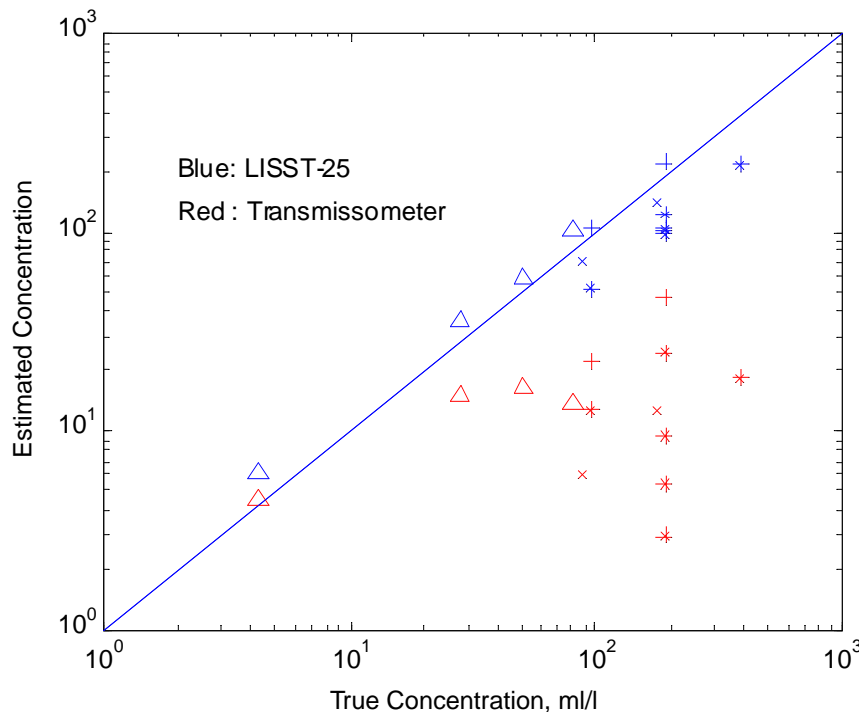


Intercomparison of LISST-25 and Transmissometer

SEQUOIA SCIENTIFIC, INC.

◆ APPLICATION NOTE L010

The LISST-25 uses specially constructed focal-plane summation of laser light scattered by particles (see Application Note L005). This method produces constant calibration estimates of particle volume concentration. This note shows a comparison of estimates of concentration made by this method with estimates made by transmissometry, using several types of particles. *The LISST-25 estimates vary by less than a factor of 2, compared with roughly factor 100 error with a transmissometer.*



LISST-25 and Transmissometer Estimates of Concentration

The estimated vs. true volume concentration of particles estimated by the LISST-25 detectors. Corrections for mass density variability have been made. Symbols: PVC spheres (*); bottom sediment from site of Coastal Mixing and Optics Experiment, south of Martha's Vineyard, Massachusetts (+), Toutle River bank sediment (x) and AC powders (Δ). Blue symbols are LISST-25, red symbols are Transmissometer. An optical forward- or back-scatterance sensor, also responding to particle area, behaves like a transmissometer with similarly large calibration errors.

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