

# Khaled W. Omari

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## **Work Experience**

### **Sample Reception Section Head/Toxicology Section Head/Interim Inorganic Section Head/ Laboratory Director**

*Mar. 2015-  
Present*

Testmark Laboratories Limited, Garson, Ontario

- Trainer for student during their coop work.
- Seeing overall aspects of work at the environmental lab.
- Lead the lab to maintain the high performance of analyses according to ISO17025.
- Reviewing SOPs.
- A member of improvement committee.
- Maintain the accreditation through CALA.
- Working hard to facilitate and meet turnaround time (TAT) for testing via simplifying tests procedure in away that keep it accurate.
- A member of procurement committee.
- Involved in preventative and correction action plan.

### **Canadian Government Laboratory Visiting Fellow**

*Feb. 2014-  
Feb. 2015*

Agriculture and Agri-Food Canada, London, Ontario

- Method development and validation to analyse flavonoids, lignin, cellulose, and condensed tannins, using different instruments including HPLC, GC-MS, and UV-visible spectrophotometer, for different genes of alfalfa forage crops.
- Functional characterization and compositional analysis for plant germplasm.
- Interpret Data and Reports.

### **Research Scientist-Post Doctoral Fellow**

*Feb. 2013-  
Jan. 2014*

Chemistry Department-Cape Breton University, Sydney, NS, Canada

In collaboration with B. W. BioEnergy Inc., Sydney, NS, Canada

- Taught selected topics in two courses (2<sup>nd</sup> and 3<sup>rd</sup> year students); Chem 2301 course “Introductory Organic Chemistry I” and Chem 3301 course “Intermediate Organic Chemistry”.
- Method development to produce high quality activated carbons via enhancing surface area and pore size. Scaled up the process and tested the efficiency of the activated carbon.
- The surface area was increased three times using a green industrial process.
- Tested activated carbon capability to adsorb pollutants including poly aromatic hydrocarbons (PAH), and pesticides using GC-MS, and heavy metals using ICP-MS, from water samples.
- Periodic mesoporous organosilica (PMO) as a catalyst to stabilize a carbocation intermediate project.
- Mentor a 1<sup>st</sup>, 4<sup>th</sup> year Bachelor of Science (chemistry) students from CBU in summer 2013

### **PhD Candidate, Researcher and Teaching Assistant**

*Sep. 2008-  
Oct. 2012*

Chemistry Department-Memorial University of Newfoundland (MUN), St. John's, NL, Canada

- Researcher in Green Chemistry and Catalytic Group
- Conducted research to develop new chemical processes using renewable feedstocks
- Devised new technical applications of industrial compounds including biofuels.

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- I have been responsible for maintenance and student-training for our group's GC-MS
- I have been responsible for maintenance and student-training for our group's GC-MS
- Scaled up chemical reactions.
- Conducted research to discover, develop, purify, evaluate and analyze new products
- Applied design of experiments & factorial design approaches to save time & cost.
- Analyzed data via Minitab, Sigmaplot & Excel.
- Teaching Assistant for undergraduate students in chemical labs and marking their reports from Sept. 2008 to Sept. 2010 (Yr1 General Chemistry and Yr4 Instrumental Analysis)
- Mentored a 2<sup>nd</sup> year Bachelor of Science (chemistry) student from MUN in summer 2010, a 2<sup>nd</sup> year Bachelor of Science (chemistry) student from Germany in summer 2011 and two graduate (M.Sc) chemistry students from MUN.

## **Wet Chemistry Supervisor (supervising five employees)**

Dec. 2005-

*BEN HAYYAN-Aqaba International Laboratories-Aqaba Special*

Aug. 2008

*It was established under EU funded programme "IS-ASEZA", Aqaba, Jordan*

- Founded a new lab in Aqaba to analyze environmental and food samples within a team of experts from European Union (EU) and Jordan.
- Contributed in planning and brainstorming for objectives of the labs.
- SOPs preparation and checking for all tests conducted in the lab using AOAC, BS, ISO standards related to food, water and wastewater samples
- Received the instruments after putting their specifications and obtained full training.
- Analyzed samples implementing accuracy assessment protocols.
- Validated method, build up the quality control charts.
- Participated in PT samples from companies such as FAPAS, BIPEA, RTC, etc.
- Supervised all tests conducting in the analytical Lab and applying ISO 17025 requirements.
- Ensured compliance with quality assurance (QA) and quality control (QC) processes.
- Contributed in customization of LIMS.
- Assisted the lab with obtaining an international accreditation from Swedish Board for Accreditation and Conformity Assessment (SWEDAC), Sweden.
- Trainer for students coming from universities and employees from industries and companies.

## **Consultant**

Sep. 2007-

*Technique For Compound Fertilizers (TCF), Aqaba, Jordan*

Aug. 2008

- Prepared new lab inside the industry to analyze P<sub>2</sub>O<sub>5</sub>, chloride and moisture
- Developed technical specifications for flame photometer to analyze potassium
- Analyzed products during production process for monitoring purposes

## **Senior Lab. Technician (for two employees)**

Aug. 2003-

*Amman Baccalaureate School (ABS), Amman, Jordan*

Dec. 2005

- Supervising all experiments conducting in the labs at middle year program and international baccalaureate program

## **Teaching Assistant**

*Jordan University of Science and Technology, Irbid, Jordan*

Oct. 2001-

Feb. 2003

Teaching Assistant for undergraduate students in chemical labs, lecturing and marking their reports.

# Khaled W. Omari

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**Lab Supervisor/Chemical Analyst (supervising four employees)**

**Chemical Analyst**

*Jun. 2001-  
Oct. 2001  
Apr. 1998-  
Jun. 2001*

*Industrial Chemistry Center-Royal Scientific Society (ICC-RSS), Amman, Jordan*

- Assisted the lab with obtaining national accreditation from Jordan Institution for Standards & Metrology
- Assisted the lab with obtaining an international accreditation/Deutsches Akkreditierungs system Prüfwesen
- SOPs Preparation for all tests conducted in the Lab using AOAC, BS, ISO, BP Standards related to food, fertilizers, detergents, phosphate rocks and extinguisher powder
- Supervised all tests conducting in the analytical Lab
- Ensured compliance with quality assurance (QA) and quality control (QC). Prepared action plans
- Conduct programs to ensure quality control of analysis
- Trainer for students coming from universities and employees from industries
- Validated method, build up the quality control charts

## Education

- **PhD in Analytical Chemistry**

*Oct. 2012*

*Memorial University of Newfoundland (MUN), St. John's, NL, Canada*

**GPA = 4.00 Out of 4.00 Rating Excellent.**

PRODUCING RENEWABLE CHEMICALS FROM FISHER  
WASTE:  
CHITIN, CHITOSAN AND THEIR MONOMERS

- **Master of Science in Analytical Chemistry**

*Jun. 2005*

*Jordan University of Science and Technology (JUST), Irbid, Jordan*

**Average = 87.8% Rating Excellent. Ranking first.**

DETERMINATION OF NICOTINE AND COTININE IN BLOOD AND URINE USING HIGH  
PERFORMANCE LIQUID CHROMATOGRAPHY AND GAS CHROMATOGRAPHY

- **Bachelor of Science in Chemistry**

*Feb. 1998*

*Mu'tah University (MU), Karak, Jordan*

**Average = 85% Rating Excellent. Ranking first.**

## Publications

1. Kormendi A., Amyot L., **Omari K.**, McDowell T., Hannoufa A., *Anal. Methods*, 2016, **8**, 4955-4964
2. Aung B, Gruber M. Y., Amyot L., **Omari K.**, Bertrand A., and Hannoufa A. *Plant Biotechnol. J.*, 2015, **13**, 779-790
3. Barrie W. Fiolek, Stephanie L. MacQuarrie and **Khaled W. Omari**, Generation of high quality birch-based activated for adsorption of heavy metals and PAH from water, US Provisional Patent, Filed on November 7<sup>th</sup>, 2013, Application, File Reference Number 61/901,058.
4. Francesca M. Kerton, Yi Liu, **Khaled W. Omari** and Kelly Hawboldt, Green chemistry and the ocean-based biorefinery, *Green Chem.*, 2013, **15**, 860-871. Top ten most accessed articles in March 2013.  
<http://blogs.rsc.org/gc/2013/08/06/top-10-most-accessed-articles-march-2013/>  
 It is one of the papers included in the special online theme issue in the green chemistry journal based on presentations at the 2012 Green Solvents Conference in Germany.  
<http://pubs.rsc.org/en/journals/articlecollectionlanding?sercode=gc&themeid=9c5a8cdd-dc66-4faa-a981-22ace930d184>
5. **Khaled W. Omari**, Jessica E. Besaw and Francesca M. Kerton, Hydrolysis of chitosan to yield levulinic acid and 5-hydroxymethylfurfural in water under microwave irradiation, *Green Chem.*, 2012, **14**, 1480-1487. Top ten most accessed articles in April 2012.  
<http://blogs.rsc.org/gc/2012/05/18/top-ten-most-accessed-articles-in-april-2/>
6. **Khaled W. Omari**, Linda Dodot and Francesca M. Kerton, A Simple One-Pot Dehydration Process to Convert N-acetyl-D-glucosamine into a Nitrogen-Containing Compound, 3-acetamido-5-acetylfuran, *ChemSusChem*, 2012, **5**, 1767-1772.
7. Marcus W. Drover, **Khaled W. Omari**, Jennifer N. Murphy and Francesca M. Kerton, Formation of a Renewable Amide, 3-acetamido-5-acetylfuran, via Direct Conversion of N-acetyl-D-glucosamine, *RSC Adv.*, 2012, **2**, 275
8. Adnan Massadeh, Ahmed Gharibeh, **Khaled Omari**, Idrees Al-Momani, Ahmed Alomari, Hiatham Tumah and Wail Hayajneh. Simultaneous Determination of Cd, Pb, Cu, Zn, and Se in Human Blood of Jordanian Smokers by ICP-OES., *Biol. Trace. Elem. Res.*, 2010, **133**, 1-11.
9. Adnan M. Massadeh, Ahmad A. Gharaibeh, and **Khaled W. Omari**. A Single-Step Extraction Method for the Determination of Nicotine and Cotinine in Jordanian Smokers' Blood and Urine Samples by RP-HPLC and GC-MS. *J. of Chromatog. Science*, 2009, **47**, 170-177.

## Presentations (presented by Khaled Omari)

- |   |          |                  |
|---|----------|------------------|
| 1. Quality assurance and quality control  | Feb 2018 |                  |
| 2. Micropipette: use and verification   | Jan 2018 |                  |
| 3. Spotlights on water sample preservation for environmental analyses   |          | <i>Jan 2017</i>  |
| 4. Statistical Process Control (SPC) Chart  |          |                  |
| 5. Spotlights on WHMIS 2015   |          | <i>Feb 2017</i>  |
| 6. Etiquette at workplace   |          | <i>May 2016</i>  |
| 7. Phosphate analysis in water samples  |          | <i>Mar. 2016</i> |
| 8. Human memory   |          | <i>Nov. 2015</i> |
| 9. Proactive communication at workplace, Testmark Laboratories Ltd.   |          | <i>May 2015</i>  |
| 10. Ectopic expression of miR156 in alfalfa affects cell wall composition, 5 <sup>th</sup> annual Biology Graduate Student F University of Western Ontario, London, ON. |          | <i>Oct. 2014</i> |
| 11. Activated carbon-B. W. BioEnergy Inc., Enterprise Cape Breton Corporation (ECPC).   |          | <i>Jul. 2013</i> |
| 12. Producing useful chemicals via renewable feedstocks from aquaculture (chitin, chitosan, and their monomers), Student Research Series, CBU, Sydney, NS               |          | <i>May, 2013</i> |
| 13. Producing useful chemicals via renewable feedstocks from aquaculture  |          |                  |
| 14. (chitin, chitosan, and their monomers), PhD departmental seminar, St. John's, NL  |          | <i>May, 2012</i> |
| 15. Recent advances in atmospheric pressure photoionization mass spectrometry,  |          | <i>Feb. 2011</i> |

# Khaled W. Omari

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- Non-research related graduate departmental seminar, St. John's, NL
16. Green chemistry, Invited Speaker, Environmental Science Program, St. John's, NL Feb. 2011
  17. Supercritical fluid chromatography developments, Comprehensive Exam, St. John's, NL Jan. 2010
  18. Rapid and high-throughput desorption electrospray ionization (DESI) method:  
A general review, Analytical Course, St. John's, NL Apr. 2009
  19. Alternatives for lignocellulosic pulp delignification using polyoxometalates and oxygen:  
A review, Green Chemistry Course, St. John's, NL Dec. 2008
  20. Control charts, Aqaba, Jordan Feb. 2008
  21. Determination of nicotine and cotinine in blood and urine using high performance  
liquid chromatography and gas chromatography, Irbid, Jordan Jun. 2005

## Conferences

22. 97<sup>th</sup> Canadian Chemistry Conference and Exhibition by Canadian Society for Chemistry (CSC),  
Vancouver, BC, Canada. My PDF work was presented by my supervisor. Jun. 2014
23. ACS Summer School on Green Chemistry and Sustainable Energy, Golden, CO, U.S. Poster  
presented. Jun. 2012-  
Jul. 2012
24. 95<sup>th</sup> Canadian Chemistry Conference and Exhibition by Canadian Society for Chemistry (CSC),  
Calgary, AB, Canada. Poster presented.
25. The Earth Day Global Poster Session 2012. Poster Presentation Apr. 2012  
([http://www.ipst.gatech.edu/faculty/ragauskas\\_art/global/global\\_2012/biochemicals.html](http://www.ipst.gatech.edu/faculty/ragauskas_art/global/global_2012/biochemicals.html)).
26. Newfoundland and Labrador Association of Technology Industries (NATI) Solutions Summit  
(Attendee) Mar. 2012
27. Memorial Student Leadership Conference (MSLC), St. John's, NL, Canada (Attendee) Feb. 2012
28. Sustainable Chemistry Summit (SCS): From Lab to Market organized by GreenCentre Canada,  
Kingston, ON, Canada, Poster presented. Sep. 2011
29. 94<sup>th</sup> Canadian Chemistry Conference and Exhibition by Canadian Society for Chemistry (CSC),  
Montréal, QC, Canada. Poster presented. Jun. 2011
30. The 2<sup>nd</sup> Annual Christmas Green Chemistry and Catalysis Mini-Conference  
at Memorial University, St. John's, NL, Canada. Oral presentation Dec. 2010
31. The 17<sup>th</sup> Annual Chemistry Colloquium Contest (CCC-XVII), St. John's, NL, Canada. Oral  
presentation Jan. 2010
32. The 1<sup>st</sup> Annual Christmas Green Chemistry and Catalysis Mini-Conference  
at Memorial University, St. John's, NL, Canada. Oral presentation Dec. 2009
33. LabWare 2008, Middle East Customer Education Conference, Manamah, Bahrain May 2008
34. The 8<sup>th</sup> Scientific day at Jordan University of Science and Technology (JUST), Irbid, Jordan May 2005
35. The 1<sup>st</sup> scientific day for graduate studies faculty at Jordan University of Science  
and Technology (JUST), Irbid, Jordan May 2005

## Training Courses

- Radiation Safety Officer Course (RSO-1), Radiation Safety Institute of Canada Sep 17-21, 2018
- **Navigating ISO/IEC 17025:2017 - Comparison to ISO/IEC 17025:2005, ANAB** Feb. 3, 2018
- Emergency First Aid/CPR/AED, Expiry date: Sep. 25, 2015 by St. John Ambulance Sep. 25, 2012
- Professional Skills Development Program (PSDP) by Memorial University Jan-Mar 2012
- Proactive & practical communication by MITACS Apr. 2010
- Basics of intellectual property, patents & trademark by MITACS Apr. 2010
- Teaching Opportunities for Graduate Assistants Program Level 2 (TOGA 2) Jan-Mar 2009
- Laboratory Safety by Safety Department at Memorial University Nov. 2008

## Khaled W. Omari

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- Workplace Hazardous Materials Information System (WHMIS) *Oct. 2008*
- Training of trainers “Supervisory skills” by Talal Abu-Ghazaleh, College of Business-Continuing Training and Professional Department, *Aqaba, Jordan* *Oct. 2007*
- Supervisory skills by Talal Abu-Ghazaleh College of Business-Continuing Training and Professional Department, *Aqaba, Jordan* *Aug-Oct 2007*
- Time management by Train edge, *Aqaba, Jordan* *Jan. 2007*
- Coexistence in food lab at Jordan military labs, Amman, Jordan *Jul. 2006*
- Applied techniques for analysis of food additives at Royal Scientific Society, Amman, Jordan *May-Jun2006*
- Estimation of Uncertainty in Chemical analysis at Royal Scientific Society, Amman, Jordan *May 2006*
- ISO 17025 at Aqaba Special Economic Zone Authority (ASEZA), *Aqaba, Jordan* *Mar. 2006*
- Introduction to ArcGIS I conducted by Info Graph-Environmental Systems Research Institute, INC. at Amman Baccalaureate School, Amman, Jordan *Jun. 2005*
- Application of instrumental analysis in pharmacy and chemistry at Jordan University of Science and Technology (JUST), Irbid, Jordan *Jul. 2004*
- Electronics course at Amman Baccalaureate School, Amman, Jordan *Jun. 2004*
- Training on HPLC Instrument at Jordan University of Science and technology, Irbid, Jordan *Mar. 2004*
- Occupational Safety at the Hashemite Kingdom of Jordan Vocational Training Cooperation Occupational Safety Institute , Amman, Jordan *Aug. 2000*
- Balance calibrations at Royal Scientific Society, *Amman, Jordan* *Mar. 2000*

### **Scholarships & Awards**

- Canadian Government Laboratory Visiting Fellow administered by NSERC *Feb. 2014-  
Feb. 2015*
- MITACS Accelerate *Sep. 2013-  
Jan. 2014*
- NSERC Engage Grant. Post-Doctoral Fellowship and B. W. BioEnergy Inc. *Feb. 2013-  
Aug. 2013*
- Travel award to attend the ACS Summer School on Green Chemistry and Sustainable Energy 2012, Colorado, USA. *Jun. 2012-  
Jul. 2012*
- Poster prize at the Sustainable Chemistry Summit (SCS), Kingston, ON *Sep. 2011*
- Travel Bursary, Sustainable Chemistry Summit (SCS), Kingston, ON *Sep. 2011*
- Research & Development Corporation of Newfoundland and Labrador (RDC) Ocean Industries Research Awards, *St. John's, NL* *Sep. 2010-  
Aug. 2012*
- J. Beryl Truscott Graduate Scholarship, *St. John's, NL* *2009/2010*
- First prize, Green chemistry & catalysis Christmas mini-conference, *St. John's, NL* *Dec. 2009*
- PhD Scholarship from Memorial University of Newfoundland, *St. John's, NL* *Sep. 2008-  
Aug. 2012*

### **Membership**

Canadian Society for Chemistry (CSC)