



INDIANA UNIVERSITY

BORKENSTEIN
COURSE

Center for Studies
of Law in Action

Mathematics of Breath and Blood Alcohol Analyses

by
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Reading Assignments:

MedicoLegal Aspects of Alcohol, Fourth Edition. Edited by James C. Garriott, Lawyers and Judges Publishing.

Chapter 3. Disposition and Fate of Ethanol in the Body
pp. 63-65

Chapter 4. The Biochemistry and Physiology of Alcohol: Applications to Forensic Science and Toxicology
pp. 126-133

Chapter 8. Methods for Breath Analysis
pp. 185-211

Additional Recommended Resources:

1. Fraser, C.G. and Fogarty, Y., "Interpreting Laboratory Results: Analytical and Biological Variation Must be Taken into Account", British Medical Journal, June 24, 1989.
2. Jones, A.W., "Precision, Accuracy and Relevance of Breath Alcohol Measurements", Mod. Probl. Pharmacopsych., Vol. 11, 1976, pp. 68-78.
3. Love, J.L., "Chemical Metrology, Chemistry and the Uncertainty of Chemical Measurements", Accred Qual Assur, Vol.7, 2002, pp. 95-100.
4. Westgard, J.O., Carey, R.N., and Wold, S., "Criteria for Judging Precision and Accuracy in Method Development and Evaluation", Clinical Chemistry, Vol. 20, 1974, pp. 825-833.
5. Thompson, M. And Fearn, T., "What Exactly is Fitness for Purpose in Analytical Measurement", Analyst, Vol.121, March 1996, pp. 275-278.
6. Aitken, C.G.G. and Stoney, D.A., The Use of Statistics in Forensic Science, Ellis Horwood, 1991.
7. Dubowski, K.M., "Quality Assurance in Breath-Alcohol Analysis", Journal of Analytical Toxicology, Vol.18, 1994, pp. 306-311.
8. Harding, P.M., Laessig, R.H., and Field, P.H., "Field Performance of the Intoxilyzer 5000: A Comparison of Blood- and Breath-Alcohol Results in Wisconsin Drivers", Journal of Forensic Sciences, Vol. 35 No. 5, Sept. 1990, pp. 1022-1028.

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