

February 22, 2023

Review letter of Ph.D. thesis for Olga Ibragimova

Development of simple and accurate methods for organic pollutants determination in the air based on solid-phase microextraction

The thesis was supervised by Dr. Nassiba Baimatova (Associate Professor).

The quality of submitted thesis is excellent.

This Ph.D. thesis aimed at the development of “green” and simple-to-use analytical methods for the determination of the grab-type and time-weighted average (TWA) concentrations of volatile organic compounds (VOCs) in air using solid-phase microextraction (SPME). The developed methods were used to for determination of VOCs in ambient air.

The research is novel and significant. The results were published in Web-of-Science-indexed journals.

Ibragimova, Olga P.; Omarova, A.; Bukenov, B.; Zhakupbekova, A.; Baimatova, N. Seasonal and Spatial Variation of Volatile Organic Compounds in Ambient Air of Almaty City, Kazakhstan. *Atmosphere* 2021, 12, 1592. <https://doi.org/10.3390/atmos12121592>

Ibragimova, Olga P.; Baimatova, N.; Kenessov, B. Low-Cost Quantitation of Multiple Volatile Organic Compounds in Air Using Solid-Phase Microextraction. *Separations* 2019, 6, 51. <https://doi.org/10.3390/separations6040051>

Kenessov, Bulat, Jacek A. Koziel, Nassiba Baimatova, **Olga P. Demyanenko**, and Miras Derbissalin. 2018. "Optimization of Time-Weighted Average Air Sampling by Solid-Phase Microextraction Fibers Using Finite Element Analysis Software" *Molecules* 23, no. 11: 2736. <https://doi.org/10.3390/molecules23112736>

Aiyngul Kerimray, Nassiba Baimatova, **Olga Ibragimova**, Bauyrzhan Bukenov, Bulat Kenessov, Pavel Plotitsyn, Ferhat Karaca. Assessing air quality changes in large cities during COVID-19 lockdowns: The impacts of traffic-free urban conditions in Almaty, Kazakhstan, *Science of The Total Environment*, Volume 730, 2020, 139179, <https://doi.org/10.1016/j.scitotenv.2020.139179>

Olga's Ph.D. thesis is a compilation of several chapters that are logically separated. Olga's publication record is similar to average compared with expectations for a typical Ph.D. student in

Chemistry at our university, where 3 peer-reviewed publications are a norm, but students can defend theses without all papers published.

Olga has published 2 papers as first author and made major contributions to 2 peer-reviewed papers focused on methods use for ambient air quality research and modeling of air sampling using TWA-SPME.

Olga is an excellent chemist and is very well prepared to defend her thesis and launch a new chapter in her scientific career.

In summary I am very supportive and pleased with Olga's progress towards earning Ph.D. degree.



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My publications: [Web of Science](#) – [Scopus](#) - [Google Scholar](#) - [RG](#) - [Digital Repository](#)

Research projects: [ORCID](#)