



**Megan Konarik**  
Senior Analytical Chemist  
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**TDI-Brooks International, Inc.**  
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Ph: (979) 693-3446 Fax: (979) 693-6389  
[www.tdi-bi.com](http://www.tdi-bi.com)

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## PROFESSIONAL EXPERIENCE

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- Senior Analytical Chemist, TDI-Brooks International, Inc., 2018 - Present
- Scientist II, Texas A&M Veterinary Medical Diagnostic Lab, 2014 - 2018
- Graduate Research Assistant, Texas Research Institute for Environmental Studies, 2011 - 2014
- Intern, Harris County Institute of Forensic Science, Summer 2013

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## KEY ACHIEVEMENTS - TDI BROOKS INTERNATIONAL, INC.

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- Develop and validate LC/MS/MS methods for additional tests to offer clients
- Perform routine analysis of sediment, water, tissue, and gas
- Perform routine maintenance of laboratory instrumentation and keep accurate records
- Compose SOPs, procedures, and supporting documents for new tests as needed

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## KEY ACHIEVEMENTS - TEXAS A&M VETERINARY MEDICAL DIAGNOSTIC LAB

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- Perform analysis of biological and non-biological samples related to animals for the presence of drugs
- Update and compose SOPs for lab operation and quality assurance and maintain instrumentation
- Participate in research projects by researchers in the veterinary science field from across the nation
- Work closely with coworkers to develop and improve methods for implementation
- Investigate samples of unknown composition and establish its contents
- Testify as a witness in hearings

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## KEY ACHIEVEMENTS - TEXAS RESEARCH INSTITUTE FOR ENVIRONMENTAL STUDIES

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- Perform analysis of non-biological environmental samples (i.e. water and soil quality tests)
- Followed established SOPs to perform daily tasks
- Recorded and conformed to established quality assurance measures

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## KEY ACHIEVEMENTS - HARRIS COUNTY INSTITUTE OF FORENSIC STUDIES

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- Assisted in analysis of trace evidence samples (for the presence of gunshot residue and accelerants in fire debris)
- Worked on a project to determine the possibility of using
- DART-TOF-MS to detect the organic components of gunshot residue

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## HONORS AND AWARDS

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- Excellence in Service Award, College of Criminal Justice, 2012
  - Recognized for service to and leadership within the Sam Houston State University College of Criminal Justice
- Robert A. Welch Foundation Research Fellowship, 2011
  - Fellowship allowing research in Physical Chemistry for the Department of Chemistry at Sam Houston State University

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## PROFESSIONAL TRAINING

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- Emerging Leaders Conference, Texas A&M AgriLife Extension Service
- SkillPath Training: How to Communicate with Tact, Professionalism, and Diplomacy
- Answering the NAS: The Ethics of Stewardship and the Stewardship of Ethics
- SOP Writing for ISO 17025 Accreditation

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## PROFESSIONAL AFFILIATIONS

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- American Chemical Society, 2011-Present

## FORMAL EDUCATION

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- M.S., Forensic Science, Sam Houston State University, 2014
- B.S., Forensic Chemistry, Sam Houston State University, 2012
- B.S., Criminal Justice minor in Biology, Sam Houston State University, 2012

## PUBLICATIONS

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- Jeffery, N., Boudreau, E., **Konarik, M.**, Mays, T., and Fajt, V. "Pharmacokinetics and safety of oral glyburide in dogs with acute spinal cord injury," *PeerJ*, doi: 10.7717/peerj.4387, 2018.
- "Contact Angle Measurements using Cell Phone Cameras Via the Bikerman Method." *Galvanotechnik*, August 2011.
- "Computerized Measurement of Contact Angles." *Galvanotechnik*, November 2010.

## ANALYTICAL INSTRUMENTATION, SOFTWARE, AND CHEMISTRY SKILLS

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### Instrumentation:

- Thermo QExactive + Orbitrap (Ion Trap MS, High Resolution Accurate MS), LC/MS/MS (Agilent and Thermo systems), IRMS-GC (for gas analysis, includes cryogenic purge and trap), SEM-EDS, Polarized Light Microscopy, Light Microscopy, Comparison Microscopy, ICP-OES, GC/MS, GC-FID, Py-GC/MS, GC-NPD, GC- $\mu$ ECD, GC/MS-SPME, EA(CHNS/O)-FPD, NIR, FT-IR-ATR, Micro-FT-IR, UV/Vis, GF/Flame AA, Ion Chromatography, HPLC-UV-Fluorescence, DART-TOF-MS, Ion Mobility Spectrometry, pH/ISE/Conductivity/DO Benchtop meter, mercury analyzer, Raman Spectrometry, solvent extractor, constant temperature oven/incubator, balance, digestion block, autoclave, centrifuge

### Software:

- MS Access, Excel, Word, Infopath, PowerPoint, Minitab, ImageJ, Agilent ChemStation, Agilent MassHunter, Thermo Xcalibur, Thermo TraceFinder (v. 3.2, 3.3), OPUS, Smart Analyzer Vision, Chromeleon, WinLab 32 for AA, Windows, Macintosh OS, WEKA Data Mining, Qualtrax

### Chemistry Skills:

- Sample preparation (SPE, liquid/liquid extraction), buffer preparation, method development for LC and GC instruments, unknown substance identification