting method tricky. If you wish to find a particular date on the chart just look at the index number that corresponds to the date on the "input page".

The zero percentage point on the chart is equal to your baseline figure and the +/- 0.5%, 1.0%, 1.5% and 2.0% lines have the values given near the top of the "input page".

The "calculations" page holds the formulae used to run this program. It is protected against accidental changes. Please do not attempt to change anything on this page. Also the "input page" has been protected except for the rows and columns in which you are expected to enter data.

There are enough rows to handle a year of QC data. For the next year save the spreadsheet under a different name, delete the old data, and reuse the spreadsheet.

There is a "Notes" page so that you can quickly make a note of when the unit was serviced, etc.

The software is provided at no charge and without any warranty, and the author accepts no liabilities from the use of this software.

The free "OpenOffice" software is available from the www.openoffice.org website.

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