

Respirometry for Assessing Biodegradation Reactions

James C. Young, Ph.D., P.E
President, Respirometer Systems and Applications, LLC,
Fayetteville, AR 72701
Principal, JCY Environmental, Fayetteville, AR 72703

12:30 – 1:30 pm, Tuesday, April 26, 2022, Online

In person: Civil Engineering Department, Room 105, Steinman Hall
(Light Lunch will be served)

Online: <https://ccny.zoom.us/j/85839128635>

Abstract: Respirometry is a method for measuring biological reactions in aerobic, anoxic and anaerobic environments. Major applications include: biodegradation reactions, conducting tests that support the design of wastewater treatment processes, and diagnosing problems with existing processes. This presentation will address: instrument features, fundamental biological growth models related to respirometry, biodegradation testing, kinetic modeling, and review of selected respirometric test protocols for assessing biodegradation reactions and wastewater treatability.

Biography: Prior to his current jobs, Dr. Young was a research professor of Environmental Engineering, University of Arkansas, Fayetteville, until 2010. Before this, he was a professor and the head of Civil Engineering, University of Arkansas, Fayetteville, until 1991. Dr. Young is the recipients of a number of honors, including W. Wesley Eckenfelder Industrial Water Qualify Lifetime Achievement Award from the Water Environment Federation, Alexandria, VA, 2015, Outstanding paper, Fifth International Symposium on Emerging Technologies in Hazardous Waste Management, Sponsored by American Chemical Society, Atlanta, GA in 1993, Research Award from the Water Pollution Control Association of Pennsylvania in recognition of outstanding research in the field of water pollution control, 1993, Willem Rudolfs medal from the Water Environment Federation for outstanding contributions to industrial waste treatment practice 1992. Dr. Young received B.S.C.E. and M.S.C.E. from New Mexico State University, Las Cruces in 1963 and 1954, respectively, and Ph.D. from Stanford University in 1968.

