

# Two Simple Methods for Measuring Isoprene Emission of Leaves by UV-Spectroscopy and GC-MS

Johannes G. Zeidler and Hartmut  
K. Lichtenthaler

Botanical Institute II, University of Karlsruhe,  
D-76128 Karlsruhe, Germany

Z. Naturforsch. **53c**, 1087–1089 (1998);  
received October 5, 1998

Isoprene, *Platanus* × *acerifolia*, *Quercus robur* L.,  
*Robinia pseudoacacia* L., UV-Spectroscopy

Two new headspace methods for the analysis of isoprene emission from detached plant leaves are described. The first method is based on the UV-absorption of isoprene emitted by leaves inside quartz cuvettes and can be used for the quantitative spectrophotometric determination of isoprene production. The second technique is a micro-extraction method of isoprene from the cuvette air for GC analysis, and is very suitable for the determination of isotope-labeled isoprene by GC-MS.

Reprint requests to Prof. Dr. Dr. h. c. H. K. Lichtenthaler. Fax: +49 721 608 3874.  
E-mail: hartmut.lichtenthaler@bio-geo.uni-karlsruhe.de