SHIFTS AND TRENDS IN QUALITY CONTROL

Commercial hematology control values are determined each day that patient specimens are run. They must fall within a set range that is established for that particular lot number. If the control values fall within the limits that have been set, the entire group of patient tests of which the control specimen was a part may be reported. If not, the group of tests must be repeated. (See Hematology Out-of-Control Plan, 5.2 and 5.3).

If the control values repeatedly fall above or below the mean, the method should be checked for systematic error. The error may be:

- Deterioration or gradual evaporation of reagent (increase in concentration)
- Gradual change in pH
- Hemolysis

These errors may result in a trend which occurs when the values continue to either increase or decrease over an interval of six or more consecutive days.

A shift occurs when values distribute themselves above or below the mean on six or more consecutive days, but with no tendency toward either a consistent fall or rise. This usually occurs with modifications of procedures, changes in reagent concentration, change in line voltage, etc.

Shifts and trends must be noted and documented as to cause and correction on the quality control log sheets.

Example:

Reference: American Society of Internal Medicine, Medical Laboratory Evaluation, 1991

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