**Worksheet 1: Calculating SEc and Sigma 906**

**Directions: Use the following key numbers to complete the table below. Each site analyzes three controls (low, normal, and high) for each analytical run.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Analyte:** Platelet Count (cell \* 109/L) | **Mean** | **True Value**  **(target)** | **SD** | **% TEA** | **Sigma-metric Rule Selection Guide**   * 6 sigma - any QC will do (just don’t use 2 SD limits) * 5 sigma - single-rules such as 1:3s or 1:2.5s * 4 sigma - multirules * < 4 sigma - multirules with look-back to previous runs, increase the number of controls analyzed * 3 or less - look for better analytical methods |
| Lab A | 150 | 150 | 3 | 13.4% |
| Lab B | 145 | 150 | 3 | 13.4% |
| Lab C | 150 | 150 | 5 | 13.4% |
| Lab D | 148 | 150 | 5 | 13.4% |
| Lab E | 145 | 150 | 10 | 13.4% |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Analyte: Platelet Count**  (cell \* 109/L) | **l Bias l**  | -True Value| | **TE in units**  Abs Bias + (1.65\*SD) | **TEA in units**  (TEA %/100%)\* Target Value | **SEc**  [(TEA - ǀBiasǀ)/SD] – 1.65 | **Sigma**  [(TEA - ǀBiasǀ)/SD]  OR  SEc + 1.65 | **QC Rules Based on the Sigma-metric** |
| Lab A |  |  |  |  |  |  |
| Lab B |  |  |  |  |  |  |
| Lab C |  |  |  |  |  |  |
| Lab D |  |  |  |  |  |  |
| Lab E |  |  |  |  |  |  |