Form 2.3

AL-FARABI KAZAKH NATIONAL UNIVERSITY

LIST OF SCIENTIFIC WORKS AND INVENTIONS

of the PhD Candidate

BUKENOV BAUYRZHAN OMIRBEKOVICH

№	Title of Works	Manuscript or Published	Name of Publisher, Journal (Issue, Year), Patent Number	Number of Printed Sheets or Pages	Co-authors
1.	Assessing air quality changes in large cities during COVID-19 lockdowns: The impacts of traffic-free urban conditions in Almaty	Published	Science of the Total Environment. – 2020. – Vol.730. – p.139-179.	8	Kerimray, A., Baimatova, N.*, Ibragimova, O. P., Bukenov, B., Kenessov, B., Plotitsyn, P., & Karaca, F.
2.	Determination of 1,3-Butadiene Migrated from Butadiene-Based Polymers to Air and Water Using Sorbent Tubes and Purge-and-Trap	Published	Chromatographia. – 2021. – Vol.84. – p.1105-112.	9	Omarova, A., Ibragimova, O. P., Bukenov, B., Abilda, A., Orazbayeva, D., & Baimatova, N.*
3.	Seasonal and Spatial Variation of Volatile Organic Compounds in Ambient Air of Almaty City, Kazakhstan	Published	Atmosphere. – 2021. – Vol.12. – 1592.	15	Ibragimova, O. P., Omarova, A., Bukenov, B., Zhakupbekova, A., & Baimatova, N.*
4.	Quantification of transformation products of rocket fuel unsymmetrical dimethylhydrazine in air using solid-phase microextraction	Published	Journal of Separation Science. – 2022 – 45(2) – 614–622.	9	Bukenov, B., Baimatova*, N., & Kenessov, B.
5.	Modeling the effect of temperature on solid-phase microextraction of volatile organic compounds from air by polydimethylsiloxane coating using finite element analysis	Published	Analytica Chimica Acta – 2022.– 1195.–339431.	9	Kapar, A., Muratuly, A., Orazbayeva, D., Bakaikina, N. V., Bukenov, B., & Kenessov, B.*
6.	Seasonal Variations and Effect of COVID - 19 Lockdown Restrictions on the Air Quality in the Cities of Kazakhstan	Published	Environmental Processes. – 2022. – Vol.9. – 48.	26	Baimatova, N.*, Omarova, A., Muratuly, A., Tursumbayeva, M., Ibragimova, O. P., Bukenov, B., & Kerimray, A.

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7.	Solving the mystery of the Chukotka stinky gray whales	Published	Chemosphere.– 2023. – 315. – 137785.	7	Polyakova, O. V., Filatova, O. A., Fedutin, I. D., Litovka, D. I., Bukenov, B., Artaev, V. B., Humston-Fulmer, E. M., Binkley, J., Kosyakov, D. S., & Lebedev, A. T.*
8.	Solid-Phase Microextraction for the Quantification of Acetophenone Migrated to Air and Water from Toys and School Supplies	Published	Journal of Analytical Chemistry. – 2023. – Vol.78. – p. 1414-1425.	12	Ibragimova, O. P., Omarova, A., Bukenov, B., & Baimatova, N.*
9.	Simple and accurate on-site quantitation of BTEX in atmospheric air using solid-phase microextraction and gas chromatography with photoionization detection	Published	Advances in Sample Preparation. – 2024. – 10. – Article number 100117.	7	Kurmanbayeva, T., Bukenov, B., Rymzhanova, Z., Kazhkenova, N., Imangabassov, A., Smail, A., Karimkyzy, N., & Kenessov, B.
10.	Emerging threats in Central Asia: Comparative characterization of organic and elemental carbon in ambient PM2.5 in urban cities of Kazakhstan	Published	Chemosphere. – 2025. – Volume 370. – Article number 143968	9	Omarova, Anara Ibragimova, Olga P. Tursumbayeva, Madina Bukenov, Bauyrzhan Tursun, Kazbek Mukhtarov, Ravkat Karaca, Ferhat Baimatova, Nassiba

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11.	Quantification of rocket fuel transformation products in air using sorbent tubes sampling and thermal desorption GC – high-resolution mass spectrometry (Orbitrap)	Published	Microchemical Journal. – 2025. – Article number 112879	9	Bukenov, Bauyrzhan Kenessov, Bulat Baimatova, Nassiba Ul'yanovskii, Nikolay Popov, Mark S. Kosyakov, Dmitry S.
12.	On-Site Quantification of Transformation Products of Rocket Fuel Unsymmetrical Dimethylhydrazine in Air Using Solid-Phase Microextraction	Published	Journal of Separation Science. – 2025. – Volume 48. – Issue 3. – Article number e70113	9	Bukenov, Bauyrzhan Karimkyzy, Nurbi Smail, Aruzhan Kurmanbayeva, Tolkyn Kenessov, Bulat
13.	Modeling the effect of temperature on solid-phase microextraction of volatile organic compounds from air using finite element analysis	Abstract	Abstracts of 1st European Sample Preparation e-Conference 11 - 12 March, 2021	1	Kenessov B., Orazbayeva D., Bakaikina N.V., Kapar A., Muratuly A., Bukenov B.
14.	Computational optimization of on-site quantification of environmental pollutants using solid-phase microextraction	Abstract	The Pacifichem 2021 Congress Dec 16-21, 2021	1	Bulat Kenessov, Bauyrzhan Bukenov
15.	Determination of time-weighted average concentrations of volatile organic pollutants in the air based on solid-phase microextraction by a modified sampler with an alternative geometry.	Abstract	25th International Symposium on Advances in Extraction Technologies 18th to 21st of July 2023	1	Baimatova N., Ibragimova O.P., Omarova A., Tursun K., Bukenov B.

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16.	On-site quantification of transformation products of unsymmetrical dimethylhydrazine in environmental samples using solid-phase microextraction and gas chromatography	Печатный тезис	25th International Symposium on Advances in Extraction Technologies Tenerife, Canary Islands, Spain from 18th to 21st of July 2023	1	B. Kenessov, B. Bukenov, A. Kapar, T. Kurmanbayeva, N. Kazhkenova.
17.	On-Site Quantitation of BTEX in Atmospheric Air Using Solid-Phase Microextraction and Gas Chromatography with Photoionization Detector	Печатный тезис	3rd European Sample Preparation Conference and 2nd Green and Sustainable Analytical Chemistry Conference Chania, Crete, Greece, from the 15th to the 18th of September 2024	1	B. Kenessov, T. Kurmanbayeva, B. Bukenov, Z. Rymzhanova, N. Kazhkenova, A. Imangabassov, A. Smail, N. Karimkyzy

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