AN ASSESSMENT OF FOURIER-TRANSFORM MICROWAVE SPECTROSCOPY FOR ENVIRONMENTAL MONITORING

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Fourier-Transform Microwave (FTMW) Spectroscopy is currently being evaluated as quantitative method to detect trace amounts of analytes in gaseous sample matrices. A number of issues are relevant for demonstrating FTMW as an effective analytical method. The following properties have been considered: the signal stability of the FTMW spectrometer, the use of different carrier gases for analyte detection, and the linearity of the instrument response. The limits of detection for sulfur dioxide, ethanol, methanol, and acetaldehyde in matrices simulating air will be reported and a discussion of the aforementioned topics will be given.