



Idaho State Police

Service since 1939



Colonel G. Jerry Russell
Director

C.L. "Butch" Otter
Governor

To: All Idaho Prosecuting Attorneys, County Sheriffs, and Police Chiefs

From: Major Ralph Powell, ISP Police Services Commander

Subject: ISP Forensic Services Updated Uncertainty Measurement Reporting

Date: September 8, 2009

On September 8, 2008 the Idaho State Police Forensic Services Laboratories began adding wording to all ethyl alcohol concentration reports in conformance with our new accreditation standards. The reported ethyl alcohol value was adjusted by subtracting the uncertainty associated with the value and a disclaimer such as, "The reported ethyl alcohol concentration has been adjusted to account for the uncertainty of measurement calculation" was placed on the laboratory report.

In order to simplify our laboratory reports, effective August 17, 2009, the Idaho State Police Forensic Services labs have updated the manner in which we report quantitative ethyl alcohol values in both biological (blood, urine, vitreous humor) and non-biological samples (suspected alcoholic beverages). Instead of subtracting the uncertainty value, we are reporting out the actual lab measured value and also a [+/-] uncertainty percentage based on parametric statistics. We are reporting the uncertainty as a percentage because a percentage gives a better approximation of uncertainty across the range of values. An attorney wishing to provide a [+/-] value to a jury would multiply the uncertainty percentage (currently 5.94% or 0.0594) by the actual lab measured value. The obtained number could then be added to or subtracted from the laboratory measured value (e.g. $0.084 \times 0.0594 = [+/-] 0.0049896$). The most current laboratory uncertainty percentage will be disclosed in the laboratory report, so the disclaimer statement regarding adjustment (referenced in the paragraph above) is no longer being used in ISP Forensic Services Laboratory Reports. The laboratory is no longer making any adjustment to the laboratory measured value. It is also important to note that the laboratory measured value stated in the laboratory report is now reported to three decimal places (e.g. 0.084).

We are required by our international accrediting body to perform and report an uncertainty calculation in our casework. We are accredited by ASCLD/LAB (American Society of Crime Laboratory Directors Laboratory Accreditation Board) to the ISO 17025 International Standard. We were one of the first laboratory systems in the country to seek and obtain this more difficult and prestigious accreditation in 2007. Prior to gaining the ISO 17025 accreditation, ISP Forensic Services had been an accredited laboratory through the ASCLD/LAB Legacy program since 1987.

Uncertainty must not be confused with error. In statistical terms, our "uncertainty number" is two standard deviations (which is a 95% confidence interval and meets the court requirement of being a generally accepted practice in the scientific community).

If you should require further documentation or explanation, please contact the ISP Forensic Services Quality Manager, Matthew Gamette at 208-884-7217.

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