

## Accepted Manuscript

Title: Simultaneous determination of trace concentrations of aldehydes and carboxylic acids in particulate matter

Authors: Jana Rousová, Manikyala R. Chintapalli, Anastasia Lindahl, Jana Casey, Alena Kubátová



PII: S0021-9673(18)30190-0  
DOI: <https://doi.org/10.1016/j.chroma.2018.02.026>  
Reference: CHROMA 359205

To appear in: *Journal of Chromatography A*

Received date: 29-10-2017  
Revised date: 6-2-2018  
Accepted date: 14-2-2018

Please cite this article as: Jana Rousová, Manikyala R.Chintapalli, Anastasia Lindahl, Jana Casey, Alena Kubátová, Simultaneous determination of trace concentrations of aldehydes and carboxylic acids in particulate matter, *Journal of Chromatography A* <https://doi.org/10.1016/j.chroma.2018.02.026>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## Simultaneous Determination of Trace Concentrations of Aldehydes and Carboxylic Acids in Particulate Matter

Jana Rousová<sup>1,a</sup>, Manikyala R. Chintapalli<sup>1,b</sup>, Anastasia Lindahl<sup>1,c</sup>, Jana Casey<sup>1,d</sup>, Alena Kubátová<sup>1\*</sup>

<sup>1</sup>Department of Chemistry, University of North Dakota, 151 Cornell Street, Grand Forks, ND 58202, USA

Present address

<sup>a</sup>Restek, 110 Benner Circle, Bellefonte, PA 16823

<sup>b</sup>Spectrum Health, 25 Ottawa Ave SW, Grand Rapids MI 49503

<sup>c</sup>Department of Biomolecular Chemistry, University of Wisconsin-Madison, 330 N Orchard Street, Madison WI 53715

<sup>d</sup>Bristol-Myers Squibb, 1 Squibb Dr, New Brunswick, NJ 08903

\*Corresponding author Email: [alena.kubatova@UND.edu](mailto:alena.kubatova@UND.edu);

phone: 701-777-0348; fax: 701-777-2331

### Highlights

- Simultaneous derivatization and GC-MS analysis of aldehydes and carboxylic acids
- One-step derivatization with PFBHA/MeOH for all aldehydes and the majority of acids
- Aromatic and hydroxyacids required sequential trimethylsilylation with BSTFA to PFBHA/MeOH derivatization
- Confirmed on a broad range of species with various functionalities (~95 compounds)
- Evaluated on representative wood smoke and urban air particulate matter

Download English Version:

<https://daneshyari.com/en/article/7608519>

Download Persian Version:

<https://daneshyari.com/article/7608519>

[Daneshyari.com](https://daneshyari.com)