

XRF *IN VIVO* BONE LEAD ANALYSIS: CORRECTION OF THE CURRENT APPROACH

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Careful review of the existing formalism (see Gordon et. al. 1994 and Todd, 2000a) for calculation of bone lead concentration and its uncertainty has revealed some flaws in this area. We have recently reported corrected mathematical techniques (Kondrashov and Rothenberg, 2001).

The authors have explored whether the new correction has a significant influence on calculated lead concentration from *in vivo* bone lead results. We show that the difference between the two methods of calculation of concentration ranges from between just a few up to several tens of percent, while the corrected technique gives uncertainties up to 2 times higher. The new calculated uncertainties are closer to uncertainties given in recently published repeated measurements on cadaver legs (Todd et al., 2000b) than uncertainties calculated with the older formalism.

Literature:

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