

Chemistry Department

Detection of 2-Butoxyethanol and its Metabolites: Methods of Analysis

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Abstract

Ethylene glycol ethers (EGEs), e.g., 2-butoxyethanol (BE), are excellent solvents. For this reason they are used in many industrial and commercial products. Upon use these solvents are discharged into waterways. Accordingly, both humans as well as aquatic animals are exposed to EGEs. Exposure to EGEs results in various toxicities including encephalopathy, hemolysis, metabolic acidosis, carcinogenesis and mutagenesis. The actual concentration of EGEs in waste water discharges is current topic for investigation. This presentation will discuss about the adaptation of GC-MS and LC-MS methods for the detection of the most common EGEs, 2-butoxyethanol (BE) and its metabolite, butoxyacetaldehyde (BA). We find that LC-MS will be better method for the detection of both BE and BA.