

NEAFS Newsletter

Volume 51, Issue 2

Summer 2026



Inside:
President's Letter
2026 Joint Meeting Updates
Welcome New Members
Cayman Technical Paper
Sixth Month Progress Report

2026

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ACCREDITED
ISO/IEC 17025 #AT-1773
ISO 17034 #AR-1774

NPS Pose Several Challenges to the Analytical Scientist

Cayman is your ally.

At Cayman, our understanding of the challenges faced by forensic labs drives us to be knowledgeable of current trends in novel psychoactive substances (NPS).

To support analysts, we have developed an **NPS Analytical Standards Dashboard** to help easily find Cayman reference standards aligned with the CFSRE's quarterly NPS scope recommendations.

Access our NPS Dashboard below and bookmark it for quarterly updates.



Scan to Explore
Our NPS Dashboard

www.caymanchem.com/NPS-dashboard





TECH UPDATE

Cayman Spectral Library



56
COMPOUNDS
ADDED



2,867
TOTAL GC-MS
SPECTRA



11JUN2026
RELEASE
DATE

Next version available Fall 2026



MEET THE 2026 BOD

Matthew Marino – President

New Jersey State Police Office of Forensic Sciences, East Regional Laboratory
Since 11/2011

Forensic Scientist 3, Drug Unit Technical Leader, and Fire Debris Analyst

Forensic Technician, Westchester County, NY Forensic Laboratory from 07/2007 to 09/2011

BS in Natural Sciences with a concentration in Chemistry-St. Thomas Aquinas College

Amanda White – President-elect

New York State Police Crime Laboratory, FS III- Controlled Substance Analysis from 2019-
Present

Westchester County Department of Labs & Research, Controlled Substance Analysis 2016-2019

NYPD Police Laboratory, Controlled Substance Analysis/Latent Print Development 2011-2016

MS Biomedical Forensic Science, Boston University

BS Biology & Anthropology, SUNY Oneonta

Anisha Paul M.S.F.S, D-ABFT-FT - Treasurer

Vermont Forensic Laboratory, Department of Public Safety - Forensic Chemist Toxicology
division since 2017

Adjunct professor at Champlain College since 2017

Masters of Science in Forensic Science from Arcadia University

Certified as a Diplomate by the ABFT in the field of Forensic Toxicology

Sarah Roseman - Secretary

Nassau County Office of the Medical Examiner, Division of Forensic Services, Controlled
Substance Analysis, 2015-present

BS in Biology, Binghamton University

MS in Forensics, Pace University

Danielle Malone - Director

NYC Office of Chief Medical Examiner, Department of Forensic Biology from 2004- Present

BS Forensic Science with a concentration in Criminalistics, CUNY John Jay College of Criminal
Justice

Alyssa Berthiaume - Director

Massachusetts State Police Crime Laboratory, Criminalistics and Crime Scene Response Units,
2017 - Present

Bay Path University, Adjunct Professor, 2022 - Present

B.S. in Forensic Biology, University of New Haven, 2016

M.S. in Cellular and Molecular Biology, University of New Haven, 2017

Keri LaBelle - Director

Massachusetts State Police Crime Laboratory, 2013-Present

Drug Unit, Crime Scene Response Unit, Clandestine Laboratory Response Unit,

Quality Assurance Management Section

M.S. Biomedical Forensic Sciences - Boston University 2012

B.S. Biochemistry - Suffolk University 2010



MATTHEW MARINO

NEAFS 2026 PRESIDENT

Hello NEAFS Members,

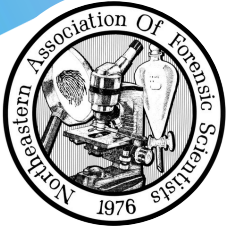
As summer gets underway, excitement continues to build for what promises to be one of the most memorable meetings in our organizations' histories. Planning for the 2026 Joint Annual Meeting between NEAFS and MAAFS is well underway, and we are thrilled for the opportunity to bring together two outstanding forensic science organizations for a larger, more dynamic, and collaborative experience.

[Registration](#) for the meeting is officially open, and this year's program is shaping up to be exceptional. Amanda White, working closely with the MAAFS planning team, has been doing a tremendous job coordinating a diverse and engaging scientific program that reflects the breadth and innovation of our field. With multiple scientific session days and workshop offerings throughout the week, attendees will have more opportunities than ever before to learn, network, and collaborate with colleagues from across the country.

We are especially excited to offer 19 workshops this year covering a wide range of forensic disciplines and professional development topics. I encourage everyone to take a look at the [workshop](#) lineup and begin planning your schedule early.

This year's meeting will be held at the beautiful Kalahari Resort and Convention Center, which offers an outstanding setting for both professional development and relaxation. In addition to excellent conference facilities, attendees and their families can enjoy the resort's restaurants, entertainment, and indoor waterpark—so don't forget to bring your bathing suits! We are excited to host this joint meeting at a location that offers something for everyone while providing ample space for networking and collaboration throughout the week.

I would also strongly encourage members to consider presenting at this year's meeting. One of the greatest strengths of NEAFS and MAAFS has always been the willingness of our members to share knowledge, casework experiences, research, and emerging ideas with one another. If you are interested in presenting, please submit your abstract through the [Call for Papers](#) page on the website. We look forward to showcasing the outstanding work being performed throughout our forensic science community.



MATTHEW MARINO

NEAFS 2026 PRESIDENT

For those planning to attend, the special meeting room block and discounted [hotel rate](#) at Kalahari are now available. I encourage everyone to book early to take advantage of the group rate and help support the continued success and affordability of future meetings.

As always, volunteers remain a critical part of what makes our organizations successful. Whether assisting with the meeting itself, mentoring students, supporting outreach efforts, or helping behind the scenes throughout the year, your contributions are deeply appreciated. If you are interested in volunteering, we would love to have your involvement.

We are also pleased to continue our outreach and student engagement efforts this year. Colleges and universities interested in participating in the outreach event are encouraged to contact outreach@neafs.org. In addition, if members have contacts with local science teachers or schools who may be interested in bringing high school students to attend, we would greatly appreciate those connections as we continue working to inspire the next generation of forensic scientists.

Finally, I would like to extend my sincere thanks to the volunteers, staff, and board members of both NEAFS and MAAFS whose dedication and hard work continue to make opportunities like this possible. The amount of time, energy, and coordination involved in organizing a joint meeting of this scale cannot be overstated, and I am incredibly grateful to everyone for contributing to its success.

Please continue to monitor our website, social media pages, and email communications for additional meeting updates and announcements in the coming months. I look forward to seeing many of you at Kalahari this fall for what is certain to be an outstanding joint meeting experience.

Warm regards,

Matthew Marino
President, NEAFS



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At the core of our engineering DNA lies a commitment to innovation, superior design, and forward-thinking. We craft solutions that meet the dynamic demands of modern laboratories. As the landscape of scientific inquiry and business requirements transform, so does our approach to design. Introducing the **triple quad LCMS RX Series** – our latest line of triple quadrupole LC-MS instruments, **engineered for unparalleled performance.**



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THE
**NORTHEASTERN & MID-ATLANTIC
ASSOCIATIONS OF FORENSIC SCIENTISTS**

INVITE YOU TO THE



2026

**JOINT
MEETING**

Kalahari®



**RESORTS &
CONVENTIONS**



POCONO MOUNTAINS, PA

OCTOBER 5TH-9TH

WWW.NEAFS.ORG WWW.MAAFS.ORG

2026 JOINT ANNUAL MEETING



REGULAR REGISTRATION STARTS

JULY 1ST

2026

Member: \$300

Non-Member: \$450

Students: \$200

One-Day Pass: \$ 150

PLEASE NOTE THAT IF YOU REGISTER ON-SITE, YOU WILL NOT RECEIVE A MEETING BOOKLET, MEAL OR DRINK TICKETS AND REGISTRATION IS ONLY PAYABLE WITH CREDIT CARD. NO CHECKS, CASH OR MONEY ORDERS WILL BE ACCEPTED.



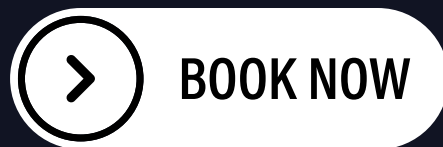
HOTEL INFORMATION

Kalahari Resorts & Convention Center
Poconos, PA

OCTOBER 5- 9, 2026

DISCOUNTED HOTEL RESERVATIONS ARE AVAILABLE UNTIL SEPTEMBER 5, 2026

*A VERY LIMITED NUMBER OF GOVERNMENT RATE ROOMS ARE AVAILABLE UPON REQUEST, WHILE SUPPLIES LAST.



WHY IS IT IMPORTANT TO BOOK IN THE BLOCK? NEAFS HAS SECURED A ROOM BLOCK AND IS PROVIDING DISCOUNTED RATES TO NEAFS AND MAAFS 2026 ATTENDEES BASED ON A GUARANTEED PERCENTAGE OF ATTENDEES STAYING IN THE OFFICIAL CONFERENCE HOTEL. BOOKING A HOTEL ROOM OUTSIDE OF THE BLOCK IMPACTS THE MEETING SPACE, DATES AND RATES IN FUTURE YEARS. GUARANTEEING ROOM BLOCKS GIVES ASSOCIATIONS THE OPPORTUNITY TO NEGOTIATE CONCESSIONS, SUCH AS BETTER ROOM RATES, FREE INTERNET, LESS EXPENSIVE FOOD AND BEVERAGE, NUMBER OF MEETING ROOMS, AFFILIATE MEETING SPACE, GYM ACCESS, ETC. HOUSING IS A KEY COMPONENT IN HOW THIS LEVERAGE IS MEASURED, AND BOOKING OUTSIDE OF THE CONTRACTED BLOCK DECREASES NEAFS'S NEGOTIATING POWER—ULTIMATELY MAKING THE MEETING MORE EXPENSIVE AND FORCING FUTURE REGISTRATION AND HOTEL PRICES TO INCREASE! WE KNOW NONE OF US WANTS TO SEE HIGHER ATTENDANCE COSTS.

A detailed illustration of a savanna landscape. In the foreground, a lion with a thick, golden-brown mane is roaring with its mouth wide open, showing its teeth. The lion is holding a rectangular, parchment-like sign with its right paw. The sign has the text "CALL FOR PAPERS AND POSTERS" written in a hand-drawn, black, uppercase font. The background features a large, gnarled acacia tree on the left, and a herd of giraffes and other savanna animals grazing in the distance under a bright, hazy sky.

CALL
FOR
PAPERS
AND
POSTERS

All presenters are eligible for \$50 reimbursement

Now Open, [Submit Here](#)

NEAFS AND MAAFS
JOINT ANNUAL MEETING
OCTOBER 5TH -9TH , 2026

**Kalahari Resorts & Conventions
Pocono Mountains, PA**

Note: All presenters must register for the meeting. Request for reimbursement must be submitted after presentation has been given by submitting proof of registration and payment via [Presentation Reimbursement Form](#) which will be open from October 12th to October 31st.

SUBJECT TO CHANGE



Make a Difference, Become a Forensic Scientist!

At Towson University you can turn your passion into a profession by earning a Master of Science in Forensic Science degree. The Master of Science in Forensic Science program is fully accredited by the Forensic Science Education Program Accreditation Commission (FEPAC). The program has an application-focused, hands-on curriculum that provides students with an educational background and development of forensic science laboratory skills. Students can choose either the DNA track with a focus on genetic analysis or the Forensic Chemistry track with a focus on drug analysis, trace analysis, and toxicology. All students must complete a forensic research project or a capstone course.

On-campus research facilities house state-of-the-art equipment including DNA Extraction Robots, Rotorgene Real-Time PCR, Qiacube Liquid Handler, Thermocyclers, ABI 3500 Genetic Analyzer, MiSeq Next Generation Sequencer, and Pyrosequencers for forensic biological research. Forensic chemistry research instruments include Gas Chromatographs, Mass Spectrometers, Liquid Chromatographs, Infra-red Spectrophotometers, Ultraviolet-Visible Light Spectrophotometers and Polarizing Light, Compound, Comparison and Ballistic Microscopes.

For additional information see <https://www.towson.edu/fcsm/departments/chemistry/grad/forensic/> or contact mprofil@towson.edu



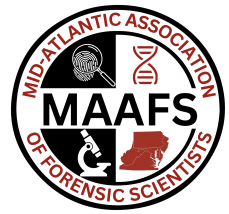
FORENSIC SCIENCE-IT'S MORE THAN A DEGREE; IT'S A CALLING!



2026 Joint Annual Meeting

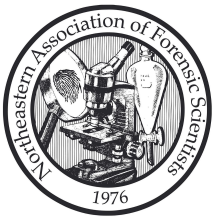
Tentative Agenda

October 5-9, 2026 - Poconos, PA



Monday October 5, 2026

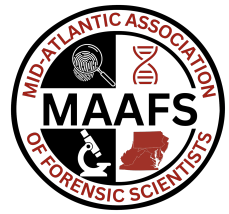
7:00am – 8:30am	Registration
7:00am – 8:30am	Breakfast
10:00am – 10:30am	Break
12:00pm – 1:00pm	Lunch (Add-on purchase required for all)
12:30pm – 1:30pm	Registration
3:00pm – 3:30pm	Break
8:00am – 5:00pm	Full Day Workshops
	(W1) MassHunter Unknowns and Qualitative Workflows for Forensic Data Analysis
	(W2) Beyond Compliance: Unlocking the Power of ISO 17025 in Forensic Laboratories
	(W3) Applications of Vibrational Spectroscopy in Forensic Science
8:00am – 12:00pm	Half-Day Workshops - Morning
	(W4) Automated DNA Extraction Strategies for Sexual Assault and Missing Persons Casework
	(W5) Professional Ethics in Forensic Science: Challenges & Responsibilities
	(W6) Design and Implementation of Statistical Sampling Plans for Seized-Drug Analysis - Part I
1:00pm - 5:00pm	Half-Day Workshops - Afternoon
	(W7) Design and Implementation of Statistical Sampling Plans for Seized-Drug Analysis - Part II
	(W8) Next-Generation Sequencing: From Theory to Implementation
	(W9) How Can We Know If Drug Samples Are Related? Analysis, Association, and Attribution.
	(W10) Forensic Entomology Workshop
9:00am - 1:00pm	Forensic Educational Outreach and College Fair



2026 Joint Annual Meeting

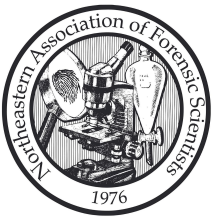
Tentative Agenda

October 5-9, 2026 - Poconos, PA



Tuesday October 6, 2026

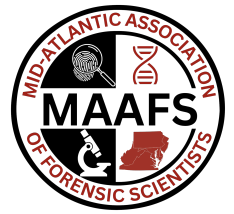
7:00am – 8:30 am	Registration
7:00am – 8:30am	Breakfast
10:00am – 10:30am	Break
12:00pm – 1:00pm	Lunch (Add-on purchase required for all)
12:30pm – 1:30pm	Registration
3:00pm – 3:30pm	Break
8:00am – 5:00pm	Full Day Workshops
	(W11) LC-MS/MS Method Development and Validation – Fragmenting Ions While Keeping Your Sanity Intact
	(W12) Advanced Instrument Maintenance: Gas Chromatography-Mass Spectrometry (GC-MS)
	(W13) Polarized Light Microscopy - A Basic Refresher
8:00am – 12:00pm	Half-Day Workshops - Morning
	(W14) Navigating Leadership and Legal Topics that Affect Forensic Scientists
	(W15) Requirements and Implementation of the Standard for Forensic Autosomal STR DNA Statistical Analyses
	(W16) DESI, DART, ASAP Oh My: Discovering How Direct Ionization Can Enhance Your Forensic and Toxicology Workflow
1:00pm – 5:00pm	Half-Day Workshops - Afternoon
	(W17) Implementation OF ANSI/ASB Standard 175 and Best Practice Recommendation 171 Regarding DNA Contamination
	(W18) Understanding and Implementing OSAC IGSR Standards
	(W19) From the Street to the Morgue: Analytical Approaches for Drugs Across the Toxicology Spectrum
6:00pm – 8:00pm	Educators Forum and Student Forum
7:00pm – 9:00pm	Registration



2026 Joint Annual Meeting

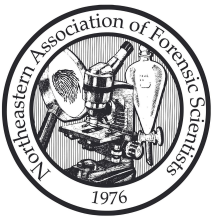
Tentative Agenda

October 5-9, 2026 - Poconos, PA



Wednesday October 7, 2026

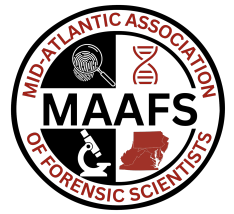
7:00am – 9:30 am	Registration
7:00am – 8:30am	Breakfast
7:00am – 8:00pm	Exhibits
8:00am – 11:00am	Vendor Spotlight Session
10:00am – 10:30am	Break
11:00am – 12:00pm	Keynote Speaker
12:00pm – 1:30pm	NEAFS Business Lunch (Add-on purchase required for non-members)
12:00pm – 1:30pm	MAAFS Business Lunch (Add-on purchase required for non-members)
2:00pm – 5:00pm	General/Plenary Session
3:15pm – 3:45pm	Break
5:30pm – 8:00pm	Vendor Reception & Poster Session
7:00pm – 8:00pm	Registration
8:00pm – 10:00pm	Evening Session & Dessert Reception



2026 Joint Annual Meeting

Tentative Agenda

October 5-9, 2026 - Poconos, PA



Thursday October 8, 2026

7:00am – 9:30 am	Registration
7:30am – 9:00am	Breakfast
7:00am – 11:00am	Exhibits
10:00am – 10:45am	Break
12:00pm – 2:00pm	Luncheon & Awards Ceremony
3:30pm – 4:00pm	Break
9:00am – 5:00pm	Breakout Sessions
	DNA/Forensic Biology
	Physical Evidence/Criminalistics/Crime Scene & Digital Evidence
	Trace/Arson & Explosives
	Forensic Toxicology
	Forensic Drug Chemistry
5:00pm – 6:30pm	George W. Chin Cup Competition
6:30pm – 11:30pm	President's Reception & Corn Hole Tournament

Friday October 9, 2026

8:00am – 9:00 am	Registration
8:00am – 9:30am	Breakfast
10:00am – 10:45am	Break
9:00am – 12:00pm	Breakout Sessions
	DNA/Forensic Biology
	Physical Evidence/Criminalistics/Crime Scene & Digital Evidence
	Trace/Arson & Explosives
	Forensic Toxicology
	Forensic Drug Chemistry



NEAFS

05
OCT

WORKSHOPS



MAAFS

FULL
DAY

(W1) MASSHUNTER UNKNOWNNS AND QUALITATIVE WORKFLOWS FOR FORENSIC DATA ANALYSIS

Presented by: Dr. Kirk Lokits, GCMS Applications Scientist
Agilent Technologies [VENDOR]

FULL
DAY

(W2) BEYOND COMPLIANCE: UNLOCKING THE POWER OF ISO 17025 IN FORENSIC LABORATORIES

Presented by: Deanne Emory, Instructional Designer
ANSI National Accreditation Board (ANAB)

HALF
DAY AM

(W3) APPLICATIONS OF VIBRATIONAL SPECTROSCOPY IN FORENSIC SCIENCE

Presented By: Lewis Smith, Forensic Chemist
Cape May County Pros. Office Forensic Lab

HALF
DAY AM

(W4) AUTOMATED DNA EXTRACTION STRATEGIES FOR SEXUAL ASSAULT AND MISSING PERSONS CASEWORK

Presented by: Sarah Rosenstein (HID-FAS), Josh Abernathy (HID-CSM), and Carole Cummings (HID-CSM) - QIAGEN North America - HID & Forensics [Vendor]

HALF
DAY AM

(W5) PROFESSIONAL ETHICS IN FORENSIC SCIENCE: CHALLENGES & RESPONSIBILITIES

Presented By: Robin Bowen, Teaching Assistant Professor, West Virginia University and Jerome F. Buting, Attorney, Buting, Williams, & Stilling, S.C.

Full Day Workshop Cost

- Member \$250/Non-member \$300

Half Day Workshop Cost

- Member \$125/Non-Member \$225

[FOR WORKSHOP ABSTRACTS:](#)

subject to change



NEAFS

05
OCT

WORKSHOPS



MAAFS

HALF
DAY AM

(W6) DESIGN AND IMPLEMENTATION OF STATISTICAL SAMPLING PLANS FOR SEIZED-DRUG ANALYSIS - PART I

Presented by: Jack Prothero, Mathematical Statistician, National Institute of Standards, and Technology and Laurel Bobka, Forensic Scientist Advanced, Maryland State Police, Dr. Jennifer Bonetti, Virginia Department of Forensic Science and MAAFS SWGDRUG representative, and Tiffany Ribadeneyra, Naussau County Office of the Medical Examiner and NEAFS SWGDRUG representative

HALF
DAY PM

(W7) DESIGN AND IMPLEMENTATION OF STATISTICAL SAMPLING PLANS FOR SEIZED-DRUG ANALYSIS - PART II

Presented by: Jack Prothero, Mathematical Statistician, National Institute of Standards, and Technology and Laurel Bobka, Forensic Scientist Advanced, Maryland State Police, Dr. Jennifer Bonetti, Virginia Department of Forensic Science and MAAFS SWGDRUG representative, and Tiffany Ribadeneyra, Naussau County Office of the Medical Examiner and NEAFS SWGDRUG representative

HALF
DAY PM

(W8) NEXT-GENERATION SEQUENCING: FROM THEORY TO IMPLEMENTATION

Presented by: Kelly Elkins, Cindy Zeller, and Filipa Simão - Department of Chemistry & Forensic Science, Towson University

HALF
DAY PM

(W9) HOW CAN WE KNOW IF DRUG SAMPLES ARE RELATED? ANALYSIS, ASSOCIATION, AND ATTRIBUTION

Presented By: Dr. Joshua DeBord, Senior Scientist; The CFSRE and Dr. Agnes Winokur, Director, DEA Special Testing and Research Laboratory

HALF
DAY PM

(W10) FORENSIC ENTOMOLOGY WORKSHOP

Presented by: Dr. Jennifer Rosati, Associate Professor of Forensic Entomology, John Jay College of Criminal Justice

Full Day Workshop Cost

- Member \$250/Non-member \$300

Half Day Workshop Cost

- Member \$125/Non-Member \$225

[FOR WORKSHOP ABSTRACTS:](#)

subject to change



NEAFS

06
OCT

WORKSHOPS



MAAFS

FULL
DAY

(W11) LC-MS/MS METHOD DEVELOPMENT AND VALIDATION – FRAGMENTING IONS WHILE KEEPING YOUR SANITY INTACT

Presented by: Dustin L. Abbott, MS, D-ABFT-FT Forensic Scientist III NYSP – Toxicology and Alaina Holt, PhD, Associate Research Faculty, Laboratory for Forensic Toxicology Research, Virginia Commonwealth University

FULL
DAY

(W12) ADVANCED INSTRUMENT MAINTENANCE: GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS)

Presented by: Mikaela Romanelli, Marilyn De Apodaca, and Mark Filandro, Senior Forensic Chemists, and John McIlroy, Supervisory Chemist/Laboratory Quality Assurance Manager, Drug Enforcement Administration

FULL
DAY

(W13) POLARIZED LIGHT MICROSCOPY - A BASIC REFRESHER

Presented by: Jack Hietpas and Peter Diaczuk, Assistant Professors, John Jay College of Criminal Justice

HALF
DAY AM

(W14) NAVIGATING LEADERSHIP AND LEGAL TOPICS THAT AFFECT FORENSIC SCIENTISTS

Presented by: Theresa DeAngelo, QA Manager, Maryland State Police Forensic Sciences Division and Dr. Kelly Elkins, Professor | Chemistry and Forensic Science, Towson University

HALF
DAY AM

(W15) REQUIREMENTS AND IMPLEMENTATION OF THE STANDARD FOR FORENSIC AUTOSOMAL STR DNA STATISTICAL ANALYSES

Presented by: Michael Coble, Ph.D.; Executive Director, Center for Human Identification, UNT Health, Caitlyn Taveira, M.S.; Forensic Scientist, Nassau County Office of the Medical Examiner, Division of Forensic Services, and Charlotte J. Word, Ph.D.; Consultant

Full Day Workshop Cost

- Member \$250/Non-member \$300

Half Day Workshop Cost

- Member \$125/Non-Member \$225

[FOR WORKSHOP ABSTRACTS:](#)

subject to change



NEAFS

06
OCT

WORKSHOPS



MAAFS

HALF
DAY AM

(W16) DESI, DART, ASAP OH MY: DISCOVERING HOW DIRECT IONIZATION CAN ENHANCE YOUR FORENSIC AND TOXICOLOGY WORKFLOW

Presented by: Dr. Ciara Pitman, Clinical and Forensic Account Manager, Waters [Vendor]

HALF
DAY PM

(W17) IMPLEMENTATION OF ANSI/ASB STANDARD 175 AND BEST PRACTICE RECOMMENDATION 171 REGARDING DNA CONTAMINATION

Presented by: Beth Ordeman, MS, ABC-MB, DNA Analyst/CODIS Administrator, Pinellas County Forensic Laboratory and Charlotte J Word, Ph.D., Consultant

HALF
DAY PM

(W18) UNDERSTANDING AND IMPLEMENTING OSAC IGSR STANDARDS

Presented by: Mary Keehan, Trace Evidence Section Supervisor, Virginia Department of Forensic Science and Thomas (Rusty) White, Team Lead ILR/GSR, Texas Department of Public Safety

HALF
DAY PM

(W19) FROM THE STREET TO THE MORGUE: ANALYTICAL APPROACHES FOR DRUGS ACROSS THE TOXICOLOGY SPECTRUM

Presented by: Laura Kimble, Chief Drug Analyst, Hamilton County Coroner's Office, Michelle Peace, Ph.D., Professor – Department of Forensic Science, Virginia Commonwealth University, Teeshavi Acosta, PhD, Head Toxicology Technician, John Jay College of Criminal Justice, and Aria McCall, Senior Toxicologist/Technical Lead, Tarrant County Medical Examiner's Office

Full Day Workshop Cost

- Member \$250/Non-member \$300

Half Day Workshop Cost

- Member \$125/Non-Member \$225

[FOR WORKSHOP ABSTRACTS:](#)

subject to change



2026

NEAFS OUTREACH

& COLLEGE FAIR

- Experts needed to present on their chosen field(s) with Q&A to follow.
- Colleges and universities may participate and reserve a table to interact with students after the presentations.
- Know a high school teacher or administrator that is close enough to the meeting location and may be interested in having their students participating in the outreach? Email outreach@neafs.org.

REGISTER COLLEGE

**VOLUNTEER AS
AN EXPERT**

Roberta Westerman
roberta.westerman@pol.state.ma.us

October 5, 2026

9AM - 1PM

Email outreach@neafs.org with questions



THINGS TO DO

STUDENT FORUM

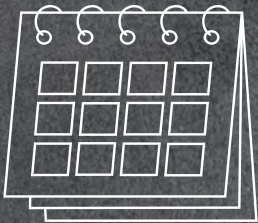


OCT 6,
2026

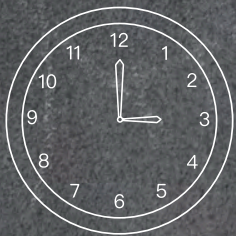
6-8 PM

EDUCATORS

FORUM



6 OCT, 2026



6:00-8:00 PM

ELEVATE YOUR LAB: VENDOR SPOTLIGHT

Wednesday October 7, 2026 8:00am - 11:00am

Join us for an exclusive Vendor Spotlight, where the industry's leading innovators showcase the latest breakthroughs in laboratory instrumentation and services. Whether you're looking to upgrade your current setup or scout for next-gen technology, this is your chance to get a "front-row seat" to the newest products and services hitting the market.

To keep things exciting, each participating vendor is raffling off a prize worth \$100! Winners will be drawn at the end of each presentation. It's simple: Show up, level up your lab knowledge, and you might just walk out a winner. You must be present during the presentation to claim your prize, so make sure to arrive on time and stay for the full session!

More information to come, subject to change.

General Sessions

FORENSICS FOR ALL

11 am

Chris Fabricant

Director of strategic litigation at the Innocence Project speaking on Junk Science and the American Criminal Justice System

2 pm

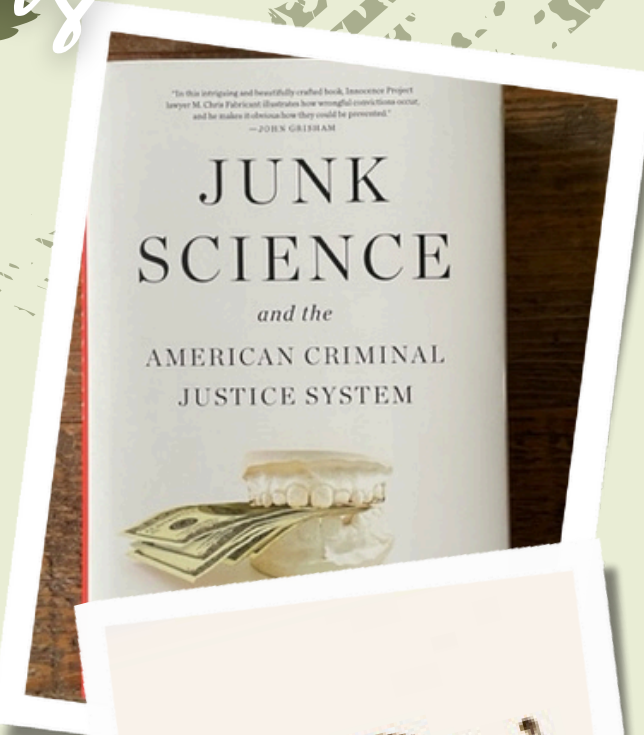
The Wild Side of Forensics

It's CSI meets the animal kingdom. Come hang out with The Society for Wildlife Forensics and take a dive into the wild side of our field as Wildlife Forensic Scientists Kim Fraizer, Tasha Bauman and Nicole Chinnici give us a birds eye view of their field!

8 pm

Rabia Chaudry

Attorney, advocate, and author of the NY Times bestselling book Adnan's Story, the Executive Producer of the HBO documentary The Case Against Adnan Syed and co-producer/co-host of the Undisclosed podcast.



**WEDNESDAY
OCT 7TH**



GET INVOLVED

Are you ready to jump right in and get involved on a NEAFS committee?

Exhibits Committee, Registration Committee, Education Committee, Outreach Committee, Social Media/Merchandise Committee, Awards Committee, or anyway you would like to get involved.

Want to learn more about the volunteer opportunities for next year's?

Exhibits, Registration, Poster Session, Workshops, Scientific Sessions, Education, Outreach, Social Media, Merchandise, Awards Committee (be a Judge), Photographer, or any other way you would like to help.

Sign up today!





NEAFS & MAAFS

invite you to the

President's
RECEPTION

THURSDAY

OCTOBER 8TH | 6:30-11:30

Join us for dinner, dancing and
cornhole!

NEAFS JOINS MAAFS
ANNUAL

CORNHOLE

TOURNAMENT

THURSDAY | OCTOBER 8TH
DURING THE PRESIDENTS RECEPTION

Get your
teams ready!
On site registration



MORE INFO TO COME!



**CHIN CUP
COMPETITION**

THURSDAY

OCTOBER 8TH

5:00PM - 6:30 PM

**COME OUT AND
SUPPORT YOUR TEAM**

and then celebrate
at the President's
Reception!

HELP SUPPORT THE

Chin Cup Competition



New Forensic Science Questions are Needed



Help Keep the Competition Fresh



With New and Up to Date Questions



How Can You Help?



Click & Submit Your Question & Answers

Question with correct answer and 3 incorrect answers - please include source



Please Feel Free to Submit More Than One

Welcome

NEW MEMBERS

BRIGITTE BURGLER

STATE UNIVERSITY OF NEW YORK

MATTHEW REIMER

NASSAU CO. OCME DIVISION OF FORENSIC SERVICES

AUDREY RUDOLPH

UMASS CHAN MEDICAL SCHOOL

HEIDI GRIEGER. NICOLE RIDDELL

NYSP FORENSIC INVESTIGATION CENTER

THERON HANCOCK

PLYMOUTH STATE UNIVERSITY

JASON PALING

PLYMOUTH STATE UNIVERSITY & SUNY PLATTSBURGH

COLLEEN PASTORE. TARA DAVIS

SUFFOLK COUNTY CRIME LABORATORY

ADAM WERWIE

CEDAR CREST COLLEGE

TAYLOR HURLEY

PLYMOUTH STATE UNIVERSITY

Welcome

NEW MEMBERS

CHRISTINE BERGERON-ROGOWSKI

UNIVERSITY AT ALBANY SUNY

KATIANA NELSON. VIKTORIYA GEORGIEVA.
KERI SNYDER

PENNSYLVANIA STATE POLICE CRIME LABORATORY

Welcome

BACK

JACK HIETPAS

JOHN JAY COLLEGE

SHAWNA BRADSHAW

DEPARTMENT OF HEALTH (RIDOH)

REBECCA PONTES. CHRISTINE ORDYNA

MASSACHUSETTS STATE POLICE CRIME LABORATORY

JOSEPH GUTTIERI

SUFFOLK COUNTY CRIME LABORATORY

MEMBER

Spotlight

ALYSSA BERTHIAUME

Massachusetts State Police Crime Laboratory
Criminalistics and Crime Scene - 9 Years



? What's something you're grateful for in your career?

I am always grateful that my lab sends civilian scientists to crime scenes. I think this is such an asset to the investigation and going to scenes are by far my favorite part of my job. I love that they are something new every time and I love the collaborative nature of crime scenes.

? Who has been a mentor or major influence in your career?

My mentor is Beth Saucier-Goodspeed. I met her the first day of my internship at the MSPCL. She eventually became my supervisor when I returned to the MSPCL full time and she played such a big role in my success as a forensic scientist. She was always there to answer my questions, let me cry on her office couch (on way too many occasions), and introduced me to NEAFS. The day I arrived to my first meeting she told me I was on her registration committee and the rest is history :)

? What's the most unusual or unexpected skill you use at work that people might not expect?

Working at crime scenes has given me an unusual skill of being able to hold an absurd amount of things in my hands. When you can't bring your kit into a messy scene you learn how to utilize all your fingers.

? If you weren't in forensic science, what career would you choose instead?

If I wasn't a forensic scientist I'd be a book editor, preferably one where I could read on the beach every day.

? How do you like to spend your downtime outside the lab?

When I am not in the lab or in the field I am on the rugby pitch! I play for the Worcester Shamrocks in Ma.

? What's the most interesting place you've ever traveled to?

The most interesting place I've ever traveled was Ghent, Belgium. The architecture was insane, it felt like I was in Harry Potter. Later that trip I went to the Olympics in Paris and saw all the women's rugby matches. That's an experience I'll never forget.

? If your life had a narrator, whose voice would it be?

I would pick Alan Rickman to narrate my life story, he has a great voice and I think his dramatic pauses would work well with the adventures I find myself on.

? If you could only communicate using movie quotes or song titles for an entire day, how would that go?

I have no doubt I could survive an entire day speaking in only office quotes....why waste time say lot word when few word do trick?

Rapid Fire

Early Bird or Night Owl

Sweet or Salty

Book or Movie

Fresh snow or Warm Sunshine

Microscope or Mass Spec

Marvel or DC

Road trip or Flight

Souvenirs or Photographs

Mountains or Beach

Pool or Ocean

Books or Podcasts

Rom-com or Thriller

Final Share

I recently became an aunt and spending time with my niece is my absolute favorite thing to do at the moment :)



NEAFS

MEMBER SPOTLIGHT

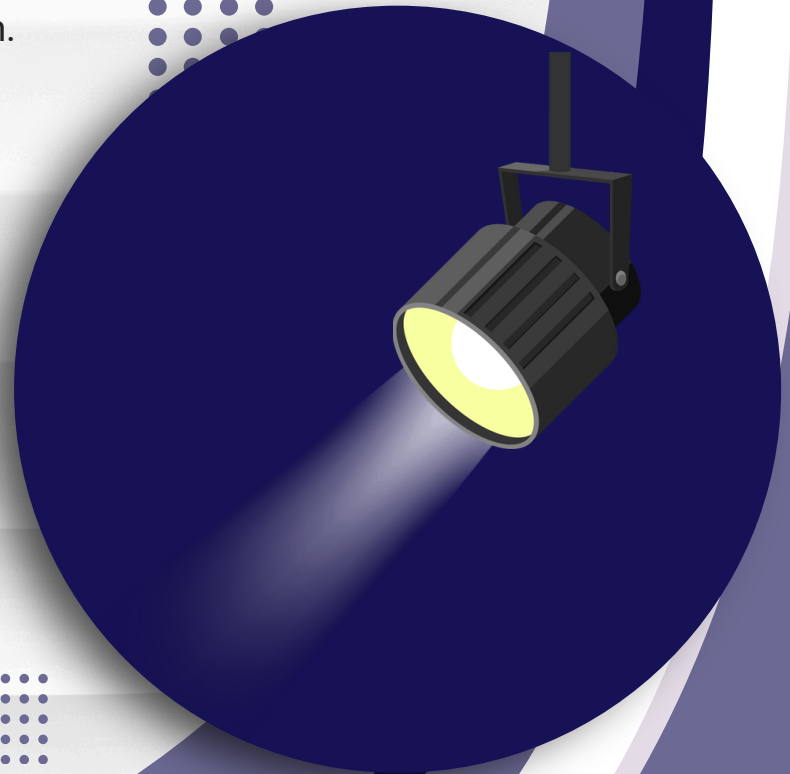
Call for Participants



Our organization is excited to launch a new Member Spotlight feature in our newsletter, highlighting the diverse professionals who make up our forensic science community. Similar to the profiles shared by ASTEE, IAI, and other leading forensic organizations, this spotlight aims to showcase the people behind the science—their journeys, expertise, and the passions that drive their work. We will be randomly selecting member numbers for participation, keep an eye out for our email.

Members who wish to be featured may select the questions they'd like to answer from our interview list, allowing each spotlight to reflect the individual's unique story and professional path. Participants are also encouraged to submit a photograph of themselves or an image that represents their work, interests, or connection to forensic science—serious or fun.

This initiative is designed to celebrate our members, strengthen our community, and inspire others through shared experiences and perspectives. We look forward to featuring voices from across all disciplines and career stages.



[PARTICIPATE NOW](#)

Call For MENTORS

NEAFS's mission has always been to exchange ideas and information within the field of Forensic Science, to promote recognition of Forensic Science as an important component of the criminal justice system, and to stimulate increased implementation of existing techniques, along with research and development of new techniques within the field.



[BECOME A
MENTOR](#)

[MORE INFO](#)

NEAFS would like to call on their members to help maintain and enhance the quality of forensic science education through mentoring. It is through mentoring that we can encourage a strong interest in the science fields among college and high school students alike. Mentoring helps develop leadership skills such as public speaking, communication, and teamwork.

In addition, individuals new to the field of Forensic Science can be mentored to advise them on professional development and counsel them on career opportunities. In this way, NEAFS members can use their knowledge and experience to mentor young professionals and foster friendships and cooperation among laboratory personnel.

Opportunities for mentoring can include providing lectures to students, interacting with newer forensic scientists, having meaningful interactions and discussions with students (ie employment requirements, discussion of daily tasks and duties, college preparation and course selection), or research and project development.

Need A MENTOR

NEAFS's mission has always been to exchange ideas and information within the field of Forensic Science, to promote recognition of Forensic Science as an important component of the criminal justice system, and to stimulate increased implementation of existing techniques, along with research and development of new techniques within the field.



[FIND A
MENTOR](#)

[MORE INFO](#)

If you are interested in being partnered with a more seasoned colleague who can advise you in your career progression, help you network, guide you learning new skills please click on find a mentor to get connect. If you are a student that needs to interview a forensic scientist, needs help with or review of a project please click on find a mentor. NEAFS will make every effort to answer requests but there is no guarantee of availability.

Application Note

Chromatographic Separation of 7-Hydroxy Mitragynine from Mitragynine Pseudoindoxyl

Camille Watson-Gooden, Ph.D.¹, Holly G. Pierzynski¹, Jianmei Liu¹,
Marc Gregerson, Ph.D.¹, Alex J. Krotulski, Ph.D.², and Donna M. Lula, Ph.D.¹
¹Forensic Chemistry Division, Cayman Chemical, Ann Arbor, MI; ²NPS Discovery,
Center for Forensic Science Research and Education (CFSRE), Horsham, PA

Key Features

- The co-elution of 7-hydroxy mitragynine and mitragynine pseudoindoxyl (two important mitragynine-related alkaloids) by traditional Gas Chromatography Mass Spectrometry (GC-MS) methods makes testing a challenge for analysts. If testing methods are unable to resolve these two substances in casework, identification and quantification can become compromised.
- The rise of consumer products on the drug market containing potent semi-synthetic opioids derived from kratom, such as 7-hydroxy mitragynine and mitragynine pseudoindoxyl, is of great public health and safety concern.
- Several chromatographic methods to achieve separation are explored in this application note. Method information presented herein may be used to assist labs in developing methods to identify and quantify 7-hydroxy mitragynine and mitragynine pseudoindoxyl in seized drug analysis and/or toxicology cases.

To cite this application note:

Watson-Gooden, C., Pierzynski, H., Liu, J. *et al.* Chromatographic separation of 7-hydroxy mitragynine from mitragynine pseudoindoxyl. *Application Note, Cayman Chemical Company* (2026).

Results: GC-MS

Both 7-HMG and MP were individually prepared at 1 mg/mL in acetonitrile. The individuals and a mixture of the two solutions were analyzed on an Agilent 8890 GC equipped with a 5977B MS detector. The injector temperature was set at 300°C, and the oven temperature was programmed to start at 240°C, hold for 1 minute, and then increase at a rate of 30°C per minute up to 300°C. The total run time was 30 minutes. The injection mode was set to a 15:1 split. Helium was used as the carrier gas at a constant flow rate of 2 mL per minute. The single component of the 7-HMG and MP solution was used to confirm the retention time order in the mixture and to ensure no interconversion. A mixture consisting of equal parts 7-HMG and MP was injected on an Rtx-5MS (30.00 m x 0.32 mm x 0.50 μm) column, a non-polar GC column equivalent to 5% phenyl 95% dimethyl arylene siloxane (USP phase G27), which resulted in significant co-elution of 7-HMG and MP (Figure 2).

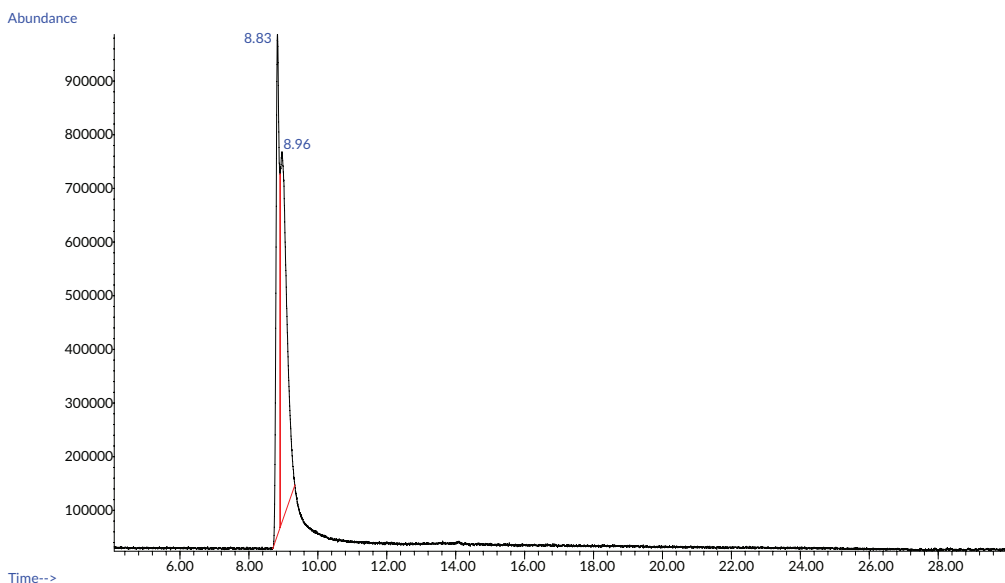


Figure 2. Co-elution of 7-HMG (8.96 min) and MP (8.83 min).

The mass spectrum of the individual components (Figure 3) showed the exact same fragmentation patterns which makes differentiating these two compounds by mass spectrometry even more challenging.

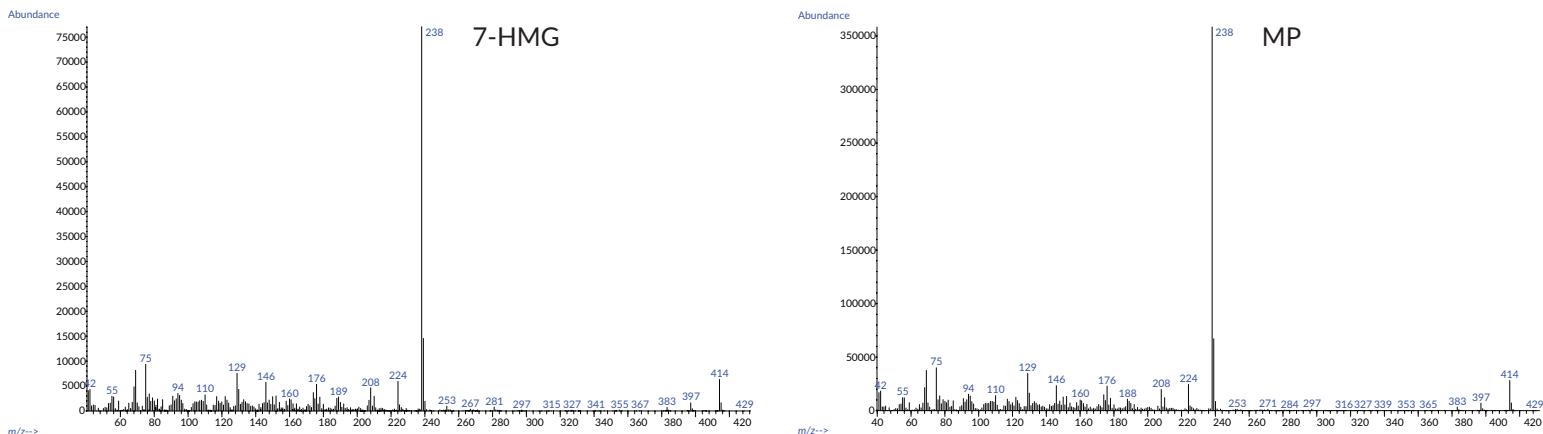


Figure 3. Mass spectrum of 7-HMG (left) and MP (right) reference standards.

When several attempts were made to resolve the peaks by first adjusting the rate of temperature increase, then adjusting the initial temperature, and lastly adjusting the flow rate, all of which were not successful, the solution mixture was then introduced onto a DB-35MS column (30.00 m x 0.320 mm x 0.25 μ m), a mid-polar GC column equivalent to 35% phenyl 65% dimethyl arylene siloxane (USP phase G42). The best results were obtained using our initial parameters on this column. This gave a peak resolution of 0.78 (**Figure 4**). Further optimization attempts were made using this column but did not yield better results. The conditions resulting in the separation shown in **Figure 4** may be useful for qualitative analysis.

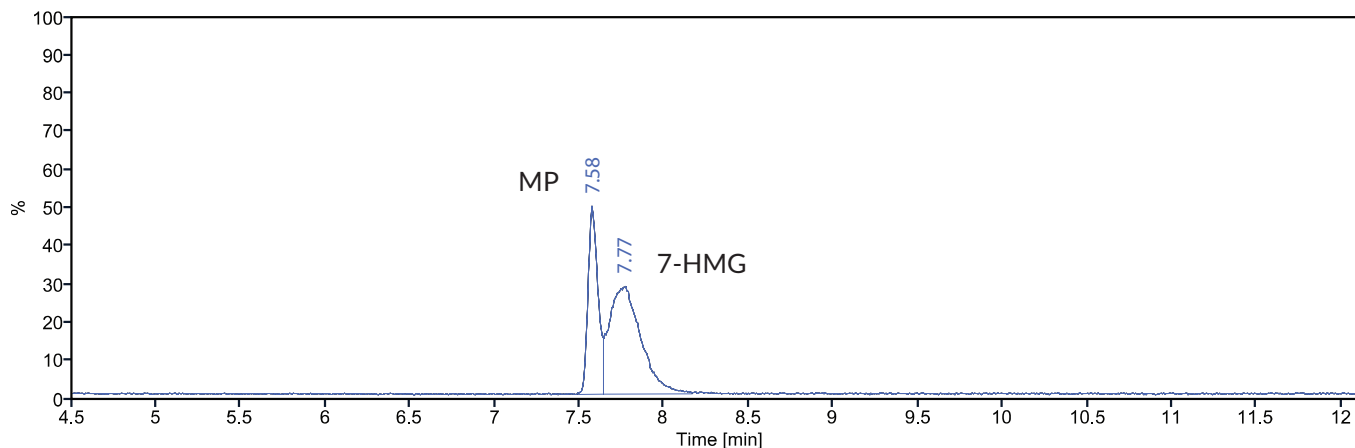


Figure 4. Co-injection of MP (7.58 min) and 7-HMG (7.77 min) on a DB-35MS column with a peak resolution of 0.78.

Results: GC-FID

Due to the non-ideal results from the GC-MS, we wanted to see if the two mixture components would perform better on Gas Chromatography-Flame Ionization Detection (GC-FID) and explore other chromatographic separation methods.

A 1:1 mixture of both components (1 mg/mL in acetonitrile) was analyzed by GC-FID using an Agilent 8890 gas chromatograph equipped with a cool-on-column inlet. The sample solution was introduced directly onto the column. The oven temperature was programmed from 50°C, hold for 1 minute, to 300°C at a rate of 30°C per minute, with a total run time of 30 minutes. Helium was used as the carrier gas at a constant flow rate of 2 mL/min.

The best results using this method gave a peak resolution of 1.07, with MP eluting first at 17.35 min and 7-HMG eluting after at 18.58 min (**Figure 5**).

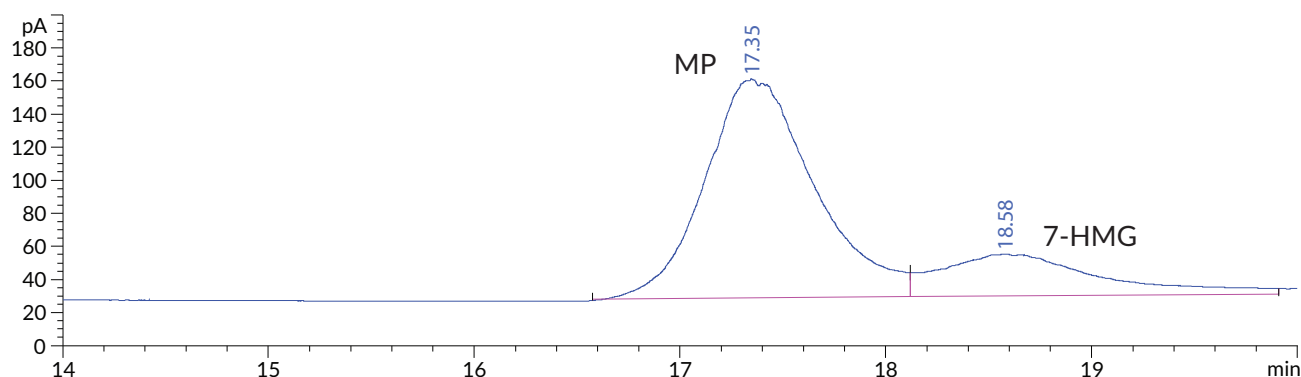


Figure 5. Co-elution of MP (17.35 min) and 7-HMG (18.58 min) on the GC-FID with a peak resolution of 1.07.

Results: HPLC

High-Performance Liquid Chromatography (HPLC) was explored using the Agilent 1260 HPLC-DAD (HPLC with Diode Array Detection). 7-HMG and MP (each at 1 mg/mL in acetonitrile) were analyzed using an Ascentis Express 90 Å C18 column (150 × 3.0 mm, 2.7 μm) maintained at 30°C.

The mobile phase consisted of 0.1% trifluoroacetic acid (TFA) in water (**A**) and acetonitrile (**B**), delivered at a flow rate of 1.0 mL per minute. The gradient program started at 5% B, increased to 50% B over 10 min, then to 95% B at 12 min, and was held for 3 min before returning to 5% B at 15.1 min, with a total run time of 20 min. The UV wavelength was set at 232 nm to analyze both components. The result, as shown in **Figure 6**, indicates that MP and 7-HMG are very well resolved under these chromatographic conditions, making this a very useful technique. **Figure 6** includes the corresponding UV absorptions, indicating another useful method for differentiation of the two species.

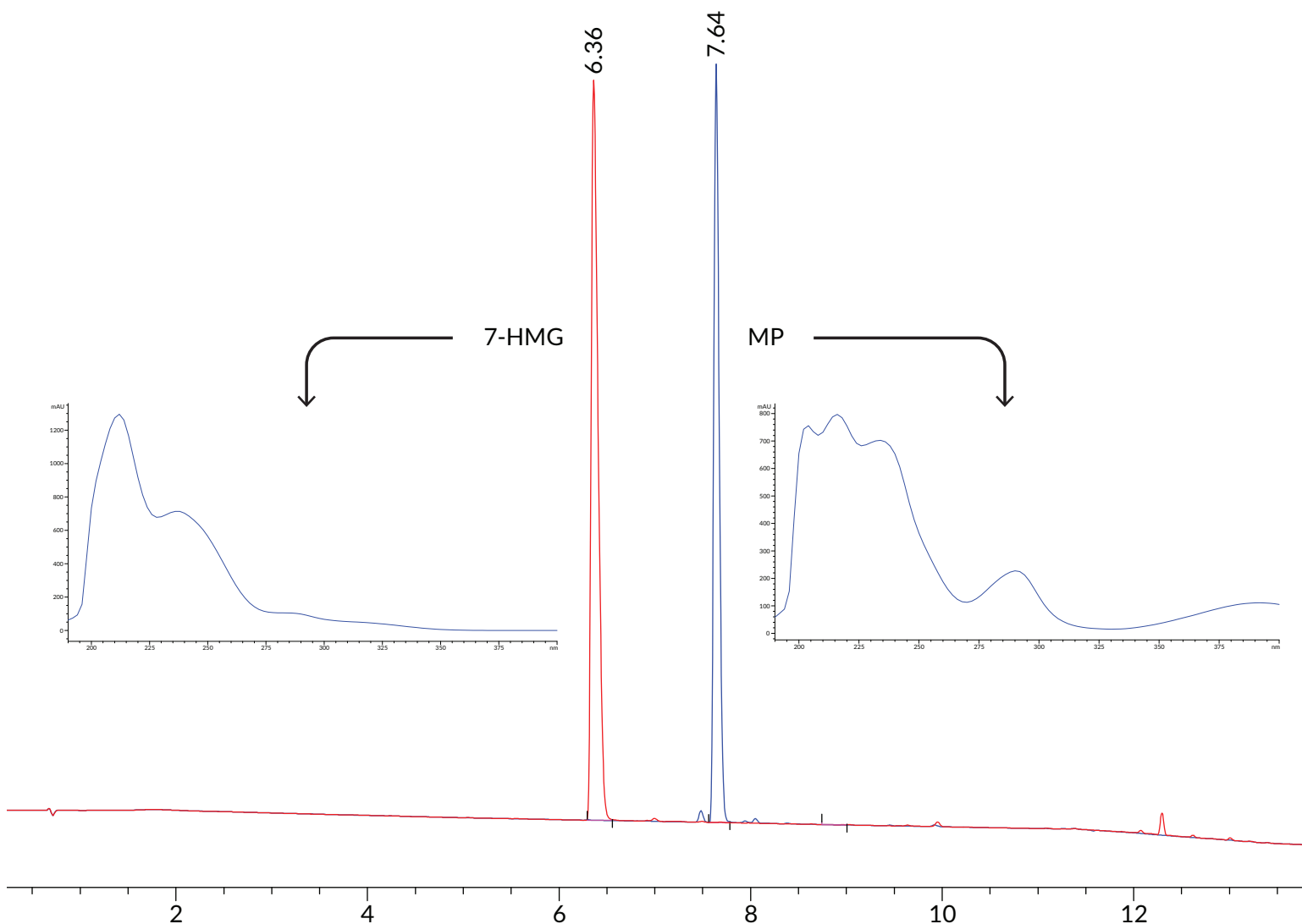


Figure 6. HPLC separation of 7-HMG (6.36 min) and MP (7.64 min) including their corresponding distinct UV absorptions.

Results: LC-MS/MS

Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) was explored. The components were analyzed on a Sciex Exion LC-AC HPLC system, with a Sciex 4500 QTrap MS. Conditions for the LC and MS components are provided in the table below.

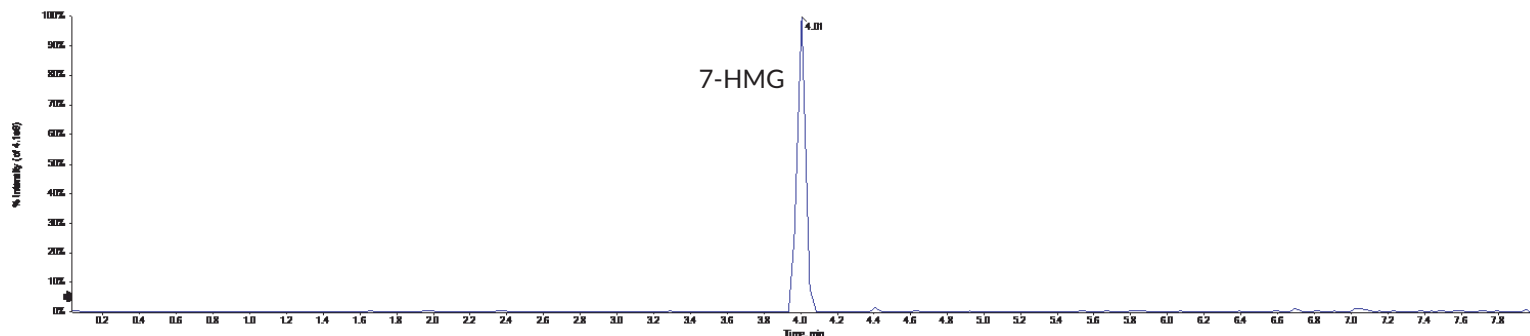
Table 1. Conditions and gradient for the LC and parameters for the MS.

HPLC		MS/MS	
Conditions		Parameter	Value
Column	Ascentis Express C18 100 x 2.1 mm, 2.7 µm	CUR	50
Column Temp	30°C	CAD	High
Sample Diluent	Methanol	IS Voltage	5500V
Inj. Vol.	1 µL	TEM	650
Flow Rate	0.5 mL/min	GS1	70
Mobile Phase	A: 0.1% Formic acid in water B: 0.1% Formic acid in acetonitrile	GS2	70
Gradient	0.0-6.5 min: 5-50% B 6.5-8.0 min: 50% B hold 8.0-8.1 min: 50-5% B 8.1-10.0 min: 5% B hold	Declustering Potential	60V
		Entrance Potential	10V
		Collision Energy	40V

Regarding the MS/MS experiment, we followed the Enhanced MS > Enhanced Resolution > IDA Criteria > Enhanced Product Ion. This experimental set up is designed to generate a chromatogram that also contains fragmentation data. The Enhanced MS and Enhanced Resolution experiments set the parameters for ion collection in QTrap. The IDA Criteria refines the method so that the 1 to 2 most abundant ions are utilized for the Enhanced Product Ion experiment. This produces a mass spectrum for each peak that can be used for identification purposes.

The IDA chromatogram below is an overlay of the individual samples at a concentration of 5 µg/mL in methanol. This chromatogram provides confirmation of retention time and shows there is minimal interconversion between the two compounds in this work (Figure 7).

5 µg/mL 7-hydroxy mitragynine for retention time purposes only.



5 µg/mL mitragynine pseudoindoxyl

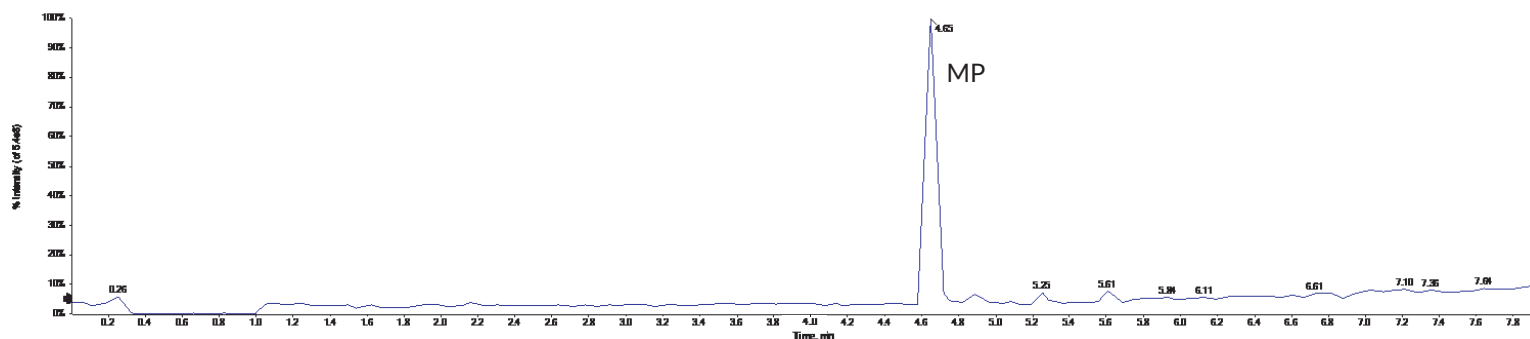


Figure 7. Separate injections of 7-HMG (4.01 min) and MP (4.65 min).

The chromatogram below (**Figure 8**) is an overlay of the IDA chromatogram and the Enhanced Product Ion mass spectra from the 5 µg/mL mixture of the two compounds. The retention times match the individual standard above.

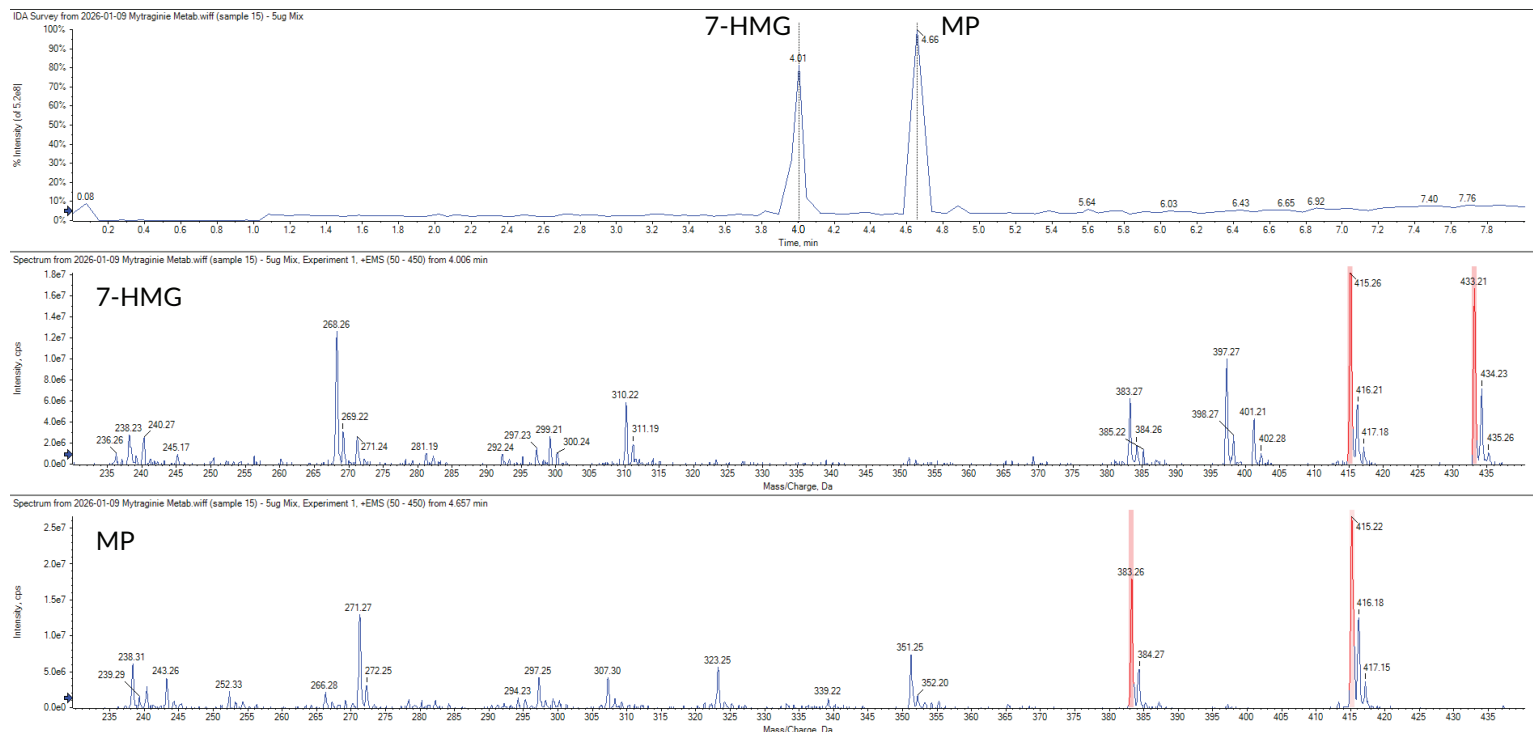


Figure 8. Overlay of the IDA chromatogram and the Enhanced Product Ion Mass Spectra of 7-HMG and MP.

It is important to note that 7-HMG readily forms a water adduct ($m/z = 433.2$ Da) using these conditions, but MP does not.

A comparison of the mass spectra shows that 7-HMG has two fragments (397.2, 401.2 Da) that are not present in the MP mass spectra. A comparison also shows that there are two MP fragments (323.2, 351.2 Da) that are not present in 7-HMG. These differences in fragmentation patterns allow for the identification of each compound in a mixture of these compounds.

Results: HRMS

Liquid Chromatography Quadrupole Time-of-Flight Mass Spectrometry (LC-QTOF-MS) was explored to determine if chromatographic separation was achievable and if fragmentation patterns differed on this instrumental platform. 7-HMG and MP were analyzed on a Sciex Exion LC HPLC system with a Sciex X500R QTOF-MS. Conditions for the LC and MS components are described in the literature.⁴

The chromatogram below (**Figure 9**) is an XIC chromatogram for the exact mass of these analytes. Two peaks are observed illustrating the resolution between the two analytes. 7-HMG first and MP second, which is expected based on their functional group chemistry.

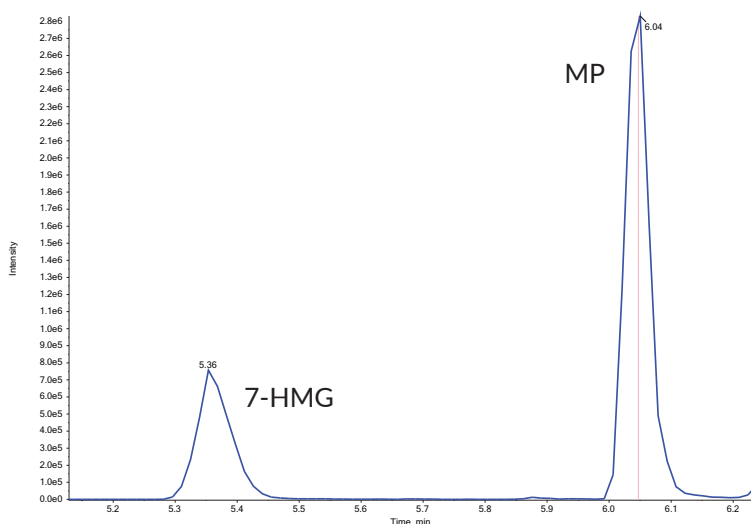


Figure 9. Extracted ion chromatogram showing 7-HMG (5.36 min) and MP (6.04 min) chromatographic separation.

The mass spectra below (**Figure 10**) represent the fragment ions acquired for 7-HMG and MP by LC-QTOF-MS. The mass spectrometer utilized a non-targeted acquisition mode. Fragment ions were acquired from m/z 50-510 using a collision energy spread to promote the development of an array of fragment ions. The two isomers showed similar fragment spectra; however, 7-HMG exhibited an m/z 397 consistent with the loss of water, while MP exhibited a more distinctive m/z 383.

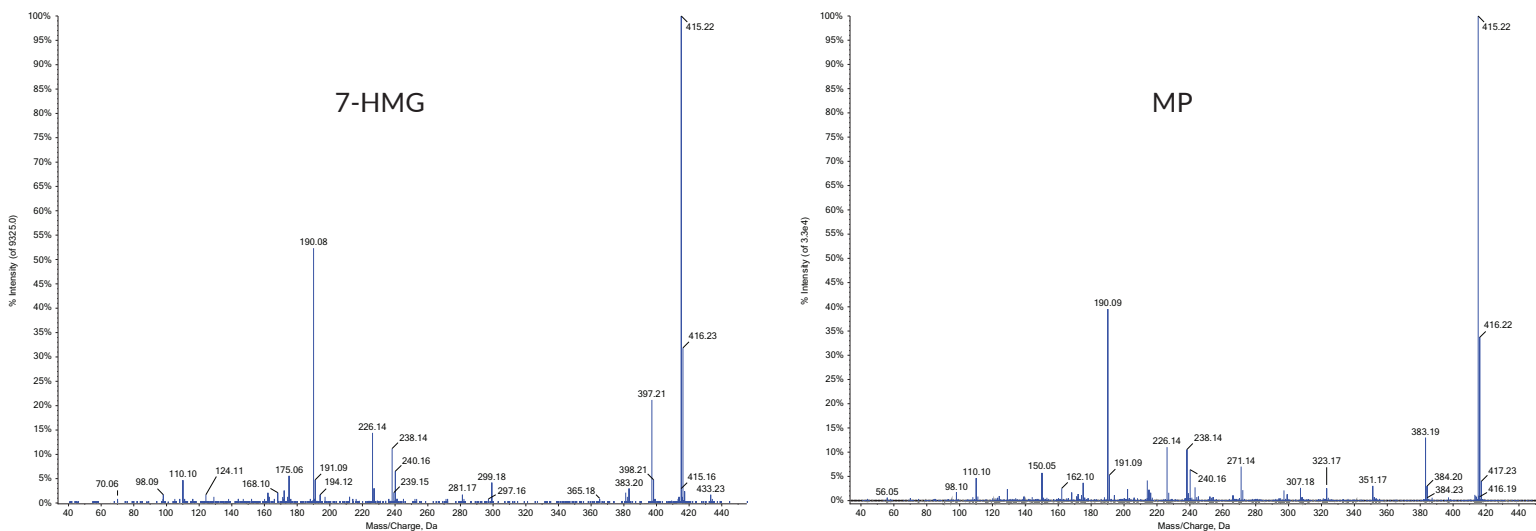


Figure 10. MS/MS spectra for 7-HMG (left) and MP (right) after analysis using an LC-QTOF-MS operating in ESI+ and MS/MS^{ALL} acquisition.

Results: TLC

The simple technique of Thin-Layer Chromatography (TLC) can be a very useful, inexpensive, and rapid tool. Individual solutions of 7-HMG and MP reference standards plus a co-spot were loaded onto a TLC plate and eluted with 3:2 heptane/ethyl acetate with 2% triethylamine. As shown in **Figure 11**, 7-HMG had an R_f of 0.27 and MP had an R_f of 0.21. As visualized using a UV wavelength of 254 nm, note the distinguishable colors, which, in addition to the R_f differences, can serve as a simple qualitative analysis technique.

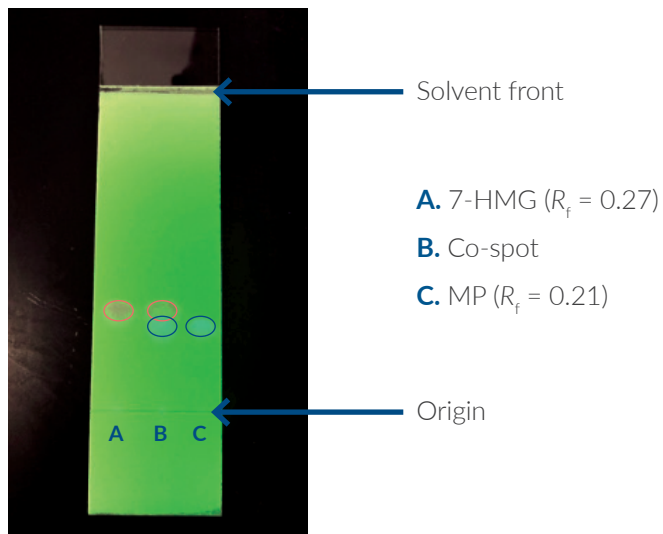


Figure 11. TLC of 7-HMG and MP plus co-spot in center lane.

Cayman products used in this application

Item No.	Product Name
13114	7-hydroxy Mitragynine
20033	Mitragynine Pseudoindoxyl

Conclusion

Kratom alkaloids continue to appear in the recreational drug market across the United States, fueled by the rise of smoke shops, gas stations, and convenience stores selling a variety of mitragynine-related products. 7-HMG and MP are now commonly found in pills, gummies, edibles, and other sample types purporting these substances. Due to their increased potency over mitragynine, these novel kratom alkaloids remain of high public health and safety interest. As states move to schedule these substances and they appear in forensic investigations, accurate identification remains vital. We discovered that 7-HMG and MP were virtually indistinguishable by routine GC-MS methods due to similar retention time and identical mass spectra, leaving the opportunity for misreporting. Our approach to resolve these isomers and developing methods for differentiation were successful in resolution and individual reporting.

References

1. Warner, M.L. Kaufman, N.C., and Grundmann, O. The pharmacology and toxicology of kratom: From traditional herb to drug of abuse. *Int. J. Legal Med.* **130(1)**, 127-138 (2016).
2. Iula, D.M. NPS snapshot: Kratom-derived semi-synthetic opioids, *Cayman Chemical* (October 2025). <https://www.caymanchem.com/literature/kratom-related-nps-snapshot>
3. Das, J. Kratom Alkaloids for the treatment of alcohol use disorder. *ACS Chem. Neurosci.* **15(24)**, 4352-4359 (2024).
4. Krotulski, A.J., Denn, M.T., Brower, J.O., *et al.* (2025), Evaluation of Commercially available smoke shop products marketed as "7-hydroxy mitragynine" & related alkaloids, Center for Forensic Science Research and Education, United States. <https://www.cfsre.org/nps-discovery/smoke-shop-testing/evaluation-of-commercially-available-smoke-shop-products-marketed-as-7-hydroxy-mitragynine-related-alkaloids>
5. Krotulski, A.J., Varnum, S.J., and Logan, B.K. Sample mining and data mining: Combined real-time and retrospective approaches for the identification of emerging novel psychoactive substances. *J. Forensic. Sci.*, **65(2)**, 550-562 (2020).

NORTHEASTERN ASSOCIATION OF FORENSIC SCIENTISTS

Certification Reimbursement

The NEAFS Board of Directors has voted to reimburse the American Board of Criminalistics and International Association for Identification exam sitting fees for five NEAFS members (regular or associate) in good standing who pass the ABC, IAI, ABFT or the NFSA Certified Forensic Manager Series exam. This offer is for any exam completed during the current year. After passing the examination, please fill out the Certification Reimbursement Form (<https://www.neafs.org/certification>). The reimbursement is based on a first come first served basis. Remember you must pass the ABC, IAI, ABFT or NFSA Certified Forensic Manager Series exam to be considered for reimbursement.

For more information about the examination sitting, please contact...

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The Certification Chair at certification@neafs.org

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For more information about certification with the ABFT, please visit...

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The American Board of Forensic Toxicology
<https://www.abft.org/certification/>

For more information about certification with the NFSA, please visit...

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The National Forensic Science Academy
<https://thenfsa.org/wp-content/uploads/2023/10/CFM-Certification-FAQ.pdf>





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MERITORIOUS
SERVICE AWARD
NOMINATION

THE NORTHEASTERN ASSOCIATION OF FORENSIC SCIENTISTS IS ACCEPTING NOMINATIONS FOR THE MERITORIOUS SERVICE AWARD.

ALL NOMINATIONS MUST BE RECEIVED BY SEPTEMBER 1ST. THE WINNER OF THE NEAFS MERITORIOUS SERVICE AWARD WILL BE ANNOUNCED DURING THE ANNUAL MEETING.

FOR MORE INFORMATION AND REQUIREMENTS VISIT THE NEAFS WEBSITE OR CLICK THE LINK BELOW.

[HTTPS://WWW.NEAFS.ORG/MERITORIOUSSERVICEAWARD](https://www.neafs.org/meritoriousserviceaward)



SEA CREST BEACH RESORT NORTH FALMOUTH, MA

October 25th - 29th, 2027

Program Chair Anisha Paul, treasurer@neafs.org

NEAFS 2027

**Investigating the Stability and Degradation of Psilocybin in Mushroom Gummies:
Implications for Forensic Analysis**

6-Month Progress Report – 2025 Carol De Forest Research Grant Recipient

This study evaluated the effects of storage condition and time on psilocybin and its active metabolite, psilocin, in gummy samples. An LC-MS/MS method was developed to chromatographically separate and quantify psilocybin and psilocin. This method was then evaluated for its repeatability, reproducibility, limits of detection, limits of quantitation, and matrix effects. Results demonstrated strong repeatability and reproducibility, with acceptable limits of detection and quantitation. Matrix effects were observed, but did not influence the objectives of this study, as it was focused on relative day-to-day changes in psilocybin and psilocin mass rather than absolute quantitation.

Several extraction procedures were evaluated to determine the most effective approach for recovering psilocybin and psilocin from the gummy matrix: ceramic bead homogenization, dounce homogenization, and QuEChERS. Ceramic bead homogenization with water as the extraction solvent yielded the highest recoveries for both psilocybin and psilocin simultaneously. The homogeneity of the gummies was tested by spiking gummies with either psilocybin or psilocin at three different concentrations and analyzed as independent studies. Results showed that the gummies were relatively homogenous with a %CV of approximately 20% or less.

Two separate batches of psilocybin-spiked and psilocin-spiked gummies were prepared and individually stored in sealed Ziploc bags in several storage conditions: room temperature (light), room temperature (dark), refrigerated, frozen, and elevated. Sampling was performed at predetermined intervals over the study duration. For each time point, three gummies per storage condition were selected and subjected to ceramic bead homogenization and extracted. Kendall's tau rank correlation was used to perform nonparametric monotonic trend analysis of the data.

Results revealed that psilocybin-spiked gummies did not exhibit a statistically significant decrease in total psilocybin mass over the course of the study. However, qualitative formation of psilocin was observed in gummies initially formulated to contain only psilocybin, with the formation occurring the most under the elevated temperature where 15 of 18 samples had psilocin in them. Beginning on Day 7, psilocin was consistently detected in all elevated temperature samples, with peak areas generally increasing over time. In contrast, freezer storage resulted in the lowest occurrence of psilocin formation, with psilocin detected in only 3 of 17 samples and at comparatively low peak areas.

In contrast, psilocin-spiked gummies exhibited a statistically significant decrease in total psilocin mass for the gummies stored under room temperature with light exposure ($t = -0.8611$, $p < 0.0001$), room temperature in the dark ($t = -0.6029$, $p = 0.0018$), and elevated temperature conditions ($t = -0.5497$, $p = 0.0045$), while refrigerated and frozen samples showed no significant associations ($p > 0.05$). The percent decreases in psilocin mass at Day 57 relative to Day 3 was 72%, 27%, and 20% under these respective conditions.

Collectively, the trend analysis and conversion data indicate that the frozen storage condition best preserved analyte mass over the study period. These findings provide practical guidance for forensic laboratories, as improper storage may contribute to degradation or unintended conversion of psilocybin to psilocin. Accurate quantitation is essential for establishing the identity and potency of seized samples, so variability in storage conditions could result in partial conversion or loss of analytes, potentially leading to misinterpretation of evidence.

A thesis on this project has been completed and the results of this work will be presented at the NEAFS conference in Fall 2026.

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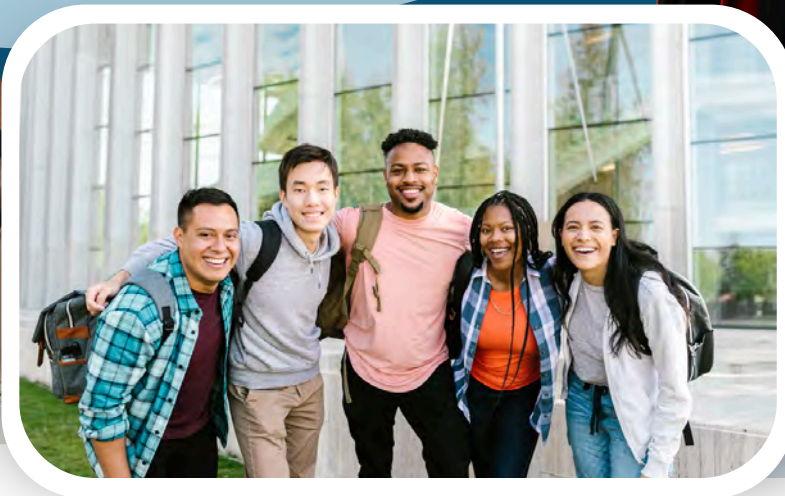
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**NORTHEASTERN
ASSOCIATION OF
FORENSIC SCIENTISTS**

TRAINING SCHOLARSHIP FUND



**OPEN APPLICATION PERIOD
JANUARY 1st to DECEMBER 31st
OF THE CURRENT YEAR**

APPLICATION REQUIREMENTS

The Northeastern Association of Forensic Scientists (NEAFS) is proud to offer its members a Training Scholarship Fund (TSF). Members in good standing are eligible to receive up to \$400 towards training, workshop or non-NEAFS meeting registration and travel expenses. Individuals will only be allowed reimbursement once per application period. Any NEAFS Annual Meeting expenses are ineligible to receive funding. Reimbursement will occur upon receipt of a certificate showing successful attendance and completion of the course along with an article summarizing the course for the NEAFS newsletter.

APPLICATION INSTRUCTIONS

Applicants must submit a Pre-Approval Application prior to attending the training for which they wish to obtain funding. For additional instructions, requirements and forms visit the NEAFS website.

<https://www.neafs.org/trainingscholarshipfund>





TRAINING OPPORTUNITIES

AFQAM Cooperative Training Program

The AFQAM Executive Board is pleased to announce the release of the AFQAM Cooperative Training Program! This training program is designed for those new to forensic quality assurance and will provide a key steppingstone to achieving success in the position and with the responsibilities. The training program was developed by experienced forensic quality assurance experts and is broken up into courses that focus on key topics in quality assurance. The first two courses available are 'Introduction to ISO' and 'Accreditation – What Is It Good For?'.

The AFQAM Cooperative Training Program is open to everyone, and you do not need to be an AFQAM member to participate. Each course can be purchased individually, and a certificate of completion will be given to the student at the successful completion of the course. The interactive training will keep you engaged, motivated, and eager to learn as you progress through the course.

This training program is ideal for those new to quality assurance or interested in quality assurance such as new Quality Manager's, Technical Leader's, new hires, or other roles that assist with quality assurance in the laboratory. Whether you are simply seeking to learn more about what the job entails, or seeking tools to help you succeed in your job, this is for you!

To review the available courses and register please follow this link: <https://afqam.org/cooperative/>. Additional courses will be released in the near future. For questions, please email contact@afqam.org.

**TRAINING
OPPORTUNITIES**



Employment Application

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