

INSTRUCTIONS FOR USE BAYESIAN CONTROL CHART

For a proper use of the Bayesian control chart follow the instructions below.

1. Enter into cell B3 the prior (manufacturer's) target value of the control sample.
2. Enter into cell B4 the (manufacturer's) maximum acceptable inter-assay Standard Deviation (SD).
3. Enter into cell B2 the manufacturer's maximum acceptable coefficient of variation (CV) in %.
4. Enter in cell B14 the name of the recorded variable. This name will appear on the vertical axis of the plot.
5. Enter in cell A19 – A68 the operator's name (optional).
6. Enter in cell B19 – B68 the date in the format Month/Day/Year (optional).
7. Enter in cell C19 – C68 the time in the format Hour:Minute (optional).
8. Enter in cell D19 – D68 / E19 – E68 the observed value (use the dot "." For decimal points, e.g. 82.7) twice (in columns D and E). The purpose of the double entry is to reduce the risk of typing errors, which is well known to be an important root cause of problems in medical labs.
9. Enter in cell H19 – H68 the clinical chemist's approval (optional).

Output

The chart's elements can be found in the blue cells of columns N, O, P and Q.

Cells O19 – P68: The observed value (which is provided twice in columns D and E).

Cells P20 – P68: The lower limit of the predictive control chart for the particular data point (starting for the second data point and updated at each new entry).

Cells Q20 – Q68: The upper limit of the predictive control chart for the particular data point (starting for the second data point and updated at each new entry).

Cells R19 – R68: The (sequentially updated) posterior mean of the unknown parameter which can be used as point estimate (estimation of mean needs 20 values).