

The Reference Standard

Special points of interest:

- Student Award Changes!
- New interactive course!
- EC Nominations!

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Did you receive this newsletter from a colleague?
Interested in joining TDRM?

Visit the [AOAC Website](https://www.aoac.org/) to learn more.



Chair's Message

With record cold spells and ice storms around much of the US recently, many of us are hoping spring and its warmer temperatures are just around the corner. Well, unless Punxsutawney Phil and the sight of his shadow have anything to say about it! The winter months can make it challenging to stay active, but that's not the case with this year's Executive Committee.

Before we jump into our busy slate of activities and updates, I haven't yet had an opportunity to recognize and appreciate the Executive Committee members who completed their terms, nor welcome the new members who joined us after last year's TDRM elections. First, many thanks to Pat Bird, Gretchen Gutierrez, and Sidney Sundberg, the three EC members who completed their terms last year. The membership elected three new members to the Executive Committee as their replacements starting Fall, 2022 – Hiroko Suzuki with Japan Food Research Laboratories, Gretchen Gutierrez with Matrix Sciences, and Sean McClure with Abbott Nutrition. Please join me in thanking Pat, Gretchen, and Sidney while welcoming Hiroko, Gretchen, and Sean into their new roles.



Derrell Johnson,
TDRM Executive
Committee Chair

The TDRM Executive Committee for 2023 are: Derrell Johnson – Chair; Joe Betz – Chair Elect; Catherine (Kate) Rimmer – Past Chair; Olu Ajayi – Treasurer; Matthias Nold – Secretary; and Elected Members – Sean McClure, Hiroko Suzuki, Gretchen Gutierrez, Don Gilliland, John Budin, and Elizabeth Mudge. Appointed members-at-large are Håkan Emteborg, John Szpylka, Chuck Barber, and Joe Konschnik. The TDRM also has key volunteers: Donna Zink as Information Services Chair; Chuck Barber as Newsletter Editor; Deborah McKenzie & Constance Bahr, our AOAC Staff Liaisons; Pearse McCarron as ISO/REMCO Liaison; and Lars Reimann & Wayne Wolf as valued advisors.

Now, off to the races! Our Education subcommittee (EdCo), led by co-chairs Gretchen Gutierrez & Håkan Emteborg, have been discussing ideas and putting together several reference material proposals for sessions at this year's annual meeting in New Orleans. We've submitted proposals for a session on Cannabis reference materials topics as well as a new joint workshop between us and TDLM. We look forward to hearing back soon from the TPC regarding these submissions.

With the Joint Research Centre of the European Commission having recently introduced an on-line training course on the use of reference materials (see more about the course on pp. 3-4), EdCo and the EC have put together a communication plan on how we can help introduce this powerful new tool to the AOAC community. If you heard it here, be sure to tell your colleagues!

EdCo and I are also looking at introducing a "Help Desk" session at the annual meeting where we can help provide answers to questions on reference materials from the AOAC

Continued on page 2

Chair's Message Continued.

community. We're still evaluating the concept, question gathering process, and how to structure & schedule the event at the annual meeting with approval from AOAC. If you have ideas or are interested in joining EC members to help answer questions, reach out to me at our new TDRM email address, AOAC.TDRM.1993@gmail.com.

Executive Committee members have also been working on other initiatives. These include: Refreshing TDRM bylaws, Reviewing Appendix A reference materials section for the Official Methods Board, and Fundraising for the members' reception at this year's annual meeting.

Our Outreach subcommittee has also been quite busy the last few months. Kate Rimmer, our Past Chair, has formed this year's Nominating Committee, comprised of a well-rounded group of TDRM and AOAC members. The Nominating Committee will start work soon on proposing their slate of nominations for open EC positions coming later in 2023. Look for an announcement on the final slate of candidates by June 1 with our election scheduled for July.

As part of Outreach, I'm excited to inform you that late last summer the AOAC Board of Directors approved an update to the policy for our Inés Cereijo TDRM Student award. We updated the policy and award amounts to better align with other AOAC student awards. Many thanks to Beth Mudge & Joe Betz for their work updating the policy. And a special thanks to FONA McCormick for their generous sponsorship this year of the TDRM Student award. Check out the recent SPECTRUM emails under the AOAC Student Awards section, and you'll now find mention of our TDRM student award alongside the other student awards through AOAC. We're excited how these changes can bring greater visibility and more sustainable support towards promoting awareness of the need for method performance evaluation early in a chemist's career, through the use of reference materials.

A big Outreach goal this year for the EC is to introduce TDRM to several country AOAC sections and seek further collaboration opportunities. To that end, Matthias Nold and I will be participating in AOAC India, partially on behalf of TDRM. I've secured from the organizers a 15-minute time slot to introduce TDRM to the local AOAC India section & see how we can work more closely with them to support their reference material needs in AOAC methods. Other visits later this year, either virtual or in-person, include ones with the Southeast Asia section and the Japan section.

Work continues with our Reference Materials database, adding more reference materials from the producer community and developing a plan for updating user features. Interested in getting involved with the database, from reviewing data to keeping entries current? If yes, reach out to our Information Services Chair, Donna Zink (dzink@aimresearchenterprises.com). She'd love to hear from you!

The Executive Committee and I are excited with our busy start to 2023. But we could definitely use some help! Want to support any of the key activities I've just mentioned? Interested to volunteer on keeping product data entries current in the database? Have any suggestions or want to help present on reference material topics for a symposium or workshop at this year's Annual Meeting? Want to collaborate with a working group & the Executive Committee on identifying reference materials to support development of an official method? If yes, don't hesitate to reach out to us at AOAC.TDRM.1993@gmail.com. And for those of you attending the mid-year meeting, either in-person or virtually, we look forward to seeing you there!

Interested in Appearing in the Next or Future Newsletters?



Here is your opportunity to appear in the next newsletter. If you would like to appear in a future issue, please submit a 300 word biography and photo to AOAC.TDRM.1993@gmail.com. Your biography can include your employer/occupation, education, reason for joining AOAC/TDRM, and your current projects. All biographies will be reviewed by the EC prior to publication.

Join EC-JRC's new interactive course on reference materials!



The European Commission's Joint Research Centre launches a free interactive course on reference materials.

The Joint Research Centre is one of the leading global producers of reference materials in the fields of food and feed analysis, environmental analysis, engineering and health applications.

Quality of measurements is key in our daily life. Reference materials ensure useful, reliable and comparable results from different methods and laboratories.

Our new online training sessions will teach you how to use reference materials and how to estimate measurement uncertainties.

In this course, you will learn the basics why measurement uncertainties are important and how you can estimate them.

You will learn the role and importance of reference materials and how you can best select and use them.

Our interactive course will be complemented by practical exercises where you can apply and test your newly acquired knowledge.

You will be able to follow 8 modules:

- **Estimation of measurement uncertainty** – This module explains what measurements uncertainty is and why is needed. You will learn how to estimate measurements uncertainty and will be get more details on the quantification procedure and whether it is a combination of uncertainty sources. At the end we show two options: the so-called bottom-up approach and the so-called top-down approach (use of validation data).
- **Use of CRMs to prove laboratory and method performance** – This module provides the tools to understand how to make use of the added value of certified reference materials (CRMs) to prove laboratory and/or method performance.
- **Making the best use of RMs** – This module presents how to get the best use out of reference materials and you will learn what sources of information are available.
- **Use of CRMs in method validation** – In this module, will be explained how to validate a new method and how to estimate the measurement uncertainty of its results.
- **Commutability of reference materials** – After being acquainted with the validation of a new method and how to estimate the uncertainty of its measurements, in this module focus will be on the commutability of reference materials.

Join EC-JRC's new interactive course on reference materials! Continued.

- **Selection of reference materials** – In this module will be presented all the steps to consider when selecting a reference material.
- **Traceability of measurement results** – In this module, will be explained the metrological traceability and its role for the comparability of measurement results. Furthermore will be described how certified reference materials or CRMs can be used to help you to make your results traceable.
- **The wrap-up** – This last module provides an example of how this course can guide you through the processes in your laboratory practice.

This course is intended for practitioners working in laboratories that need to apply reference materials for statistical quality control, method validation and calibration and who need to assess measurement uncertainties on customer's demand or as requirement of the ISO/IEC 17025 standard. It can also be useful for ISO/IEC 17025 auditors who need to assess the estimation of measurement uncertainties and the correct application of certified reference materials.

Join EC-JRS's online course and boost your knowledge in reference materials and measurements!

Join freely the course wherever you are, whenever you want, and whatever device you want to use!

Register [here](#).

Enjoy the journey in the exciting world of measurement science!

Join the free interactive course on reference materials and measurement uncertainty!

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Information Services Corner



You may contact any member of the committee directly if you have questions, or use the TDRM email address, AOAC.TDRM.1993@gmail.com.

If you are interested in volunteering, or if you have any comments to share, please contact us.

What would a new year be without change?

Sharepoint is reaching its end-of-life, and Microsoft will no longer be providing external hosting services for subscribers, so there will be corresponding changes in online tools used for TDRM activities, including archived and published documents. Stay tuned.

Near the end of last year, the [database policy was updated](#) to clarify inclusion of "regulatory materials" that are not CRMs but are required for certain quality assurance practices by regulation. There are different types of these materials used in different industries, including pharmacopeial reference standards. This particular group of RMs, the pharmacopeial reference standards, serve a specific purpose but are not presently defined as a subset of RMs within current internationally harmonized definitions, although the term is widely used in FDA regulations in the U. S. You may download copies of the TDRM RM Guidelines and additional information on the database using these links:

[TDRM RM Guidelines: Applications and Guidelines for Use of Reference Materials](#)
[TDRM RM Database Information](#)
[Search Tips](#)

The database has been migrated from the Gen 3 server to the Gen 4 server, and with the pleasant surprise of a cost reduction.

Which of these statements is accurate:

The more things change, the more they stay the same.

The more things change, the more we need to learn in order to adapt.

There will be a lot to learn in the coming year, and Information Services will adapt to support the needs and activities of TDRM. We invite those who are interested in these activities to volunteer. As we move forward, extending the benefits of TDRM membership will be accomplished through the efforts of its highly valued volunteers.

Contributed by

Donna Zink, Information Services Chair
dzink@aimresearchenterprises.com

**Nominate a student intern
or colleague for their research!**

Inés Cereijo Student Award

Student award has been updated with additional funding!

TDRM sponsors a Student Award raising awareness of the need for method performance evaluation at an early point in a chemist's career. Because not all colleagues have research facilities or may only be involved in a short-term summer internship, nominees are evaluated based on a report describing either the use of a reference material for method performance evaluation or the development of a new reference material.

- Undergraduate and graduate students are eligible; award based on a report that evaluates the use of a reference material for a specific application; winner will receive in USD a \$1,000 prize; \$1,000 towards lodging; \$500 towards transportation; \$400 food, and a TDRM membership.
- Nominate someone on the [AOAC website](#) by **March 31, 2023**.
- Please visit the [AOAC Awards Program for TDRM](#).

TDRM Achievement Award

- Award recognizes an outstanding contribution to the use of reference materials in a unique or unusual manner or to the development of reference materials for laboratory use; nominations are based on a short statement describing the unique or significant contribution of the scientist or group of scientists using 150 words or less.
- Statements and up to 2 letters of support should be sent to AOAC.TDRM.1993@gmail.com by **May 1, 2023**.

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Nominations for 2023 TDRM Executive Committee Election

An AOAC TDRM Nominating Committee will soon be established to begin developing the slate for the 2023 Executive Committee election. The upcoming election will have three Officer positions and two Elected Member positions to be filled. Please contact Kate Rimmer at catherine.rimmer@nist.gov if you would like to be considered for this or a future election, or to suggest a nominee; in the subject line of the email please state "2023 TDRM Nomination Request". Officers serve in two-year terms, with Chair-Elect moving into the Chair Position for the following two-year term. Elected Members serve three-year terms on the Executive Committee and vote on procedural matters. Executive Committee members also strive to uphold the mission statement of TDRM and advance the quality of analytical measurements through use of reference materials in validating or using analytical methods. Those who are interested in becoming Executive Committee members through future elections are encouraged to attend the annual TDRM Member meeting and Executive Committee meetings to learn more about current goals and activities and to become better acquainted with other TDRM members. The last date to suggest a nominee for the current election is **April 15, 2023**. Once a slate is developed and presented to the Executive Committee, to be sure that the interests of TDRM are well-served, members will have the additional option of running by petition or as write-in candidates. Please see the AOAC TDRM Mission Statement and TDRM By-laws, page 4, for more details.

Contributed by Kate Rimmer, Nominating Committee Chair

AOAC Annual Meetings & Expositions of Interest



Aug 25-Aug 31, 2023
New Orleans, LA

Aug 22-Aug 27, 2025
San Diego, CA

Aug 23-Aug 29, 2024
Baltimore, MD

Aug 28-Sept 2, 2026
Indianapolis, IN

Aug 27-Sept 1, 2027
Toronto, Ontario Canada



Reference Material Resources

Do you ever find yourself looking for basic information about reference materials? Look no further!

Ever wonder [how to compare a measurement result with a certified value](#) to determine if your method is appropriate? [What about how to use a reference material for calibration \(including examples\)?](#) Ever tried to figure out [how to use a reference material to establish traceability](#)? Wait, there's [more!](#) There is a discussion of using reference materials to quantify GMOs in [food and feed](#), and in [DNA copy number ratio](#). European Reference Materials (ERM) even provides a guide on [use of their certificates and materials](#), and the National Institute of Standards and Technology (NIST) has an excellent [Frequently Asked Questions](#) section where you can find a plethora of additional information. NIST also released [The ABCs of Using Standard Reference Materials in the Analysis of Foods and Dietary Supplements: A Practical Guide](#) in June 2014.

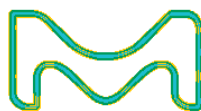
Additional RM Resources! The *Cooperation in publicly funded reference material production*, is a free, open access article available to download at <https://link.springer.com>. TDRM guidelines: Applications and Resources for Use of Reference Materials: [TDRM Guidelines](#).

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MilliporeSigma

Cerilliant
Certified Reference Material - Certificate
Testosterone in Serum

Chemical structure of Testosterone: CC12CCC3C(C1CC2=O)CCC4=CC(=O)CCC34

Analytical Products

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

New Members

Xiaofeng Bao, MI, USA
Sherry Barsamian, IL, USA
Susana Basurto, Nuevo Leon, Mexico
Vijay Bommuluri, India
Vyangesh C, Karnataka, India
Taylor Cappadona, MI, USA
Silvia Carnio, Italy
Peggy Cook, MI, USA
Susanne Crowe, FL, USA
Sachia Fernandez, AZ, USA
Russell Foley, CT, USA
Richard Guimarães, Brazil
Tyler Hack, TX, USA
Tabitha Hauer, AZ, USA
Rosa Isela De La Cruz, Nuevo Leon, Mexico
Ruth Ivory, Ireland
Ronald Johnson, MO, USA
Solomon Kariuki, KY, USA
Sydney Keeney, UT, USA
Sarah Lundfelt, NC, USA
Sharadha Murali, India
Sarah O'Brien, IL, USA
Ujwal Patil, OH, USA
Warren Potts, MA, USA
Samuel Putnam, MA, USA
Sondos Samara, Jordan
Zhaoxing Shi, AZ, USA
Victoria Siegel, LA, USA
Shivlal Singh, India
Zachary Smith, AZ, USA
Stacy Swanson, IL, USA
Thuy Truong, MD, USA
Philip Zinth, Switzerland

Welcome



Join TDRM on LinkedIn!
[Request Membership Here](#)

Interested in learning more about the current activities of the AOAC TDRM Executive Committee? Join the Linked-In TDRM group to access The Reference Standard (newsletter), EC agenda items, sub-committee updates, election information, individual posts from fellow TDRM members, and so much more!

Join the TDRM Linked-In group at <https://www.linkedin.com/groups/7498809/> and click "join" to be added. Once the request to join the group is received, a notification will be sent to TDRM for approval. One approved, you will have access to view content and communicate with the TDRM community.

Member Corner

**Please
contact**

**Kate
Rimmer at
catherine.rimmer@nist.gov
with your
member-
ship
questions.**

Congratulations on your TDRM membership! Whether you are a new member or a returning member, we are happy to welcome you. As a member, you may be wondering how you can become more involved in the group. There are a number of ways to become involved with varying time commitments, please feel free to email any member of the board to discuss the opportunities (contact information on page 9). A few examples include:

1. Attend our member meeting at the AOAC INTERNATIONAL Annual Meeting in New Orleans, LA, U.S., in August 2023. We will discuss our work from 2023 and our directions for 2024. This is a great opportunity to meet the TDRM leadership and make suggestions.
2. Volunteer! Donna Zink is looking for volunteers to help with the reference material database (<http://tdrm.aoac.org/>). More details on page 5.
3. Propose a session for a national meeting or a local section meeting.
4. Run for office. Please contact Kate Rimmer at catherine.rimmer@nist.gov, Past Chair, if you would like to be considered for a future election, or to suggest a nominee.

To learn more about TDRM, please visit our table at the AOAC Annual Meeting, or send an email to volunteer your ideas and skills or just to ask how you can be more involved.

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Derrell Johnson, MilliporeSigma
derrell.johnson@milliporesigma.com

Past Chair

Kate Rimmer, NIST
catherine.rimmer@nist.gov

Chair Elect

Joseph Betz, NIH-ODS (Retired)
cognosy88@gmail.com

Secretary

Matthias Nold, Merck KGaA
matthias.nold@merckgroup.com

Treasurer

Olusegun Ajayi, FDA
sbj4040@yahoo.com

Members (Elected)

Don Gilliland, G-SQUARED Consulting
 (2020-2023)

don@gillilandscientific.com

John Budin, McCormick FONA
 (2021-2024)

john_budin@mccormick.com

Elizabeth Mudge, NRC Canada (2021-2024)

elizabeth.mudge@nrc-cnrc.gc.ca

Gretchen Gutierrez, Matrix Sciences (2022-2025)

ggutierrez@matrixsciences.com

Sean McClure, Abbott Laboratories (2022-2025)

sean.mcclure@abbott.com

Hiroko Suzuki, JFRL (2022-2025)

suzukih@jfrl.or.jp

Member (Appointed)

Håkan Emteborg, EC-JRC (2020-2023)

hakan.emteborg@ec.europa.eu

John Szpylka, FSNS (2020-2023)

John.Szpylka@FSNS.com

AOAC Support Positions

Deborah McKenzie

Constance Barr

Ancillary Appointed Positions

Information Services Chair

Donna Zink, AIM Research Enterprises

ISO-REMCO Liaison

Pearse McCarron, NRC Canada

Advisor

Wayne Wolf, USDA (retired)

Newsletter Editor

Chuck Barber, FDA

Membership Chair

Kate Rimmer, NIST

Email

AOAC.TDRM.1993@gmail.com

*if you are interested in
 becoming more involved in the
 TDRM through the Executive
 Committee.*



Chair

Derrell Johnson,
 MilliporeSigma



Past Chair

Kate Rimmer,
 NIST



Chair Elect

Joseph Betz,
 NIH-ODS (Retired)

2022-2023 Executive Committee



Secretary
Matthias Nold,
Merck KGaA



Treasurer
Olusegun Ajayi,
FDA



Elected Member
Don Gilliland,
G-SQUARED
Consulting



Elected Member
John Budin,
McCormick FONA



Elected Member
Elizabeth Mudge,
NRC Canada



Elected Member
Gretchen Gutierrez,
Matrix Sciences



Elected Member
Sean McClure,
Abbott Laboratories



Elected Member
Hiroko Suzuki,
Japan Food Research
Laboratories



Appointed Member
Håkan Emteborg,
EC-JRC



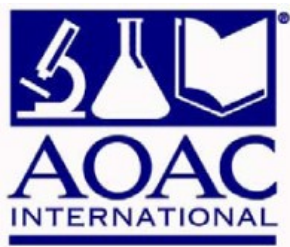
Appointed Member
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Food Safety Net Services,
Ltd.



Appointed Member
Chuck Barber,
FDA



Appointed Member
Joe Konschnik,
Restek

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*Improving the Quality of Laboratory Measurements
through the use of Reference Materials*

AOAC INTERNATIONAL expanded its mission statement "To promote quality measurements and method validation in the analytical sciences." Focus has increased on accuracy of analytical measurements generated by AOAC methods and the role of reference materials in verification of accuracy.

The Technical Division on Reference Materials (TDRM) further develops and maintains AOAC INTERNATIONAL's status as a recognized worldwide authority on methods validation and quality analytical measurements through facilitating the use of reference materials in collaborative validation, implementation, and routine use of AOAC methods.

