



South Florida Section American Chemical Society

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Florida Memorial University

Seminar

Are You Too Drunk to Drive?

Dr. Gary Christian

Professor of Chemistry

University of Washington-Seattle

Wednesday, February 11, 2:00 pm

Florida Memorial University

15800 NW 42nd Avenue, Miami Gardens, Florida 33054

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Abstract

The Physiology and Chemistry of Breath Alcohol Measurement

Driving under the influence of alcohol is a serious offense in all states. In most states, a blood alcohol concentration of 0.08% (w/w) is by law deemed to indicate being under the influence. Normally, the blood alcohol level is determined by measuring the percent breath alcohol, assuming a partition ratio between blood and breath of 2100:1. The legal consequences of being convicted of driving while under the influence will be presented, along with the physiology of alcohol absorption and metabolism, the physiological effects as a function of alcohol, and ways to estimate your blood alcohol level. The principles, chemistry, and operations of breath alcohol measuring instruments will be described.

Speaker



Dr. Gary Christian

Gary D. Christian received his B.S. degree in 1959 from the University of Oregon and Ph.D. degree from the University of Maryland in 1964. He was a research analytical chemist at the Walter Reed Army Institute of Research from 1961 to 1967. He joined the University of Kentucky in 1967 and in 1972 moved to the University of Washington as Professor of Chemistry. He was Divisional Dean of Sciences in the College of Arts and Sciences, 1993-2001. He is the author of over 300 papers and has authored books on: Analytical Chemistry (6 editions); Instrumental Analysis (2 editions); Problem Solving in Analytical Chemistry; Quantitative Calculations in Pharmaceutical Practice and Research; Atomic Absorption Spectroscopy; and Trace Analysis. His honors include the ACS Division of Analytical Chemistry Award for Excellence in Teaching and the ACS Fisher Award in Analytical Chemistry. He was Chairman of the Division of Analytical Chemistry, 1989-90. He has been Editor-in-Chief of *Talanta* since 1989