

WS. GC-MS made easy: AMDIS in the analysis of complex mixtures of volatiles

Dragan Zlatković^{1*}

Keywords: GC-MS, AMDIS, essential-oil analysis

The Automated Mass Spectral Deconvolution and Identification System (AMDIS) is a computer program that extracts pure component spectra from complex chromatograms and identifies target compounds by matching these spectra against a reference library [1,2]. This software is a powerful tool that can be used as a “black box” device to identify trace compounds in complex matrices, yet it is available free of charge from the webpage of the National Institute of Standards and Technology (NIST) [3]. The workshop will cover basic operations and tools available in AMDIS (including chromatogram manipulation, retention index calculation, peak integration and library search), as well as more advanced concepts and methods that can be useful to an essential-oil chemist. The workshop is intended primarily for PhD students and researchers new to the analysis of complex volatile mixtures. It is desirable that participants have a basic knowledge of GC-MS principles.

References:

- [1] Davies, T., 1998. *Spectrosc. Eur.* 10, 24–27.
- [2] Stein, S.E., 1999. *J. Am. Soc. Mass Spectr.* 10, 770–781.
- [3] AMDIS Download Page (February 2013) Retrieved August 20, 2018, from <https://chemdata.nist.gov/mass-spc/amdis/downloads/>

Acknowledgments: This work was supported by the Ministry of Education, Science and Technological Development of Serbia [Project No. 172061].

¹Department of Chemistry, Faculty of Sciences and Mathematics, University of Niš, Višegradska 33, 18000 Niš, Serbia.

*Corresponding author: dragan.zlatkovic@gmail.com