

**FORENSIC TOXICOLOGY LABORATORY
OFFICE OF CHIEF MEDICAL EXAMINER
CITY OF NEW YORK**

CALIBRATION CURVES

The software used by the FTL allows establishment of several types of calibration curves. This laboratory uses the linear calibration curve and the non-linear power calibration curve.

Both types of calibration curves are defined by a minimum of three positive calibrators. The number of calibrators varies among assays from three to six. Acceptance range for calibrators is $\pm 20\%$ of the target value. Data from one invalid calibrator may be dropped from consideration in assays calibrated with more than three calibrators. The remaining acceptable calibrators must be re-processed and quantitative values for cases reported within the dynamic range of the acceptable calibration range.

The linear calibration curve may be extended to 20% above the highest valid calibrator concentration. The power curve is used for quantitative results only to the highest valid calibrator concentration. If the highest or lowest calibrator concentrations are dropped, the range for either type of calibration curve is adjusted to the range between the highest and lowest valid calibrator concentrations for that batch of samples.

The regression correlation (r^2) must be greater than or equal to 0.99 for methods using deuterated internal standards. The regression correlation (r^2) must be greater than or equal to 0.98 for methods using non-deuterated internal standards.