

Nausheen Sadiq, Ph.D.

Associate Research Chemist

Primary Responsibilities	<i>Develop new research techniques to expand methods currently offered at Brooks Applied Labs while providing help and support for the Lab Staff, as needed.</i>
Education	Ph.D. Chemistry, <i>Queen's University, Kingston, ON, Canada</i> 2016 BScH. Chemistry, <i>Queen's University, Kingston, ON, Canada</i> 2012
Affiliations	Member of the Canadian Canola Initiative National Advisory Council (2016-present) Member of the Canadian Society for Analytical Sciences and Spectroscopy (CSASS) (2013-Present)
Publications	Sadiq, N. and Beauchemin, D. (2014) Optimization of the operating conditions of solid sampling electrothermal vaporization coupled to inductively coupled plasma optical emission spectrometry for the sensitive direct analysis of powdered rice. <i>Analytica Chimica Acta</i>. 851, 23-29. Sadiq, N., Huang, L., Kaveh, F. and Beauchemin, D. (2017) ETV-ICPOES coupled to a nebulisation/pre-evaporation system for the direct analysis of glutinous rice by external calibration with aqueous solutions. <i>Food Chemistry</i>. 237, 1-6. Sadiq, N. W. and Beauchemin, D. (2017) Simultaneous speciation analysis of As, Cr and Se in the bio-accessible fraction for realistic risk assessment of food. <i>Analytical Chemistry</i>. 89, 13299-13304. Althobiti, R., Sadiq, N. and Beauchemin, D. (2018) Risk assessment of arsenic in rice using on-line leaching and speciation analysis by ion exchange chromatography coupled to inductively coupled plasma mass spectrometry. <i>Food Chemistry</i>. 257, 230-236. Scheffler, G., L., Sadiq, N., W., Pozebon, D. and Beauchemin, D. (2018) Bio-accessibility of trace elements in air filters using simulated saliva, gastric and lung fluids. <i>Journal of Analytical Atomic Spectrometry</i>. 33, 1486-1492. Sadiq, N. and Beauchemin, D. Multi elemental risk assessment of various baby rice cereals: some cause for concern? <i>Environmental Science & Technology</i>. (Manuscript in Preparation).

Book Chapters

Makkonen, Y., Sadiq, N. and Beauchemin, D. (2016) Inductively coupled plasma mass spectrometry. In Taylor & Francis Group Encyclopedia of Plasma Technology, J. Leon Shohet, Ed., (Invited Submission).

Sadiq, N. (2017) To Fail and Tell the Tale – A Story of Science In Canadian Failures. Dundurn Press Limited, Benay, A. (Invited Submission).

Sadiq, N. and Beauchemin, D. Sample introduction systems in ICP-MS and ICP-OES. Elsevier – Science and Technology Books, J. Cetel., (Invited Submission) (Manuscript in Preparation).

Presentations

Sadiq, N., Tahmasebi, S., Jerkiewicz, G. and Beauchemin, D. (2017) Speciation analysis of nickel in alkaline fuel cell electrolyte by ion chromatography coupled to inductively coupled plasma mass spectrometry. ICASS. Ontario, Canada. June 19-23.

Sadiq, N. and Beauchemin, D. (2017) Multi-elemental risk assessment of toxic and essential elements in oat cereal using ion exchange chromatography coupled to inductively coupled plasma mass spectrometry. ICASS. Quebec, Canada. June 19-23.

Mainguy, A., Sadiq, N. and Beauchemin, D. (2017) Assessment of Ni-based electrode stability in alkaline fuel cells through the development of ICP-MS methods for basic electrolyte solutions. ICASS. Quebec, Canada. (Refereed Poster Presentation) June 19-23.

Sadiq, N. and Beauchemin, D. (2017) Analyse de speciation simulatanée de chrome, arsenic et selenium dans la fraction bio-accessible d'échantillons de riz pour l'évaluation du risque. Spectr' Atom. Quebec, Canada. June 19-23.

Althobiti, R., Sadiq, N. and Beauchemin, D. (2017) Analyse de speciation de l'arsenic dans la fraction bio-accessible pour l'evaluation du risqué lié à la consommation de riz de divers pays. Spectr' Atom. Quebec, Canada. June 19-23.

Scheffler, G. L., Sadiq, N., Pozebon, D and Beauchemin, D. (2017) Direct analysis of air filters for toxic elements screening using a mixed-gas plasma and ETV-ICPOES. ICASS. Quebec, Canada. June 19-23.

Sadiq, N., Tahmasebi, S., Jerkiewicz, G. and Beauchemin, D. (2017) Speciation analysis of nickel in alkaline fuel cell electrolyte by ion chromatography coupled to inductively coupled plasma mass spectrometry. CSC. Ontario, Canada. May 28-June 1.

Sadiq, N., Jerkiewicz, G. and Beauchemin, D. (2017) Analysis of alkaline fuel cell electrolyte by inductively coupled plasma mass spectrometry. NSERC Discovery Frontiers Project Meeting. British Columbia, Canada. February 3 2017.

Sadiq, N., Mainguy, A., Jerkiewicz, G. and Beauchemin, D. (2016) Analysis of alkaline fuel cell electrolyte by inductively coupled plasma mass spectrometry. NSERC Discovery Frontiers Project Meeting. Ontario, Canada. December 7 2016.

Sadiq, N. and Beauchemin, D. (2016) Evaluation du risqué cause par As, Se et Cr dans les céréales pour bébés par lixiviation en ligne et analyse de speciation avec detection par ICPMS. 9th Queen's Chemistry Graduate Symposium. Ontario, Canada. September 9 2016.

Mainguy, A., Sadiq, N. and Beauchemin, D. (2016) Assessment of Ni-based electrode stability in alkaline fuel cells through the development of ICP-MS analysis methods for basic electrolytic solutions. NSERC Discovery Frontiers Project Meeting. Ontario, Canada. August 17 2016.

Sadiq, N. and Beauchemin, D. (2016) Evaluation du risqué cause par As, Se et Cr dans les céréales pour bébés par lixiviation en ligne et analyse de speciation avec detection par ICPMS. Spectr' Atom. Pau, France. (Refereed Poster Presentation) May 24–27 2016.

Sadiq, N. and Beauchemin, D. (2016) Killing me softly: A hit song or the story of arsenic in

rice?. Winter Conference on Plasma Spectrochemistry. Arizona, USA. (Refereed Poster Presentation) January 11–16 2016.

Guerrero, S. J. G., Sadiq, N. and Beauchemin, D. (2016) risk assessment of arsenic and other potentially toxic elements in maize flour. Winter Conference on Plasma Spectrochemistry. Arizona, USA. (Refereed Poster Presentation) January 11–16 2016.

Sadiq, N. and Beauchemin, D. (2016) Simultaneous Speciation Analysis of Bio-Accessible As, Se, and Cr in Leachates from Baby Cereals for Realistic Risk Assessment. Winter Conference on Plasma Spectrochemistry. Arizona, USA. (Oral Presentation) January 11–16 2016.

Sadiq, N. and Beauchemin, D. (2015) Killing me softly: A hit song or the story of arsenic in rice?. 8th Queen's Chemistry Graduate Symposium. Ontario, Canada. (Refereed Oral Presentation -3 Minute Thesis) **Oral Presentation — 3MT Prize**. September 11 2015.

Sadiq, N. and Beauchemin, D. (2015) Multi Elemental Risk Assessment in Various Types of Rice Using Inductively Coupled Plasma Mass Spectrometry (ICP-MS). 8th Queen's Chemistry Graduate Symposium. Ontario, Canada. (Refereed Poster Presentation). September 11 2015.

Sadiq, N., Huang, L., Kaveh, F. and Beauchemin, D. (2015) enhancement of electrothermal vaporization coupled to inductively coupled plasma optical emission spectrometry using nebulization/pre-evaporation for the direct analysis of glutinous rice flour. 60th International Conference on Analytical Sciences and Spectroscopy (ICASS). Nova Scotia, Canada. (Oral Presentation). May 19–22 2015.

Sadiq, N. and Beauchemin, D. (2015) Analyse simultanée de spéciation du Se, Cr et As dans les lixiviats de céréals pour bébé pour une évaluation du risque plus réaliste. Spectr'Atom. Nova Scotia, Canada. (Oral Presentation). May 19–22 2015.

Sadiq, N. and Beauchemin, D. (2014) Multi-elemental risk assessment in baby rice cereal using on-line continuous leaching and ion exchange chromatography coupled to ICP-MS for the speciation analysis of bio-accessible elements. 17th Annual Chemistry and Biochemistry Graduate Research Conference (CBGRC). Quebec, Canada. (Refereed Oral Presentation). **Oral Presentation Prize**. November 28 2014.

Sadiq, N., Lamsal, R. and Beauchemin, D. (2014) effect of food processing on the content and maximum bio-accessibility of toxic elements in bread and organic long grain rice. 97th Canadian Chemistry Conference and Exhibition (CSC). BC, Canada. **Invited Speaker** (Oral Presentation). June 1–5 2014.

Sadiq, N. and Beauchemin, D. (2014) direct analysis of rice for essential and toxic elements by solid sampling electrothermal vaporization coupled to inductively coupled plasma optical emission spectrometry. Spectroscopy Solutions 2014 e-Conference, Singapore. (Refereed Poster Presentation). May 20–29 2014.

Sadiq, N. and Beauchemin, D. (2013) Multi-elemental risk assessment in various types of rice using inductively coupled plasma mass spectrometry (ICP-MS). 59th International Conference on Analytical Sciences and Spectroscopy (ICASS). Quebec, Canada. (Refereed Poster Presentation). **Poster Presentation Prize**. June 26– June 28 2013.

Sadiq, N. and Beauchemin, D. (2013) Multi-elemental risk assessment in various types of rice using on-line continuous leaching and ion exchange chromatography coupled to ICP-MS for the speciation analysis of bio-accessible elements. 6th Annual Queen's Chemistry Graduate Symposium. Ontario, Canada. (Oral Presentation). September 5 2013.