



INTERNATIONAL

Standards Worldwide

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RADIATION PROCESSING: DOSIMETRY AND APPLICATIONS

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GLENN CALVERT & JOERN MEISSNER

PROGRESS REPORT 66

March 2009

TO: Subcommittee Members, Industry Groups

FROM: John R. Logar, E10.01 Chairman

I. E10.01 Updates

1. Executive Summary
2. January 2009 Subcommittee Meeting Attendees
3. Next Meeting
4. E10.01 Completed Standards
5. How to Obtain Copies of our Standards
6. Personal Notes
7. Membership Information
8. Specific Action on Standards
9. ISO Actions
10. Previous Meetings
11. Future Meetings

II. INDUSTRY UPDATES

1. AAMI
2. ICRU
3. RPSMUG
4. CIRMS
5. iiA
6. The Panel
7. Courses and Workshops
8. Upcoming Events
9. Books of Interest

III. APPENDICES

- A – January 2009 Meeting Action Items
- B – 6th International Workshop 2nd Announcement
- C - June 2009 Preliminary Agenda

IV. ATTACHMENTS

- A – Membership List

E10.01 UPDATES

1. EXECUTIVE SUMMARY

The January 2009 meeting in Atlanta, Georgia was held in conjunction with the E10 Committee Week. We had a total of 23 E10.01 members attend the meeting. The week started with a critical planning session for the 6th International workshop was conducted on Sunday with discussions surrounding the potential of postponing the workshop. The following three days were dedicated to the review of key standards. We have entered an extremely busy yet rewarding time for our standards development. As a result of getting standards published for the last workshop in the fall of 2004, we have hit the 5-year review cycle for most of our standards. As of January 25th, 2009, subcommittee E10.01 had 34 of its 36 published standards requiring some ballot action. In addition we are in the process of completing our two new standards. As we continue to develop and improve our standards, please do your part in reviewing and commenting on draft standards for those task groups in which you are a member.

Also, during the meeting, we were fortunate to view two presentations on low energy x-rays. In addition, we had the opportunity to visit and tour the Rad-Source facility outside Atlanta on Tuesday evening hosted by Randy Kirk. We were shown exceptional hospitality as we were transported via coach to and from the facility and were provided light snacks and beverages as we toured their operations. I would like to thank Kishor Mehta and Randy Kirk for setting up this opportunity for members of our subcommittee.

Looking forward to our meeting in Vancouver this June, we are putting together a special trip to Whistler, British Columbia on Wednesday afternoon/evening. We plan to back at the Vancouver hotel by Wednesday evening. It is a spectacular year-round resort. Whistler, regarded as one of the top four-season resorts in North America, is one of the major alpine and Nordic venues for the Vancouver 2010 Olympic and Paralympic Winter Games. If you plan to join us, please contact Kevin O'Hara at Kevin.OHARA@mdsinc.com by May 22nd.

MEETING MINUTES: Highlights from the meeting in Atlanta:

6th International Workshop –

Symposium Chair: Glenn Calvert

When: October 4th – 8th, 2009 (**NOTE CHANGE IN DATES from PR 65**)

Where: Ettlingen in Karlsruhe Germany. Meeting location is at the Schloss (castle setting)

- 2nd Announcement on ASTM website and attached in Appendix B.

The meeting in Atlanta proved to be very beneficial in gaining a consensus on whether or not we should continue to pursue holding the workshop in the current economy. Following the meeting, commitments were obtained from key individuals that enabled us to solidify the team needed to put on the workshop. With the team complete, financial commitments understood and the budget finalized, the decision was made to continue with the workshop. The cost of workshop will be \$1425 for ASTM members and will be held this October. A key addition to the workshop is the addition of a presentation on worldwide regulatory perspective during special topics session. We have a commitment from Patrick Weixel, US FDA and we are looking for a representative speaker from Europe.

The workshop team continues to meet on a weekly basis in order to stay on top of key objectives. Please contact the Symposium chair Glenn Calvert at glenn_calvert@bd.com if you would like to assist with any aspect of the workshop.

E10.90 Executive Meeting Highlights

- This year is the year of the professor, where professors that support the use of ASTM standards in their classrooms will be honored.. Subcommittee E10.01 was happy to recognize Roberto Uribe as he has built in the use of standards into his curriculum.

- An important addition to the ASTM website will be the use of an online document review system, similar to the previous ASTM Forum. We were able to view the beta version of this system earlier this year and it appears to be a very useful tool. As many of us are constantly faced with time constraints and travel budgets, this will add another means of enabling members to review documents outside of meetings. This system is expected to be available in late April.
- The current balance in the E10.01 account is \$13,523.64

Meeting Presentations

During the meeting in Atlanta we continued the effort to promote a forum where members can present new or topical information to the attendees. The first talk was given by Kishor Mehta and focused on dose mapping a low energy x-ray irradiation chamber. The next following day, Roberto Uribe gave a presentation on the mathematical modeling of the same low energy x-ray chamber Kishor spoke about. It was a great opportunity not only to see the work that went into their studies but also have an opportunity to visit the facility where the x-ray chambers are made. If you would like to conduct a presentation or conduct a discussion on a topic of interest at an upcoming meeting, please contact John Logar at Jlogar8@its.jnj.com. These time slots are filled on a first come first served basis.

Management Task Group Updates

Administration – The membership list is routinely updated and we are finishing our file transition to the new Secretary of E10.01. We continue to work through software compatibility issues with the various formats we use. John Rickey is working on developing an alternate way of tracking our membership. Please see the updated membership list in Attachment A. If you need any changes made to your personal information or task group affiliations, please contact John Rickey at rickey@fwf.com. In addition, E10.01 Progress Reports are on the Website under subcommittee minutes. The task group is keeping up to date with requested information and links that should be on the ASTM E10 webpage. Denise has been very successful in ensuring the current links are accurate and the addition of new links is completed in a timely manner. If you need any changes or links added to the website that pertain to E10.01 please contact Denise Cleghorn at cleghord@bsci.com.

Balloting - As a result of the introduction of the new ISO electronic Systematic Review with review automatically started 3 years after publication, almost all of the ISO/ASTM standards are being reviewed. The restructuring of the standards with E10.01-hh as the top document requires many of the standards to have major revisions. This will cause a significant increase in the work of the Management Task Group on Balloting in the next few years. To assist in meeting this anticipated workload, Fred Halperin (J&J) agreed to be added as a Co-Chair. The balloting of standards is complicated by the fact that E10.01 produces both ISO/ASTM standards and ASTM standards. The balloting of ISO/ASTM standards follows the maintenance procedures in ISO/TC 85 N 928. ASTM standards are balloted following the procedures in the ASTM Green book. Each Task Group Chair is responsible for providing a document suitable for direct submission to ASTM for balloting. This ASTM version is usually a redlined version showing the changes. If the document is to be balloted by ISO, a clean version in the ISO format is needed and a Management Task Group member must work with the ASTM editor to convert the document into the ISO format. To assist the members of the Management Task Group on Balloting in understanding the procedures to be followed at the different stages of the ASTM or ISO/ASTM balloting, Rod prepared a summary of the specific duties to be performed.

Education & Promotion: This group has an active role in the promotion and coordination of the 6th International Workshop on Dosimetry.

Task Group Chair Responsibilities – NEW POLICY REMINDER

AS A REMINDER we are moving into a very busy time with almost all of standards under some type of revision, we need to move standards along through the review periods and ballot process in a timely and effective manner. The task group chair must make every effort to get updated drafts and comments out to the task group and/or subcommittee in plenty of time as to provide an adequate review and comment period. In addition, all changes to a draft standard must be completed at least THIRTY DAYS prior to meeting in order to give task group members enough time to adequately prepare for the meeting and subsequent break out sessions. Also, ASTM will send out a comments page when the standards go out to subcommittee, and similar to ISO

comments, it will include a column to identify comments as Technical (T) or Editorial (E). All members will be required to submit comments on this form; this will help with the consolidation and review of comments. As we move through the revision process, we must also be sure the definitions section of each standard is up to date with what is in our E10.01 Glossary. The glossary was sent out to all of the TG chairs and it is your responsibility to ensure the definitions are updated as required. If you did not receive a copy of the glossary, please let me know and I will ensure you get a copy. It is the ultimate responsibility of the Executive committee to make sure that things move forward efficiently but we rely on the task group chairs to be the main driver. For comments or suggestions on these policies, please contact John Logar at Jlogar8@its.jnj.com.

Radiation Sensitive Indicators

The subcommittee was notified that the USDA is once again considering the use of Radiation Sensitive Indicators for irradiation as a phytosanitary treatment. The request has been presented to the USDA due to the cost of the dosimeters and costs associated with the calibration and maintenance of a dosimetry system. The Executive Committee re-issued a letter previously sent by Harry Farrar IV on this very subject, with an updated cover letter, to Ian Winborne (USDA-APHIS). This letter expresses our concern regarding the use of RSI's in lieu of dosimeters. To date, no action has been taken regarding this issue.

Current Standards Review - Consolidation

Currently, we are planning on combining two existing standards, "ISO/ASTM 51204:Practice for Dosimetry in Gamma Irradiation for Food Processing" with "ISO/ASTM 51702:Practice for Dosimetry in Gamma Irradiation Facility for Radiation Processing." The two standards were compared and deemed virtually identical. The two standards will be consolidated in an upcoming ballot under the ISO/ASTM 51204 number. The 51702 will be balloted for withdrawal. If you have any questions or concerns, please contact John Logar at Jlogar8@its.jnj.com.

As noted previously, we have 34 of our 36 standards under some part of the review process. The question was asked "Can we do this with other standards?" As a result, during the meeting, the group reviewed the 36 published standards we currently have in an effort to evaluate which standards could be consolidated and if a standard is not needed should it be withdrawn. We want to work smarter, not harder. Following the discussion it became apparent that this exercise could not be done in a short time and would take some time to fully evaluate the impact of consolidation or withdrawal of a standard. A small ad hoc task group was formed to thoroughly review our current standards and make recommendations at an upcoming meeting.

Committee Meetings

A discussion was had during the meeting surrounding whether we are meeting with the right Committee; currently our meetings are held with Committee E10 on Nuclear Technology. The standards for all other subcommittees surround the nuclear industry. In a quick poll, we identified that over 80% of the attendees in the room were primarily associated with the Medical Device Industry and the E10.01 standards are used to support activities in that industry. We identified another ASTM Committee that we are evaluating meeting with at a future committee week. The committee is "F04 – Medical and Surgical Materials and Devices". This committee's scope states "the Committee shall be the development of standardized nomenclature and definitions of terms, test methods, recommended practices, guides, specifications and performance standards for medical and surgical materials and devices". Considering most of the members associated with E10.01, and their companies, deal primarily with medical and surgical devices, meeting with this subcommittee may be a good synergistic opportunity for both groups to promote our work and make key contacts. This committee meets twice a year in May and November. We have opened lines of communication with the chair of this committee and will provide updates if a meeting will be planned. For comments or suggestions on regarding meeting with this committee, please contact John Logar at Jlogar8@its.jnj.com.

New Exploratory Task Group

Following numerous discussions surrounding the workshop and hands-on training, we identified a need in the radiation processing industry that could benefit from standardization. The need surrounds "Process Control". As we continue to develop the hands-on training material and exercises, Deepak Patil and Jon Jansson have agreed to evaluate the need for a formal standard. If a standard is deemed necessary, a task group will be created

and members solicited. If you have any questions or concerns or would like to participate in the evaluation, please contact Deepak Patil at deepak.patil@steris.com.

Action Items

During the meeting the group reviewed the action items list from the last meeting in Denver. Items that remained opened were transferred to the new list from the Atlanta meeting. Following the three-day meeting in Atlanta, a total of 24 action items were identified. The Action Item list can be found in Appendix A of the this report. Please ensure the tasks you have responsibility for are being tracked and stay on target for completion.

ACTION FOR ALL TG MEMBERS: Progress Report 66 does not contain any draft standards. Please contact your Task Group Chair or the Subcommittee Chair directly to obtain a current copy. For the next Subcommittee meeting, please ensure that you have an updated copy of the standards on which you will be working. Please contact John Logar at Jlogar8@its.jnj.com or Joe Koury at jkoury@astm.org for additional information. The table below identifies which task groups are currently active. See section 8 for an update on current activity.

Active Task Groups

Task Group	Standard	Chair
B	ISO/ASTM 51204: Practice for Dosimetry in Gamma Irradiation facilities for Food Processing	Kim Morehouse Kim.morehouse@fda.hhs.gov
C	ISO/ASTM 51400: Practice for Characterization and Performance of a High-Dose Radiation Dosimetry Calibration Laboratory	Gary Pageau gpageau@gexcorp.com
D	ISO/ASTM 51401:Practice for Use of a Dichromate Dosimetry System	Peter Sharpe phgs@npl.co.uk
E	ISO/ASTM 51539: Guide for Use of Radiation Sensitive Indicators	Mark Murphy mk.murphy@pnl.gov
F	ISO/ASTM 51607:Practice for Use of the Alanine-EPR Dosimetry System	Marc Desrosiers Marc.desrosiers@nist.gov
G	ISO/ASTM 51707:Guide for Estimating Uncertainties in Dosimetry for Radiation Processing	Barry Fairand bfairand@columbus.rr.com
H	ISO/ASTM 51631: Practice for Use of Calorimetric Dosimetry Systems for Electron-Beam Dose Measurements and Dosimeter Calibrations	Arne Miller arne.miller@risoe.dk
L	ISO/ASTM 51818: Practice for Dosimetry in an Electron Beam Facility for Radiation Processing at Energies between 80 and 300 keV	Gary Pageau gpageau@gexcorp.com
M	ISO/ASTM 51608:Practice for Dosimetry in an X-ray (Bremsstrahlung) Facility for Radiation Processing	Marsh Cleland Marshall.Cleland@iba-group.com
N	ISO/ASTM 52116: Practice for Dosimetry for a Self-Contained Dry-Storage Gamma-Ray Irradiator	Paul Mellor paul.mellor@sbcglobal.net
O	Terminology	Kishor Mehta mehta@aon.at
P	ISO/ASTM 51276: Practice for Use of a Polymethylmethacrylate Dosimetry System	Roger Bett roger.bett@harwell-dosimeters.co.uk
R	ISO/ASTM 51261: Guide for Selection and Calibration of Dosimetry Systems for Radiation Processing	Brad Lundahl Sc1b5@cox.net
S	ASTM 2303: Guide for Absorbed-Dose Mapping in Radiation Processing Facilities	Gary Pageau gpageau@gexcorp.com

T	ISO/ASTM 51649: Practice for Dosimetry in an Electron Beam Facility for Radiation Processing at Energies between 300 keV and 25 MeV	Josef Mittendorfer htcmitt@eunet.at
U	ISO/ASTM 51275: Practice for Use of a Radiochromic Film Dosimetry System	John Rickey rickey@fwt.com
W	ISO/ASTM 51650: Practice for Use of a Cellulose Tri-Acetate Dosimetry System	Masaaki Takehisa
X	ISO/ASTM 51400: Practice for Characterization and Performance of a High-Dose Radiation Dosimetry Calibration Laboratory	Kevin O'Hara kevin.ohara@mdsinc.com
aa	ISO/ASTM 51956: Practice for Use of Thermoluminescence Dosimetry (TLD) Systems for Radiation Processing	Rod Chu rodchu@rogers.com
bb	ASTM 2381: Guide for Dosimetry in Radiation Processing of Fluidized Beds and Fluid Streams	Denise Cleghorn cleghord@bsci.com
cc	ISO/ASTM 51940: Guide for Dosimetry for Sterile Insect Release Programs	David Lance david.r.lance@aphis.usda.gov
dd	Standard E2232-02: Standard Guide for Selection and Use of Mathematical Methods for Calculating Absorbed Dose in Radiation Processing Applications	Doug Weiss deweiss@mmm.com
ff	E10.01-ff: Practice for Performance Testing of Routine Dosimeters	Rod Chu rodchu@rogers.com
gg	ASTM E 2304: Practice for Use of a LiF Photo-Fluorescent Film Dosimetry System	Mark Murphy mk.murphy@pnl.gov
hh	E10.01-hh: Practice for Use of Dosimetry in Radiation Processing	Peter Sharpe rickey@fwt.com
nn	ASTM F1885-04: Guide for Irradiation of Dried Spices, Herbs, and Vegetable Seasonings to Control Pathogens and Other Microorganisms	Kim Morehouse Kim.morehouse@fda.hhs.gov

Recent ASTM Ballot Results: For more information on the name and status, refer to the tables and updates in Section 8: Specific Actions on Standards. If necessary, contact the TG Chair directly. The ballot results are summarized.

<u>SUBCOMMITTEE BALLOT E10.01 (08-02)</u> November 25, 2008 to December 29, 2008	Affirmatives	Negatives	Abstentions	%
E10.01-ff: Guide for Performance Characterization of Dosimeters and Dosimetry Systems for Use in Radiation Processing	51	1	19	98.07
ISO/ASTM 51261 Practice for Calibration of Dosimetry Systems for Radiation Processing	51	6	14	89.47
ISO/ASTM 52116 Practice for Dosimetry for a Self-Contained Cry-Storage Gamma-Ray Irradiator	43	0	28	100

<u>MAIN COMMITTEE BALLOT E10 (08-04)</u> November 26, 2008 to December 29, 2008	Affirmatives	Negatives	Abstentions	%
ISO/ASTM 51310 Practice for Use of a Radiochromic Optical Waveguide Dosimetry System	58	0	78	100
ISO/ASTM 51540 Practice for Use of a Radiochromic Liquid Dosimetry System	58	0	78	100
<u>MAIN COMMITTEE BALLOT E10 (08-05)</u> December 10, 2008 to January 12, 2009	Affirmatives	Negatives	Abstentions	%
ASTM F1640 Guide for Packaging Materials for Food to be Irradiated	50 38	0 0	94 37	100 100
ASTM F1736 Guide for Irradiation of Finfish and Aquatic	48	0	96	100

Invertebrates Used as Food to Control Pathogens and Spoilage Microorganisms	37	0	38	100
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FUTURE ASTM BALLOT RESULTS: The ballot deadline for main or concurrent ballot items is April 1st, 2009. The deadline for the second and final main and subcommittee ballots is May 4th, 2009 if you want the results prior to the June 2009 meeting in Vancouver, BC Canada. Please have all drafts to Rod Chu by April 24th, 2009 for all main and subcommittee ballot items. As a reminder, a ballot can be generated at any time, however the timing when the results will be ready is affected by when they are submitted. Please submit all drafts to Rod Chu for ballot preparation. For questions on balloting please contact John Logar at Jlogar8@its.jnj.com or Rod Chu at rodchu@rogers.com.

GROUP OUTING - ATLANTA: The group outing in Atlanta was to visit the Rad-Source facility and see the manufacturing and technology behind their low-energy x-ray systems. Transportation, snacks and beverages were supplied to our group and the hospitality was appreciated. All that attended left with a souvenir mug. We will continue to solicit ideas and suggestions and explore group outing opportunities for each upcoming meeting. It is good to get out and do something fun with fellow industry colleagues and E10.01 members outside the normal meeting settings. Please forward any suggestions for future meetings to John Logar @ Jlogar8@its.jnj.com.

2. ATTENDEES at the June 2008 SUBCOMMITTEE MEETING



Front Row: John Rickey, Roger Bett, Hans Wiegert, Deepak Patil, Gloria Mendez-Rodriguez
 Second Row: John A. Williams, Fred Halperin, Peter Sharpe, Kishor Mehta
 Third Row: Kim Morehouse, Patrick Weixel, Gary Pageau, Denise Cleghorn
 Fourth Row: Sam Estrada, Roberto Uribe, Kevin O’Hara, Joe Koury, Rod Chu
 Last Row: Brad Lundahl, Marsh Cleland, John Logar, Arne Miller

Roger Bett, Harwell Dosimetry
Glenn Calvert, Becton Dickinson
Rod Chu, Consultant
Marsh Cleland, IBA Industrial
Denise Cleghorn, Boston Scientific
Sam Estrada, Ethicon-Endo Surgery
Fred Halperin, J&J Sterile Process Technology
Art Heiss, Bruker
Joe Koury. ASTM
John Logar, Ethicon, Inc.
Brad Lundahl, Sterigenics International
Kishor Mehta, Consultant

Gloria Mendez-Rodriguez, Ethicon-Endo
Arne Miller, RISO
Kim Morehouse, US FDA
Kevin P.J. O'Hara, MDS Nordion
Gary Pageau, GEX Corporation
Deepak Patil, Steris-Isomedix
John Rickey, Far West Technology
Peter Sharpe, NPL
Roberto Uribe, Kent State University
Patrick Weixel, US FDA
Hans Wiegert, Cryovac
John A. Williams, Baxter Healthcare

3. NEXT MEETING

REGISTRATION: Registration is required for all E10.01 meetings to ensure we have ample meeting space and is able to properly prepare for the meeting. Registration is done through the ASTM website and information will be sent out prior to the meeting. Your cooperation with this process is greatly appreciated.

E10.01 Workshop Meeting: Sunday, June 14th, 2009. The meeting will be from **10:00 am – 5:00 pm** and will focus on the workshop program and hands-on activities. All are invited to come and participate regardless of the time you arrive on Sunday. This meeting will include plenary session presentations and hands-on activity reviews - so be prepared to work.

E10.01 Meeting: Monday, June 15th, 2009 - Wednesday June 17th, 2009. You must pre-register for this meeting (see above). The general meeting will begin at 8:30 am sharp each day and will incorporate reports on sub-committee activities, E10 main committee activities and updates from industry organizations as well as updates from task group chairs on current active standards. Individual task group meetings will follow a daily group meeting.

Industry Presentations: We have scheduled time for presentations regarding to industry and sub-committee interests prior to the lunch break on the three meeting days (Monday, Tuesday and Wednesday). If you are interested, please let John Logar (Jlogar8@its.jnj.com) know what you are interested in presenting and what day you would like to present your information. These time slots are filled on a first come, first served basis. No time slots have been filled for the June meeting in Atlanta.

Social Plans: An E10.01 group dinner will be planned for Monday night, June 15th, 2009. In addition, we will look into another activity for those interested in doing something in Vancouver.

WEDNESDAY ADVENTURE TO WHISTLER

Following our Wednesday meeting, we plan to visit Whistler, British Columbia on Wednesday afternoon/evening. We plan to be back at the Vancouver hotel by Wednesday evening. It is a spectacular year-round resort. Whistler, regarded as one of the top four-season resorts in North America, is one of the major alpine and Nordic venues for the Vancouver 2010 Olympic and Paralympic Winter Games. If you plan to join us, please contact Kevin O'Hara by May 22nd.

Hotel Information: **The Fairmount Hotel - Vancouver**
900 West Georgia Street
Vancouver, British Columbia
Canada

V6C2W6

1-604-684-3131 (North America and International)

The hotel is located approximately 10 miles/30 minutes from the Vancouver International Airport.

Airport Shuttle Service: The Airporter shuttle service provides service every half hour (from airport) 7 days a week. One way ticket is \$13.50 (CAD) or \$21.00 (CAD) round trip. Taxis cost approximately \$35 (CAD).

Parking: The Fairmont Hotel Vancouver offers parking for \$30 (CAD) valet Parking. Both hotels have in and our privileges.

Additional Information regarding transportation, room rates and cut off dates will be provided as soon the information is available to ASTM.

Cancellation Policy: The Fairmont Hotel Vancouver requires cancellation be received 48 hours prior to arrival to avoid a penalty of one night room and tax.

Meeting Agenda: The Preliminary Agenda for the meeting is attached in the Appendix. The Final Agenda will be issued prior to the next meeting. Suggestions, comments or additions should be sent to John Logar at Jlogar8@its.jnj.com.

IMPORTANT INFORMATION REGARDING TRAVELING TO CANADA

ENTRY INTO CANADA AND U.S.

If you are from the United States, the following instructions may apply to you:

U.S. Citizens traveling to Canada are required to show U.S. Government issued photo ID and proof of U.S. citizenship, such as a birth certificate; however, U.S. law requires that Americans entering the U.S. from Canada by air must have a valid passport. For more information please visit http://www.explore.canada.travel/ctc/ke/things_to_know_2.jsp?cat=4004&localeId=16.

If you are from a country other than the U.S. and are not a U.S. citizen or legal, permanent resident of the U.S., you need a valid passport or travel document. Citizens of some countries also need visas to enter Canada. Visitors should ask about visa requirements and valid travel documents at the Canadian embassy, consulate, or mission in their home countries before departure.

Entry by Private Motor Vehicle

In Canada, U.S. state drivers' licenses are valid for varying periods of time, depending on the province or territory you are visiting. For more information, please visit U.S. Dept. of State Information.

Canadian Currency and Banking

Money in Canada is in dollars and cents, as in the United States. Due to current monetary exchange rates, there is a slight difference in value between the Canadian dollar and the American dollar. Although U.S. money is usually accepted in Canada, we suggest that you exchange it for Canadian dollars at any ATM machine located throughout the city or at the airport, or use your credit card for any purchases while in the city. You may check daily for the current exchange rate: Canadian Exchange Rate. Most U.S. credit cards are honored in Canada. Any charge to a credit card will reflect the bank exchange rate.

The Fairmont Hotel Vancouver will be happy to assist guests with currency exchange transactions with no surcharge. Please note that they are unable to exchange coins.

4. E10.01 STANDARDS NOW COMPLETED

Subcommittee E10.01 has completed the following 36 standards and the 30 dosimetry related standards are published in the latest revision of the “Red Book” and it is available for sale from ASTM (see next section for details).

- ISO/ASTM 51204:2004 Practice for Dosimetry in Gamma Irradiation Facilities for Food Processing
- ISO/ASTM 51205:2009 Practice for Use of a Ceric-Cerous Sulfate Dosimetry System
- ISO/ASTM 51261:2002 Guide for Selection and Calibration of Dosimetry Systems for Radiation Processing
- ISO/ASTM 51275:2004 Practice for Use of a Radiochromic Film Dosimetry System
- ISO/ASTM 51276:2002 Practice for Use of a Polymethylmethacrylate Dosimetry System
- ISO/ASTM 51310:2004 Practice for Use of a Radiochromic Optical Waveguide Dosimetry System
- ISO/ASTM 51400:2003 Practice for Characterization and Performance of a High-Dose Radiation Dosimetry Calibration Laboratory
- ISO/ASTM 51401:2003 Practice for Use of a Dichromate Dosimetry System
- ISO/ASTM 51431:2005 Practice for Dosimetry in Electron Beam and X-ray (Bremsstrahlung) Irradiation Facilities for Food Processing
- ISO/ASTM 51538:2009 Practice for Use of the Ethanol-Chlorobenzene Dosimetry System
- ISO/ASTM 51539:2005 Guide for Use of Radiation-Sensitive Indicators
- ISO/ASTM 51540:2004 Practice for Use of a Radiochromic Liquid Dosimetry System
- ISO/ASTM 51607:2004 Practice for Use of an Alanine-EPR Dosimetry System
- ISO/ASTM 51608:2005 Practice for Dosimetry in an X-Ray (Bremsstrahlung) Facility for Radiation Processing
- ISO/ASTM 51631:2003 Practice for Use of Calorimetric Dosimetry Systems for Electron Beam Dose Measurements and Routine Dosimeter Calibrations
- ISO/ASTM 51649:2005 Practice for Dosimetry in an Electron-Beam Facility for Radiation Processing at Energies between 300 keV and 25 MeV
- ISO/ASTM 51650:2005 Practice for Use of a Cellulose Triacetate Dosimetry System
- ISO/ASTM 51702:2004 Practice for Dosimetry in Gamma Irradiation Facilities for Radiation Processing
- ISO/ASTM 51707:2005 Guide for Estimating Uncertainties in Dosimetry for Radiation Processing
- ISO/ASTM 51818:2009 Practice for Dosimetry in an Electron Beam Facility for Radiation Processing at Energies between 80 and 300 keV
- ISO/ASTM 51900:2009 Guide for Dosimetry in Radiation Research on Food and Agricultural Products
- ISO/ASTM 51939:2005 Practice for Blood Irradiation Dosimetry
- ISO/ASTM 51940:2004 Guide for Dosimetry for Sterile Insect Release Programs
- ISO/ASTM 51956:2005 Practice for Use of Thermoluminescence-Dosimetry (TLD) Systems for Radiation Processing
- ISO/ASTM 52116-2002 Practice for Dosimetry for a Self-Contained Dry-Storage Gamma-Ray Irradiator
- ASTM E 1026-04 Practice for Using the Fricke Reference Standard Dosimetry System
- ASTM E 2232-02 Guide for Selection and Use of Mathematical Methods for Calculating Absorbed Dose in Radiation Processing Applications
- ASTM E 2303-03 Guide for Absorbed-Dose Mapping in Radiation Processing Facilities
- ASTM E 2304-03 Practice for Use of a LiF Photo-Fluorescent Film Dosimetry System
- ASTM E 2381-04 Guide for Dosimetry in Radiation Processing of Fluidized Beds and Fluid Streams
- ASTM E 2449-05 Guide for Irradiation of Pre-packaged Processed Meat and Poultry Products to Control Pathogens and Other Microorganisms
- ASTM F 1355-06 Guide for Irradiation of Fresh Agricultural Produce as a Phytosanitary Treatment
- ASTM F 1356-08 Guide for Irradiation of Fresh and Frozen Red Meat and Poultry to Control Pathogens and Other Microorganisms
- ASTM F1640-09 Guide for Selection and Use of Packaging Materials for Foods to be Irradiated
- ASTM F1736-09 Guide for Irradiation of Finfish and Aquatic Invertebrates Used as Food to Control Pathogens and Spoilage Microorganisms
- ASTM F1885-04 Guide for Irradiation of Dried Spices, Herbs, and Vegetable Seasonings to Control Pathogens and Other Microorganisms

5. HOW TO OBTAIN COPIES OF OUR DOSIMETRY STANDARDS

Individual Standards. Those wishing to purchase a copy of any ASTM or ISO/ASTM standard may obtain it by contacting the Customer Service Department, ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, USA, by calling +1(610) 832-9585, or by faxing +1(610) 832-9555. Customers and members may also download any standard (for a charge) from the ASTM web site at www.astm.org. This information is in the “ASTM Store” under “ordering information” or you may contact ASTM by e-mail at service@astm.org. ASTM accepts Visa, MasterCard and American Express. ASTM members receive a volume of standards free with their paid up membership. For more information on standards, please contact the E10.01 staff manager, Joe Koury at jkoury@astm.org.

Special “Red Book” of our Dosimetry Standards. In 2004, ASTM published the second Edition of the latest versions of all 25 ISO/ASTM dosimetry standards plus five ASTM dosimetry standards that have not yet been proposed as ISO/ASTM standards. Seventeen of the standards are either revisions of versions in the First Edition, or are completely new standards. This book also contains ASTM Terminology Standard E170, which provides definitions of terms that apply to radiation measurements and dosimetry, and a Glossary consisting of an alphabetical listing of all the definitions found in the individual dosimetry standards. The Red Book will be available from ASTM International at the address shown above. ASTM Stock Number: RADPR2004.

Compilation of Dosimetry Standards referenced in ISO 11137. ASTM offers a compilation of 14 ASTM and ISO/ASTM standards that are directly referenced in ISO 11137-3:2006. The goal of this compilation was to enable users of the ISO 11137 standard to purchase, at a discounted price of \$99 per year, all the necessary ASTM related references to ISO 11137 and not have to worry about whether or not they had the most up to date copy. This set is also available for use in multiple sites at an additional cost – please contact ASTM for details on multi-site licenses. The ASTM Stock Number is: STERIL07.

6. PERSONAL NOTES

No updates for this Progress Report

7. MEMBERSHIP

Current Membership Information: The updated Membership List can be found in Attachment A to this Progress Report. The membership list is also available in the “Rosters” section on your committee’s page following login. This is not available without a paid up ASTM membership and password. Members are urged to review the data for accuracy. Corrections or requests should be sent to the E10.01 Secretary, John Rickey at rickey@fwt.com.

TG Chair/Co-chair/Vice Chair Openings: At the Atlanta meeting, a number of vacant positions were filled. Thank you to those who accepted the additional responsibility and we look forward to you increased involvement with our standards activities. We are always looking for more people to get involved so if you would like to contribute toward our success and are interested in becoming a chair or vice-chair for a specific standard, please contact John Logar at Jlogar8@its.jnj.com.

Opening	Task Group	Standard	New Chair/Vice Chair
Chair	ii	ASTM E2449 Guide for Irradiation of Pre-packaged Processed Meat and Poultry Products to Control Pathogens and Other Microorganisms	Chris Sommers
Vice Chair			John Logar
Chair	jj	ASTM F1355 Guide for Irradiation of Fresh Agricultural Produce as a Phytosanitary Treatment	Ian Winborne
Vice Chair			John Logar

Chair	kk	ASTM F1356 Guide for Irradiation of Fresh and Frozen Red Meat and Poultry to Control Pathogens and Other Microorganisms	Kim Morehouse
Vice Chair			Chris Sommers
Chair	ll	ASTM F1640 Guide for Packaging Materials for Foods to be Irradiated	Kim Morehouse
Vice Chair			John Logar
Chair	mm	ASTM F1736 Guide for Irradiation of Finfish and Aquatic Invertebrates Used as Food to Control Pathogens and Spoilage Microorganisms	Kim Morehouse
Vice Chair			John Logar
Chair	nn	ASTM F1885 Guide for Irradiation of Dried Spices, Herbs, and Vegetable Seasonings to Control Pathogens and Other Microorganisms	Kim Morehouse
Vice Chair			John Logar
Chair	B	ISO/ASTM 51204 Practice for Dosimetry in Gamma Irradaition facilities for Food Processing	Kim Morehouse
Vice Chair			John Logar / Rod Chu
Chair	dd	ASTM E2232 Guide for Selection and Use of Mathematical Methods for Calculating Absorbed Dose in Radiation Processing Applications	Kevin O'Hara
Vice Chair			Doug Weiss Mike Saylor

Membership Review: Please review the attached membership list (see Attachments A) and verify your personal information. You may see old information but please be patient with our membership and task group lists as we continue to transition the duties of our subcommittee secretary and we are having difficulties with software applications and releases. If you need any additions or changes to your membership information, please contact John Rickey at rickey@fwt.com.

Deadbeats List: Lists of members who have not voted in the past two and three ballots are issued from ASTM semi-annually and are subjected to periodic review. Members are reminded that failure to vote on three consecutive ballots will result in termination from Subcommittee E10.01 unless the E10 Executive Committee grants a waiver. All members are encouraged to review and send in ballots regularly. This ballot process is critical to the success of ASTM and the development of good standards.

Application for ASTM Membership: ASTM membership is not required for participation in subcommittee activities, but membership is needed in order to have a formal vote (and veto) when standards are balloted. The annual membership fee, the only fee required for participation, is \$75 per year. Please note that this membership fee for joining ASTM includes a free subscription to the monthly ASTM magazine Standardization News and a free volume of the Annual Book of ASTM Standards (normally costing \$210 US). The Annual Book of ASTM Standards includes 155 completed standards on various subjects, as well as all E10.01 published standards. Along with the benefits of membership comes the responsibility to actively participate by voting on all ballots issued by Subcommittee E10.01 and Committee E10. Failure to meet the responsibility for three consecutive ballots will usually result in declassification and eventually the removal from our rosters. We strongly encourage you to actively participate and have your views fully considered by becoming a voting member of ASTM International. If you are not already a member of ASTM, please contact Joe Koury at jkoury@astm.org for further information or an application form.

8. SPECIFIC ACTIONS ON STANDARDS

The status of the 39 standards produced and maintained by ASTM Subcommittee E10.01 is summarized in Tables 1-5 below. At present Subcommittee E10.01 is responsible for maintaining 25 ISO/ASTM Dosimetry standards, 5 ASTM Dosimetry standards, 2 new Dosimetry related standards, 6 Food Irradiation standards, and a Glossary of the terms used in the dosimetry standards. Updates on the activities of the active Task Groups are provided following the charts.

TABLE 1: SUMMARY OF STATUS OF THE 25 ISO/ASTM DOSIMETRY STANDARDS

STANDARD	NAME	TG	CHAIR	CO-CHAIRS	STATUS
ISO/ASTM 51204	Practice for Dosimetry in Gamma Irradiation Facilities for Food and Other Products (New Title)	B	Kim Morehouse	John Logar, Kishor Mehta, Rod Chu	Current edition approved June 30, 2004; published August 15, 2004. ISO electronic Systematic Review closed March 17, 2008. Decision was made to withdraw 51702 and include other products in 51204. See update following Table 1.
ISO/ASTM 51205	Practice for Use of a Ceric-Cerous Sulfate Dosimetry System	V	Rod Chu,	Adriana Uranga-Baker	New edition is being prepared for publication in March 2009.
ISO/ASTM 51261	Practice for Calibration of Dosimetry Systems for Radiation Processing (New Title)	R	Brad Lundahl	Peter Sharpe, Marc Desrosiers, Kevin O'Hara	Current edition approved January 22, 2002; published March 15, 2002. Being revised as major revision with title change. See update following Table 1.
ISO/ASTM 51275	Practice for Use of a Radiochromic Film Dosimetry System	U	John Rickey	Gary Pageau	Current edition approved April 5, 2004; published June 15, 2004. ISO electronic Systematic Review closed December 17, 2007. Being revised as a major revision. See update following Table 1.
ISO/ASTM 51276	Practice for Use of a Polymethylmethacrylate Dosimetry System	P	Roger Bett	Masaaki Takehisa, Paul Mellor	Current edition approved June 4, 2002; published December 15, 2002. Being revised as a major revision. See update following Table 1.
ISO/ASTM 51310	Practice for Use of a Radiochromic Optical Waveguide Dosimetry System	ee	John Rickey	Mike Saylor	Current edition approved April 5, 2004; published June 15, 2004. ISO electronic Systematic Review closed December 17, 2007. ASTM ballot for reapproval was affirmative. Waiting for ISO ballot.
ISO/ASTM 51400	Practice for Characterization and Performance of a High-Dose Radiation Dosimetry Calibration Laboratory	C	Gary Pageau	Paul Mellor, Marc Desrosiers, Kevin O'Hara	Current edition approved May 28, 2003; published July 15, 2003. ISO electronic Systematic Review closed December 15, 2008. See update following Table 1.
ISO/ASTM 51401	Practice for Use of a Dichromate Dosimetry System	D	Peter Sharpe	Rod Chu	Approved February 27, 2003; published July 15, 2003. ISO electronic Systematic Review closed December 15, 2008. See update following Table 1.
ISO/ASTM 51431	Practice for Dosimetry in Electron Beam and X-ray (Bremsstrahlung) Irradiation Facilities for Food Processing	A	Kishor Mehta	Marsh Cleland	Current edition approved October 1, 2004; published May 15, 2005. ISO electronic Systematic Review closed December 15, 2008. See update following Table 1.
ISO/ASTM 51538	Practice for Use of the Ethanol-Chlorobenzene Dosimetry System	Q	Dušan Razem	András Kovács	New edition is being prepared for publication in March 2009.
ISO/ASTM 51539	Guide for Use of Radiation-Sensitive Indicators	E	Mark Murphy	Tom Menezes	Current edition approved June 1, 2004; published May 15, 2005. ISO electronic Systematic Review closed December 15, 2008. See update following Table 1.
ISO/ASTM 51540	Practice for Use of a Radiochromic Liquid Dosimetry System	K	John Rickey	Mike Saylor	Current edition approved April 5, 2004; published June 15, 2004. ISO electronic Systematic Review closed December 17, 2007. ASTM

					ballot for reapproval was affirmative. Waiting for ISO ballot.
ISO/ASTM 51607	Practice for Use of the Alanine-EPR Dosimetry System	F	Marc Desrosiers	Dieter Regulla, Arthur Heiss, Albrecht Wieser	Current edition approved June 30, 2004; published August 15, 2004. The ISO electronic Systematic Review closed March 17, 2008. Being revised as a major revision. See update following Table 1.
ISO/ASTM 51608	Practice for Dosimetry in an X-ray (Bremsstrahlung) Facility for Radiation Processing	M	Marsh Cleland	Masaaki Takehisa, Olivier Gregoire	Current edition approved June 1, 2004; published May 15, 2005. ISO electronic Systematic review closed September 15, 2008. See update following Table 1.
ISO/ASTM 51631	Practice for Use of Calorimetric Dosimetry Systems for Electron-Beam Dose Measurements and Dosimeter Calibrations	H	Arne Miller	Fred Bateman, Mark Bailey	Current edition approved May 28, 2003; published July 15, 2003. ISO electronic Systematic Review closed December 15, 2008. See update following Table 1.
ISO/ASTM 51649	Practice for Dosimetry in an Electron Beam Facility for Radiation Processing at Energies between 300 keV and 25 MeV	T	Josef Mittendorfer	Marsh Cleland, Peter Baker	Current edition approved June 1, 2004; published May 15, 2005. ISO electronic Systematic Review closed December 15, 2008. See update following Table 1.
ISO/ASTM 51650	Practice for Use of a Cellulose Triacetate Dosimetry System	W	Masaaki Takehisa	Ryuichi Tanaka	Current edition approved June 1, 2004; published May 15, 2005. ISO electronic Systematic Review closed December 15, 2008. See update following Table 1.
ISO/ASTM 51702	Practice for Dosimetry in a Gamma Irradiation Facility for Radiation Processing	I	Rod Chu	Doug Harbrecht, Adriana Uranga-Baker	To be withdrawn. Decision was made to combine with 51204. See update on 51204 following Table 1.
ISO/ASTM 51707	Guide for Estimating Uncertainties in Dosimetry for Radiation Processing	G	Barry Fairand	Bruce Peterson, Rod Chu	Current edition approved June 1, 2004; published May 15, 2005. ISO electronic Systematic Review closed December 15, 2008. See update following Table 1.
ISO/ASTM 51818	Practice for Dosimetry in an Electron Beam Facility for Radiation Processing at Energies Between 80 and 300 keV	L	Gary Pageau	Doug Weiss, Marsh Cleland, Tom Menezes	New edition is being prepared for publication in March 2009. However, work has already started on preparing a new revision. See update following Table 1.
ISO/ASTM 51900	Guide for Dosimetry in Radiation Research on Food and Agricultural Products	Z	Kevin O'Hara	Kishor Mehta	New edition is being prepared for publication in March 2009.
ISO/ASTM 51939	Practice for Blood Irradiation Dosimetry	X	Kevin O'Hara	Art Heiss, Glenn Calvert	Current edition approved June 1, 2004; published May 15, 2005. ISO electronic Systematic Review closed December 15, 2008. See update following Table 1.
ISO/ASTM 51940	Guide for Dosimetry for Sterile Insect Release Programs	cc	Dave Lance	Kishor Mehta	Current edition approved June 30, 2004; published August 15, 2004. The ISO electronic Systematic Review closed March 17, 2008. See update following Table 1.
ISO/ASTM 51956	Practice for Use of Thermoluminescence Dosimetry (TLD) Systems for Radiation Processing	aa	Rod Chu	Dave Vehar	Current edition approved January 1, 2005; published May 15, 2005. ISO electronic Systematic review closed September 15, 2008. See update following Table 1.

ISO/ASTM 52116	Practice for Dosimetry for a Self-Contained Dry-Storage Gamma-Ray Irradiator	N	Paul Mellor	Kevin O'Hara	Current edition approved June 21, 2002; published December 15, 2002. ISO Systematic Review closed December 31, 2007. See update following Table 1.
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TASK GROUP A – ISO/ASTM 51431: Practice for Dosimetry in Electron Beam and X-Ray (Bremsstrahlung) Irradiation Facilities for Food Processing

Chair: Kishor Mehta **Co-Chairs:** Marsh Cleland

Update: This standard is up for review and action will be determined at the meeting in Vancouver this June. We are evaluating the possibility of combining this standard with 51608, Practice for Dosimetry in an X-Ray (Bremsstrahlung) Facility for Radiation Processing.

TASK GROUP B – ISO/ASTM 51204: Practice for Dosimetry in Gamma Irradiation Facilities for Food and Other Products

Chair: Kim Morehouse **Co-Chairs:** John Logar, Kishor Mehta

Update: The task group held another meeting at the Atlanta meeting this January and discussed keeping this standard (in lieu of withdrawal) and changing the title to reflect the merger with, then withdrawal of ISO/ASTM 51702, Practice for Dosimetry in a Gamma Irradiation Facility for Radiation Processing. Kim Morehouse has agreed to chair this new combined standard and lead the task group. This standard is targeted for ballot later this year.

TASK GROUP C – ISO/ASTM 51400: Practice for Characterization and Performance of a High-Dose Radiation Dosimetry Calibration Laboratory

Chair: Gary Pageau **Co-Chairs:** Paul Mellor, Marc Desrosiers and Kevin O'Hara

Update: Task Group C met in Atlanta and it was decided to suspend revision of 51400 until substantial completion of the 51261 revision in order to determine the technical material content needed for 51400 with an understanding that the 51261 final material content should be known before the June meeting.

TASK GROUP D – ISO/ASTM 51401: Practice for Use of a Dichromate Dosimetry System

Chair: Peter Sharpe **Co-Chair:** Rod Chu

Update: This standard is overdue and requires immediate action. If no action is taken this standard is up for withdrawal

TASK GROUP E – ISO/ASTM 51539: Guide for Use of Radiation Sensitive Indicators

Chair: Mark Murphy **Co-Chairs:** Tom Menezes

Update: This standards needs to start the 5-year review.

TASK GROUP F – ISO/ASTM 51607: Practice for Use of the Alanine-EPR Dosimetry System

Chair: Marc Desrosiers **Co-Chairs:** Dieter Regulla, Art Heiss, Albrecht Wieser

Update: This standard will begin its 5-year review and will undergo a major revision.

TASK GROUP G – ISO/ASTM 51707: Guide for Estimating Uncertainties in Dosimetry for Radiation Processing

Chair: Barry Fairand **Co-Chairs:** Bruce Peterson, Rod Chu

Update: This standard is undergoing preliminary review. A plan of action is being developed and will be decided on prior the meeting in Vancouver this June.

TASK GROUP H – ISO/ASTM 51631: Practice for Use of Calorimetric Dosimetry Systems for Electron-Beam Dose Measurements and Dosimeter Calibrations

Chair: Arne Miller **Co-Chairs:** Fred Bateman, Mark Bailey

Update: This standard requires action and is currently being reviewed by the chair. The plan is to start the revision this June in Vancouver.

TASK GROUP K – Standard ISO/ASTM 51540: Practice for Use of a Radiochromic Liquid Dosimetry System

Chair: John Rickey **Co-Chairs:** Mike Saylor

Update: This practice was submitted for reapproval on the December 2008 ballot. It passed with no negatives and two comments. It is out for ISO ballot. The Task Group will revisit this item soon after adoption of the draft standard E10.01-hh.

TASK GROUP L – ISO/ASTM 51818: Practice for Dosimetry in an Electron Beam Facility for Radiation Processing at Energies Between 80 and 300 keV

Chair: Gary Pageau **Co-Chairs:** Doug Weiss, Marsh Cleland and Tom Menezes

Update: The revised draft is being prepared for publication. However, work has also begun on additional revisions. Task Group L met in Atlanta to discuss the status of the recently approved 2008 version, which is being placed into an ISO format by ASTM. The Task Group has opened the document for revision actions based on significant new developments that now allow calibration in accordance with our published standard for calibration based on the new D_{μ} (average dose in first micron) method. Publication of the technical paper describing the D_{μ} method and its development background presented at the recent IMRP meeting is forthcoming. The Task Group continues the effort to distribute the technical information related to D_{μ} implementation to all Task Group members. Contact Gary Pageau (gpageau@gexcorp.com) to obtain copies of technical handouts and recent ASTM meeting presentations. The document revision effort has begun with the addition of three new Co-chairs: Michael Fletcher; Hans Wiegert; Jakob Helt-Hansen. Suggested changes will be presented and reviewed at the June meeting.

TASK GROUP M – ISO/ASTM 51608: Practice for Dosimetry in an X-ray (Bremsstrahlung) Facility for Radiation Processing

Chair: Marsh Cleland **Co-Chairs:** Masaaki Takehisa, Olivier Gregoire

Update: This standard is up for review and action will be determined at the meeting in Vancouver this June. We are evaluating the possibility of combining this standard with 51431, Practice for Dosimetry in Electron Beam and X-Ray (Bremsstrahlung) Irradiation Facilities for Food Processing.

TASK GROUP N – ISO/ASTM 52116: Practice for Dosimetry for a Self-Contained Dry-Storage Gamma-Ray Irradiator

Chair: Paul Mellor **Co-Chair:** Kevin O'Hara

Update: As part of the five-year review, the updated of ISO/ASTM 52116 was originally considered to be minor in nature; however, in order to harmonize this standard with other more-recently balloted standards (i.e. ISO/ASTM 51939), the resulting updated document required major changes. This current revision of ISO/ASTM 52116, Draft 4 is a complete document revision. This revision is the result of standard document structure changes within the E10.01 sub-committee. Minor feedback from the recent subcommittee ballot has been incorporated and the document has been submitted for DIS/E10 ballot in April, 2009.

TASK GROUP P – ISO/ASTM 51276: Practice for Use of a Polymethylmethacrylate Dosimetry System

Chair: Roger Bett **Co-Chairs:** Masaaki Takehisa, Paul Mellor

Update: This standard is undergoing its five-year Systematic Review, which is a major revision to accommodate the current general philosophy and to ensure compatibility with the top-tier standards. The format of this revised standard is to be adopted for the standards for the other routine dosimeter systems. Users and manufacturers of other systems have therefore actively participated in the revision, including in Denver and more recently in Atlanta. In Atlanta the task group went through the whole standard, revising things long since considered settled; and additionally incorporated input from the Japanese manufacturer Radix. We again looked in detail at the section concerning Routine Use. The task group asked the general meeting of E10.01 to consider and advise on the inclusion of two Appendices added in Denver, which respectively provided an example of a manufacturing process,

and a practical example of procedures for routine use. The general meeting decided to remove the appendices. The standard will be slightly modified to accommodate removal of the appendices, and will then be submitted for sub-committee ballot.

TASK GROUP R – ISO/ASTM 51261: Practice for Calibration of Dosimetry Systems for Radiation Processing

Chair: Brad Lundahl **Co-Chairs:** Peter Sharpe, Marc Desrosiers, Kevin O'Hara

Update: ASTM 1261 draft 4 was balloted and the ballot comments reviewed in the Atlanta meeting. A draft(5) was prepared and submitted for the Feb 23 ballot. It is the intent to run the document (draft 6) through the April ballot in advance of the June meeting where the April ballot comments will be reviewed.

TASK GROUP T – ISO/ASTM 51649: Practice for Dosimetry in an Electron Beam Facility for Radiation Processing at Energies between 300 keV and 25 MeV

Chair: Josef Mittendorfer **Co-Chairs:** Marsh Cleland, Peter Baker

Update: This standard is up for review and action will be determined at the meeting in Vancouver this June.

TASK GROUP U – ISO/ASTM 51275: Practice for Use of a Radiochromic Film Dosimetry System

Chair: John Rickey **Co-Chair:** Gary Pageau

Update: This standard is in its review stage. We expect major changes as the standard will be revised to account for draft standard E10.01-hh. The modifications are expected to be similar to those being made with the PMMA standard.

TASK GROUP W – ISO/ASTM 51650: Practice for Use of a Cellulose Triacetate Dosimetry System

Chair: Masaaki Takehisa **Co-Chairs:** Ryuichi Tanaka

Update: This standard is up for review and action will be determined at the meeting in Vancouver this June.

TASK GROUP X – ISO/ASTM 51939 Practice for Blood Irradiation Dosimetry

Chair: Kevin O'Hara **Co-Chairs:** Art Heiss, Glenn Calvert

Update: This standard is up for review and action will be determined at the meeting in Vancouver this June.

TASK GROUP aa – ISO/ASTM 51956: Practice for Use of a Thermoluminescence Dosimetry (TLD) System for Radiation Processing

Chair: Rod Chu **Co-Chairs:** Dave Vehar

Update: This standard is up for review and action will be determined at the meeting in Vancouver this June.

TASK GROUP cc – ISO/ASTM 51940: Guide for Dosimetry for Sterile Insect Release Programs

Chair: Dave Lance **Co-Chair:** Kishor Mehta.

Update: Task Group cc has been inactive since the publication of a revision of Guide 51940 in 2004 and did not convene at the E10.01 meeting in Atlanta in January. However, the task group is being re-activated as part of ISO/ASTM's review process, and a draft revision is in preparation. One major change in the Guide will be the incorporation of information regarding self-contained X-ray units, which are coming into vogue for insect irradiation.

TASK GROUP ee – ISO/ASTM 51310: Practice for Use of a Radiochromic Optical Waveguide Dosimetry System

Chair: John Rickey **Co-Chairs:** Mike Saylor

Update: This practice was submitted for reapproval on the December 2008 ballot. It passed with no negatives and two comments. It is out for ISO ballot. The Task Group will revisit this item soon after adoption of the draft standard E10.01-hh.

TABLE 2: SUMMARY OF STATUS OF THE 5 ASTM E10.01 DOSIMETRY STANDARDS

STANDARD	NAME	TG	CHAIR	CO-CHAIRS	STATUS
ASTM E 1026	Practice for Using the Fricke Reference-Standard Dosimetry System	Y	Kevin O'Hara	Peter Sharpe	Current edition approved January 1, 2004; published February 2004. Due for 5-year ASTM Systematic Review. See update following Table 2.
ASTM E 2232	Guide for Selection and Use of Mathematical Methods for Calculating Absorbed Dose in Radiation Processing Applications	dd	Kevin O'Hara	Doug Weiss, Mike Saylor, Bruce Peterson	Current edition approved September 10, 2002; published November 2002. Being revised as major revision. See update following Table 2.
ASTM E 2303	Guide for Absorbed-Dose Mapping in Radiation Processing Facilities	S	Gary Pageau	Glenn Calvert, Bruce Peterson	Current edition approved July 10, 2003; published August 2003. Due for 5-year ASTM Systematic Review. See update following Table 2.
ASTM E 2304	Practice for Use of a LiF Photo-Fluorescent Film Dosimetry System	gg	Mark Murphy	András Kovács	Current edition approved July 20, 2003; published October 2003. Due for 5-year ASTM Systematic Review. See update following Table 2.
ASTM E 2381	Guide for Dosimetry in Radiation Processing of Fluidized Beds and Fluid Streams	bb	Denise Cleghorn	Doug Weiss	Current edition approved June 1, 2004; published July 2004. Due for 5-year ASTM Systematic Review. See update following Table 2.

Task Group Y – ASTM E 1026: Practice for Using the Fricke Reference-Standard Dosimetry System**Chair:** Kevin O'Hara **Co-Chairs:** Peter Sharpe**Update:** This standard is up for review and action will be determined at the meeting in Vancouver this June**Task Group dd – ASTM E 2232: Guide for Selection and Use of Mathematical Methods for Calculating Absorbed Dose in Radiation Processing Applications****Chair:** Kevin O'Hara **Co-Chairs:** Doug Weiss, Mike Saylor, Bruce Peterson**Update:** Doug continues to be involved in this important standard, but does not have the time to continue as the chair. Kevin O'Hara and Mike Saylor have volunteered as Chair and Co-Chair, respectively. Doug Weiss and Bruce Peterson will act as Co-Chairs. This standard, currently in its first five-year review, has had a number of references added to the already extensive list of references. Following the January 2009 meeting, the updated document has been sent to all TG members for review. We plan to submit the updated draft for the May 2009 E10.01 ballot.**Task Group S – ASTM E 2303: Guide for Absorbed-Dose Mapping in Radiation Processing Facilities****Chair:** Gary Pageau **Co-Chairs:** Glenn Calvert, Bruce Peterson**Update:** Task Group S met in Atlanta and reviewed the combined list of revision comments. Co-chair, Glenn Calvert agreed to prepare an initial draft based on the combined comments that would be posted to the ASTM site and be made available to all task group members for review and comment. The full Task Group comments would provide the basis for a revision draft to go to Sub-committee ballot and the results to be reviewed and discussed at our June meeting.**Task Group gg – ASTM E 2304: Practice for Use of a LiF Photo-Fluorescent Film Dosimetry System****Chair:** Mark Murphy **Co-Chairs:** András Kovács**Update:** Action on this standard is overdue. Action will be needed or this standard will be withdrawn.

Task Group bb – ASTM E 2381: Guide for Dosimetry in Radiation Processing of Fluidized Beds and Fluid Streams

Chair: Denise Cleghorn **Co-Chairs:** Doug Weiss

Update: This standard is requiring ballot action. The chair is evaluating the best path, re-approval or revision, for this standard. A work item will be initiated and a path decided by the Vancouver meeting this June.

Addition of ASTM dosimetry standards to the group of 25 ISO/ASTM Dosimetry Standards: The new procedures for the addition of closely related dosimetry standards for which there is no counterpoint in ISO to the ISO/ASTM pilot project were finalized at the ISO/TC85/WG3 meeting in Orlando in June 2008. The new procedures (ISO/TC 85 Document N 1009) allow ASTM to submit published ASTM E10.01 standards to ISO/TC 85 for adoption as ISO/ASTM standards. The ASTM standard will be balloted by ISO/TC 85 as a Draft International Standard (DIS).

When the new standards E10.01-hh and E10.01-ff are published, they will be the first ASTM standards to be submitted to ISO/TC 85. The present 5 ASTM E10.01 dosimetry standards are being reviewed and will be submitted after the revised versions are published.

TABLE 3: SUMMARY OF STATUS OF THE DOSIMETRY STANDARDS BEING DEVELOPED BY ASTM E10.01

STANDARD	NAME	TG	CHAIR	CO-CHAIRS	STATUS
E10.01-J	Practice for Use of a Label Dosimetry System	J	Mark Murphy	Zbigniew Zagorski, Gary Pageau	No recent progress.
E10.01-ff	Guide for Performance Characterization of Routine Dosimeters for Use in Radiation Processing	ff	Rod Chu	Glenn Calvert, Kishor Mehta	See update following Table 3.
E10.01-hh	Practice for Use of a Dosimetry System	hh	Peter Sharpe	Arne Miller, Brad Lundahl, Rod Chu	See update following Table 3.

TASK GROUP ff – Draft Standard E10.01-ff: Guide for Performance Characterization of Routine Dosimeters for Use in Radiation Processing

Chair: Rod Chu **Co-Chairs:** Glenn Calvert, Kishor Mehta

Update: Draft 18, balloted by E10.01 in December 2008, received 1 negative vote (withdrawn at Atlanta meeting) and a number of comments. These comments were discussed in Atlanta and the Chair prepared a new preliminary draft incorporating the changes agreed at the Atlanta meeting. This draft was circulated to the Task Group ff members and other E10.01 members for review. Any new comments will be considered and Draft 19 will be prepared for the combined E10/E10.01 Committee/Subcommittee Ballot in April.

TASK GROUP hh – Draft Standard E10.01-hh: Practice for Use of a Dosimetry System in Radiation Processing

Chair: Peter Sharpe **Co-Chairs:** Arne Miller, Brad Lundahl, Rod Chu

Update: (Update information to be provided by Peter Sharpe)

TABLE 4: SUMMARY OF STATUS OF TASK GROUP O TERMINOLOGY

STANDARD	NAME	TG	CHAIR	CO-CHAIRS	STATUS
E10.01-O	Terminology Pertaining to Radiation Measurements and Dosimetry	O	Kishor Mehta	Roberto Uribe, Marsh Cleland	See update following Table 4.

Task Group O (Terminology pertaining to radiation measurements and dosimetry)

Chair: Kishor Mehta **Co-chairs:** Robert Uribe, Marsh Cleland

Update: The latest balloted version of the E10.01 Glossary was distributed to all of the E10.01 Task Group chairs. The chairs are to ensure their draft standards have the most up to date definitions included in their standard.

TABLE 5: SUMMARY OF STATUS OF ASTM E10.01 FOOD IRRADIATION STANDARDS

STANDARD	NAME	TG	CHAIR	CO-CHAIRS	STATUS
E 2449	Guide for Irradiation of Pre-packaged Processed Meat and Poultry Products to Control Pathogens and Other Microorganisms	ii	Chris Sommers	John Logar	Current edition approved June 1, 2005; published July 2005.
F 1355	Guide for Irradiation of Fresh Agricultural Produce as a Phytosanitary Treatment	jj	Ian Winborne	John Logar	Current edition approved January 1, 2006; published February 2006.
F 1356	Guide for the Irradiation of Fresh and Frozen Red Meat and Poultry to Control Pathogens and Other Microorganisms	kk	Kim Morehouse	Chris Sommers	Current edition approved January 1, 2008; published February 2008
F1640	Guide for Packaging Materials for Food to be Irradiated	ll	Kim Morehouse	Open	Current edition approved February 1, 2009; published March 2009
F1736	Guide for Irradiation of Finfish and Aquatic Invertebrates Used as Food to Control Pathogens and Spoilage Microorganisms	mm	Kim Morehouse	John Logar	Current edition approved February 1, 2009; published March 2009.
F1885	Guide for Irradiation of Dried Spices, Herbs, and Vegetable Seasonings to Control Pathogens and Other Microorganisms	nn	Kim Morehouse	John Logar	Current edition approved January 1, 2004; published February 2004. See update following Table 5.

TASK GROUP ll – ASTM F1640: Guide for Selection and Use of Packaging Materials for Food to be Irradiated

Chair: Kim Morehouse **Co-Chairs:** John Logar

Update: The standard passed con-current ballot last December and the new version was published in February 2009.

TASK GROUP mm – ASTM F1736: Guide for Irradiation of Finfish and Aquatic Invertebrates Used as Food to Control Pathogens and Spoilage Microorganisms

Chair: Kim Morehouse **Co-Chairs:** John Logar

Update: The standard passed con-current ballot last December and the new version was published in February 2009.

TASK GROUP nn – ASTM F1885: Guide for Irradiation of Dried Spices, Herbs, and Vegetable Seasonings to Control Pathogens and Other Microorganisms

Chair: Kim Morehouse **Co-Chairs:** John Logar

Update: The standard passed con-current ballot last December and the new version was published in February 2009.

9. ISO UPDATES – Rod Chu

ISO Systematic Review ISO, through a resolution adopted by its Technical Management Board, has introduced electronic Systematic Review where each standard that is 3 years old or older is

automatically balloted for re-approval, revision, or withdrawal. In the 5-month ballot, member states are asked to reply to a set of questions. The latest ISO Systematic Review ballot results are shown below.

ISO Systematic Review Ballot July 15, 2008 to December 15, 2008	P-Members Voting	Confirm	Revise/Amend	Withdraw
ISO/ASTM 51400:2003 Practice for Characterization and Performance of a High-dose Radiation Dosimetry Calibration Laboratory	8	6	2	0
ISO/ASTM 51401:2003 Practice for Use of a Dichromate Dosimetry System	8	6	2	0
ISO/ASTM 51431:2005 Practice for Dosimetry in Electron Beam and X-Ray (Bremsstrahlung) Irradiation Facilities for Food Processing	8	6	2	0
ISO/ASTM 51539:2005 Practice for Use of Radiation-Sensitive Indicators	8	6	2	0
ISO/ASTM 51631:2003 Practice for Use of Calorimetric Dosimetry Systems for Electron Beam Dose Measurements and Dosimeter Calibrations	8	6	2	0
ISO/ASTM 51650:2005 Practice for Use of a Cellulose Triacetate Dosimetry System	8	6	2	0
ISO/ASTM 51707:2005 Guide for Estimating Uncertainties in Dosimetry for Radiation Processing	8	6	2	0
ISO/ASTM 51939:2005 Practice for Blood Irradiation Dosimetry	8	6	2	0

ISO/TC 85 Nuclear Energy

In addition to ISO/TC 85 WG 3, Dosimetry for Radiation Processing, ISO/TC 85 has other Working Groups and Subcommittees that are producing standards on radiation protection, nuclear fuel technology, and reactor technology that may be of interest to E10.01 members. Subcommittee 2, Radiation Protection, will be meeting at the IAEA from April 6-9. During the same week, WG 1, Terminology, Definitions, Units and Symbols, will be meeting to discuss the production of a new vocabulary on nuclear energy. The first part, being developed in Vienna, is Nuclear Energy – Vocabulary – Part 1: Radiation Protection. This will contain all terms used in the ISO Radiation Protection standards.

To ensure that the E10.01 Glossary and E170 are harmonized with the vocabulary being produced by ISO/TC 85 WG1, Kishor Mehta and Rod Chu will be attending the WG1 Vienna meeting as Working Group members from Austria and Canada, respectively.

ISO/TC 34 WG 10 Food Irradiation

ISO/TC 34 WG 10 met at BSI in London on September 18-19, to review the comments provided with the balloting of the Working Draft, ISO/WD 22008, Food irradiation – Requirements for the development, validation, and routine control of the ionizing radiation process used for the treatment of food products. All comments were reviewed and a new draft was prepared for ISO ballot as a Committee Draft (CD). ISO/CD 22008 was circulated for balloting on January 1, 2009 with a closing date of April 1, 2009.

10. PRIOR MEETINGS OF SUBCOMMITTEE E10.01

For those members of Subcommittee E10.01 with a taste for nostalgia, what follows is a listing of former meeting sites.

Jan-84	San Diego, CA	Sep-92	Beijing	Oct-00	San Diego, CA
Jun-84	Williamsburg, VA	Jan-93	San Antonio, Texas	Jan-01	Reno, Nevada
Jan-85	Reno, Nevada	May-93	Jackson, Wyoming	Mar-01	Avignon, France
Jun-85	Toronto, Ontario	Jan-94	San Francisco, CA	Jun-01	Norfolk, Virginia
Jan-86	New Orleans, LA	Jun-94	Sun Valley, Idaho	Jan-02	Dallas, Texas
Jun-86	Seattle, Washington	Sep-94	Istanbul	Jun-02	Tucson, Arizona
Jan-87	Tampa, Florida	Jan-95	Phoenix, Arizona	Jan-03	Albuquerque, NM
May-87	Jackson, Wyoming	Jun-95	Denver, Colorado	Jun-03	Denver, Colorado
Jan-88	Albuquerque, NM	Oct-95	Ste-Adèle, Québec	Sep-03	Chicago, Illinois
Jun-88	Andover, MA	Jan-96	Atlanta, Georgia	Jan-04	Tampa, Florida
Jan-89	Orlando, Florida	Jun-96	Hyannis, MA	Jun-04	Boston, Massachusetts
Apr-89	Noordwijkerhout	Jan-97	New Orleans, LA	Sep-04	Ste-Adele, Quebec
Jun-89	Gaithersburg, MD	Jun-97	W. Conshohocken, PA	Jan-05	Atlanta, GA
Oct-89	Ste-Adèle, Québec	May-97	Anaheim, California	Jun-05	Jackson Hole, Wyoming
Jan-90	Las Vegas, Nevada	Jan-98	San Diego, California	Feb-06	Phoenix, Arizona
Jun-90	Pinawa, Manitoba	Jun-98	Seattle, Washington	Mar-06	Kuala Lumpur, Malaysia
Nov-90	Vienna, Austria	Nov-98	Vienna	Jun-06	Ottawa, Canada
Jan-91	San Diego, CA	Jan-99	San Antonio, Texas	Jan-07	Anaheim, California
Jun-91	Cape Cod, MA	Mar-99	Melbourne	Jun-07	Norfolk, VA
Oct-91	College Park, MD	Jun-99	Vancouver	Jan-08	Tampa, Florida
Jan-92	Gainesville, FL	Jan-00	New Orleans, LA	Jun-08	Denver, CO
Jun-92	Denver, Colorado	Jun-00	Williamsburg, VA	Jan-09	Atlanta, GA

11. FUTURE MEETINGS

Dates: June 14-17, 2009: Vancouver BC Canada

Location: Fairmount Hotel, - Vancouver, Vancouver, BC CANADA

Event Name: June 2009 Committee Week

Dates: October 4th – 8th, 2009

Location: Ettlingen, Germany

Event Name: 6th International Workshop on Radiation Dosimetry

Dates: Sunday January 24, 2010 - Wednesday January 27, 2010

Location: Grand Hyatt San Antonio; San Antonio, TX

Event Name: January 2010 Committee Week

Dates: Sunday June 6, 2010 - Wednesday June 9, 2010

Location: Renaissance Hotel, St. Louis, MO

Event Name: June 2010 Committee Week

Dates: Sunday January 30, 2011 - Wednesday February 2, 2011

Location: Marriott Hotel, Baltimore, MD

Event Name: January 2011 Committee Week

Dates: Sunday June 11th – Wednesday 14th, 2011

Location: Marriott Anaheim, Anaheim, CA

Event Name: June 2011 Committee Week

INDUSTRY UPDATES

1. ACTIONS BY AAMI AND ISO/TC 198/WG2 RADIATION STERILIZATION WORKING GROUPS

Jeff Martin, AAMI Liaison with ASTM

The AAMI Radiation Sterilization Working Group met on Tuesday December 9th from 9:00 am to 3:00 pm in the Westin Arlington Gateway hotel in Arlington, VA. Topics at the meeting included:

- Status of ISO/CD 11137-2, Sterilization of health care products -- Radiation -- Part 2: Establishing the sterilization dose
- Status of the ISO NWIP to develop a new ISO Technical Specification to expand the doses that can be selected for VDmax Dose Substantiation defined in ISO/AAMI/ANSI 11137-2
- Report of the December meeting of ISO/TC 198/WG 2, Radiation sterilization
- Status of development of a guidance document, Establishing Process Equivalency in Cobalt 60 Radiation Sterilization Facilities
- Decision on the periodic review of: AAMI TIR29:2002, Guide for process control in radiation sterilization; and AAMI TIR33:2005, Sterilization of health care products - Radiation sterilization -Substantiation of a selected sterilization dose - Method VDmax
- Consideration of comments on AAMI CDV-1 TIR (ST02)2, Radiation Dose Setting for Low Bioburden products utilizing a Modified Method 2 (See Doc. STWG02 N085 for the draft. Votes were due on 17 November 2008)

The next meeting is set for Wednesday June 10th, 2009. A copy of the agenda can be found on the AAMI website. If you have any questions or comments on AAMI activities please contact Jeff Martin at jeffrey.martin@alconlabs.com.

2. INTERNATIONAL COMMISSION ON RADIATION UNITS AND MEASUREMENTS (ICRU)

Rod Chu, Chair of Report Committee on Dosimetry Systems for Use in Radiation Processing

ICRU Report 80, Dosimetry Systems for Use in Radiation Processing, was published by Oxford University Press in the Journal of the ICRU Volume 8 No. 2 in December 2008. The Report Committee was chaired by Rod Chu and was sponsored by Mitio Inokuti (Argonne National Laboratory) and Stephen Seltzer (NIST). The other Report Committee members were Peter Sharpe, Arne Miller and Bill McLaughlin. Assisting the Report Committee were nine consultants, many of who are E10.01 members.

From its inception, the ICRU has produced publications on the measurement of absorbed dose for radiation research and applications such as radiation protection, medical diagnosis, and radiation therapy. However, this Report is the first ICRU publication to characterize in considerable detail the dosimetry systems developed and used in radiation-processing applications. The ICRU recognized that ASTM Subcommittee E10.01 and other organizations produced a number of standards and guidelines dealing with dosimetry for use in radiation processing. However, the ICRU assessed the coverage of these existing documents and identified the need for a more fundamental treatment of the subject. As a result, the ICRU Report Committee was established and charged with this task. The report was to complement the work of other bodies by providing a solid scientific background for radiation dose measurements at the levels required for radiation processing.

The report begins with a brief description of the main radiation-processing applications using photon- or electron-beam irradiations, the dosimetry performed for these applications, and the traceability of these absorbed-dose measurements to standards maintained by national laboratories. The properties of nine dosimetry systems, some reference standard dosimetry systems and some used for routine monitoring, are then examined in detail. The descriptions include the reaction mechanisms and the historical background leading to the present systems. Some additional dosimetry systems now in use and some potential new systems are described in less detail.

The ICRU dedicated this Report to the memory of Bill McLaughlin, acknowledging Bill's work in forming the basic foundation for the field of radiation-processing dosimetry and his keen insight and constant search for

new systems that was an encouragement to many developers of dosimetry systems. All members of E10.01 who desire a deeper understanding of the scientific basis for radiation-processing dosimetry are encouraged to obtain a copy of the report. Information for obtaining this Report can be found at <http://jicru.oxfordjournals.org>.

3. RADIATION PROCESS SIMULATION AND MODELING USER GROUP (RPSMUG)

Kevin O'Hara, President, RPSMUG

Our last meeting was held at the IAEA in Vienna in November, 2008. The gamma benchmarking experiment was completed at the Canadian Irradiation Centre in Laval, Québec using Alanine dosimetry. Point Kernel codes were run, and results were given at the November meeting. Josef Mittendorfer has released a detailed report on the e-beam benchmarking task, and this report was a focal point at the November meeting. E-beam benchmarking efforts were performed using IBA Rhodotron single-sided e-beam exposures on test phantom at Mediscan. Benchmark modeling included EGS, MCNPX and GEANT. In addition to the CIC gamma benchmark, Kevin O'Hara has completed the design of the hypothetical Co-60 irradiator, and modeling has been completed using a Point Kernel algorithm and MCNP. We will pursue independent MCNP, ITS, PK Master and MCBEND and RANKERN calculations. RPSMUG now has a "members only" section. This section contains a Library of papers and presentations, and will also contain the results of the electron and gamma benchmarking. We invite everyone to visit the RPSMUG website (www.rpsmug.org), and to consider joining our group. The e-beam (and much of the gamma) benchmarking exercises will be published in detail in 2009.

4. THE COUNCIL ON IONIZING RADIATION MEASUREMENTS AND STANDARDS (CIRMS)

Roberto Uribe, IAME Chair

The CIRMS meeting in 2008 took place on October 6 to the 8 at the NIST Campus in Gaithersburg, MD. The main theme of this year's meeting was about "Radiation Measurements and Standards at the Molecular Level". The meeting was organized with plenary sessions in the mornings and breakout sessions in the afternoons. The plenary sessions included talks about Radiation Biology, the effects of radiation in cells and bacteria, the activities of FDA related to radiation measurements and standards, and the effect of transuranium elements radiation in the tissue dose of radiation workers. There was also a panel session on the National Academy of Science Report, "Radiation Source Use and Replacement". The Industrial Applications break out sessions included a session on Molecular Biological Dosimetry, as well as effects of radiation in molecules and bacteria. There were also presentations devoted to applications in food, low energy electron beams and the synthesis of nano-hydrogels using radiation. The 2009 CIRMS meeting will take place the third week of October of this year from the 22nd to the 24th at the NIST campus in Gaithersburg Maryland, USA. At the present time there is no decision yet on the theme for the meeting. If you need further information regarding CIRMS activities please contact Roberto M. Uribe at ruribe@kent.edu.

5. INTERNATIONAL IRRADIATION ASSOCIATION (iiA)

Ruth Brinston, iiA Association Manager

To receive a copy of the iiA Newsletter or for more information please contact Ruth Brinston, iiA Manager at ruth.brinston@doubleia.org or visit their growing website at <http://www.doubleia.org>

6. THE PANEL ON GAMMA and ELECTRON BEAM IRRADIATION

Mark Bailey, Secretary

The Irradiation Panel had a busy year in 2008 leading up to IMRP in London in September, and since then at the AGM in February John Woolston stood down as Chairman after completing his maximum four years. Cathie Deeley (REVISS plc) has now taken on the role of Chairman. The Microbiology Working Group is working on a document aiming to give some guidance on meaningful warning and action limits on routine bioburden measurements; there is strong evidence that the log-normal distribution is generally applicable to the statistics of microbiological populations, allowing as it does for the inclusion of "spikes". The Dosimetry Working Group is now working towards the next Dosimetry Course in 2010, and a Dosimetry Comparison

exercise at the end of 2009/start of 2010, and of course the upcoming ASTM Dosimetry Workshop in October 2009. The Modeling Working Group, now having completed the main work on comparisons of different Monte Carlo codes apart from the final reporting due by May, will now revert to the Dosimetry Working Group whence it came. The Food Irradiation Working Group continues to work towards a draft of ISO 22008 on Food Irradiation, which is consistent with the Codex Alimentarius and with ISO 11137. The draft standard continues to progress in that positive direction. The next meetings of the Panel will be on 13th May, hosted by Isotron at Birmingham International airport, UK, and then on 16th September, hosted by Aérial in Strasbourg, France. For additional information, please visit www.irradiationpanel.org or contact Mark Bailey at mark.bailey@npl.co.uk for more information regarding The Panel activities.

7. COURSES AND WORKSHOPS

Canadian Irradiation Centre (CIC):

CIC is a training centre operated as a joint venture by MDS Nordion and the Université du Québec, Institut Armand-Frappier (IAF). The CIC's objectives are to develop, demonstrate and promote radiation processing and its diverse applications by: conducting applied research; training technical, professional and scientific personnel; educating industry and government; demonstrating operational and scientific procedures; developing processing procedures and standards; performing product and market acceptance trials. Courses include: Radiation Safety in Industrial Irradiator Operations, Industrial Irradiator Operator Course, Radiation Safety Officer (Industrial Irradiator), Advanced Industrial Irradiation Dosimetry, Irradiation Facility Management Course, Irradiator Technology for Inspectors, Radiation Safety Officer (Research Irradiator), Radiation Safety Review for Operators, Basic Industrial Irradiation Dosimetry and Food Irradiation Seminars. Visit http://www.mdsnordion.com/cic/docs/Course_2009.pdf for the 2009 course calendar.

GEX Corporation:

GEX 2009 Hands-On Workshop Schedule

GEX is pleased to announce that their next scheduled 3-day Hands-On Dosimetry Workshop will be April 7-9, 2009. GEX received several requests to add another 3-day workshop later in 2008 as well. Contact Mike Pageau (mpageau@gexcorp.com) or 303-400-9640 if you are interested in a possible winter workshop. GEX will not schedule a fall workshop in 2009 in the hope that everyone can consider the participation in the ASTM Workshop in Germany for his or her alternative. Information and an overview of the GEX Dosimetry Workshop is found at: http://www.gexcorp.com/GEX_educ.html. For more information visit www.gexcorporation.com or contact Mike Pageau at 303-400-9640 or mpageau@gexcorp.com.

International Meeting on Radiation Processing (IMRP) 2008

IMRP 2008 was held at the Riverbank Park Plaza Hotel in London England from the 21st – 25th of September last year. The conference was very successful and attracted over 400 participants and more than 120 posters were presented. Two workshops were held on the 4th day of the conference, one on Advanced Dosimetry and one on Combination Products. The next IMRP will be hosted in Canada in June 2011.

KENT STATE UNIVERSITY

A Design of Experiments course under the Master of Technology (MT) degree in the College of Technology has been offered during the last two semesters as a Special Topics class. Given the interest of students in the graduate program for this subject, the course will be proposed as a regular course within the MT. This course is being offered in the spring of 2009. The course covers material related to some standards developed by subcommittee E10.01, including, basic statistical models, introduction to ANOVA, dealing with nuisance factors, design of experiments including factorial designs, and fractional factorial designs. Some projects related to Radiation Processing have been suggested to the students as part of the requirements for this course. People interested in more information about these courses please contact Dr. Roberto Uribe at ruribe@kent.edu.

RISO COURSES

Validation and Process Control for Electron Beam Sterilization

Risø High Dose Reference Laboratory Risø - DTU, Technical University of Denmark DK 4000 Roskilde, Denmark

The Risø course on "Validation and process control for electron beam sterilization" provides the background for understanding the requirements of the international radiation sterilization standard EN ISO 11137 with focus on the dosimetric aspects of the electron beam sterilization as required in IQ/OQ (Installation / Operational Qualification), PQ (Performance Qualification) and Routine monitoring and Process Control.

This course is focused on high energy (1-10 MeV) electron beam radiation sterilization. The next courses are scheduled for May 11-15 and September 7-11, 2009.

We have recently designed courses specifically for users of low-energy electron sterilization. 100-300 keV electrons are increasingly used for sterilization, and we offer a course that addresses the special problems of dosimetry in this energy range. One course was arranged March 16-18, 2009. Next one will be in 2010 - or as dictated by need.

For information contact Arne Miller, Risø National Laboratory, DK 4000 Roskilde, Denmark.

E-mail: arne.miller@risoe.dk or contact him at +45 4677 4224. Also, please visit http://www.risoe.dk/business_relations/Products_Services/supplementary_training/NUK_electron_beam_sterilization.aspx for more information.

8. UPCOMING EVENTS in the RADIATION PROCESSING INDUSTRY

From the iiA newsletter

- MEDTEC Japan, Pacifico Yokohama, JAPAN April 7-8, 2009
- 2009 GEX Dosimetry Workshop, Denver, CO, USA April 7-9, 2009
- United Fresh 2009, Sands Mega Center, Las Vegas, NV USA April 21-24, 2009
- MEDTEC France, Micropolis Exhibition Centre, Basancon, FRANCE April 22-23, 2009
- MDS Nordion CIC Radiation Safety Officer, Industrial Irradiators, Montreal, QC CANADA April 27 - May 1, 2009
- IAEA, Accelerator Applications Conference, Vienna, AUSTRIA, May 4-8, 2009
- RISO Validation and Process Control for Electron Beam Sterilization, Roskilde DENMARK May 11-15, 2009
- Panel on Gamma & Electron Irradiation tbd, Europe, May 13, 2009
- AAMI/ST, Sterilization Standards Committee, US TAG for ISO/TC 198, Baltimore, Maryland, USA June 8-10, 2009
- FAO/IAEA Symposium on Sustainable Improvement of Animal Production and Health, Vienna, AUSTRIA June 8-11, 2009
- MD&M East, New York, NY, USA June 8-11, 2009
- ASTM Radiation Processing Dosimetry Applications, Hyatt Regency Vancouver, BC CANADA June 15-17, 2009
- MDS Nordion Basic & Advanced Dosimetry Courses, Montreal, QC CANADA June 15-19, 2009
- AAPS National Biotechnology Conference, Seattle, Washington, USA June 21-24, 2009
- ANTEC 2009 Society of Plastic Engineers, McCormick Place, Chicago, IL, USA June 22-26, 2009
- IAFP International Association for Food Protection, Annual Meeting, Grapevine, Texas, USA July 12-15, 2009
- IEEE Nuclear and Space Radiation Effects Conference, Hilton Quebec City, CANADA July 20-24, 2009

- Joint FAO/ IAEA Development of Generic Irradiation Doses for Quarantine Treatments, Vienna, AUSTRIA July 27-31, 2009
- RISO Validation and Process Control for Electron Beam Sterilization, Roskilde, DENMARK September 7-11, 2009
- MEDTECH China, INTEX Shanghai, CHINA September 8-10, 2009
- IAEA General Conference, Vienna, AUSTRIA September 14-18, 2009
- Panel on Gamma & Electron Beam UK, September 23, 2009
- MEDTEC Ireland, Radisson SAS Hotel, Galway, IRELAND September 23-24, 2009
- China Food Safety, Landmark Towers and Hotel, Beijing, CHINA September 24-25, 2009
- 6th International Workshop on Dosimetry for Radiation Processing, Schloss Ettlingen Castle, Karlsruhe, GERMANY, October 4-8, 2009
- MDS Nordion CIC Facility Management, Montreal, CANADA October 19-23, 2009
- MD&M Minneapolis, MD USA October 20-22, 2009
- AAMI Sterilization Standards Committee, U.S. TAG for ISO/TC 198, Westin Arlington VA USA November 16-18, 2009

9. BOOKS and JOURNALS OF INTEREST IN RADIATION PROCESSING

1. To obtain a printed copy of *ICRU Report 80, Dosimetry Systems for Use in Radiation Processing*, you need to purchase an individual subscription for the Journal of the ICRU for the year 2008 for \$200 (US dollars). This subscription will give the purchaser both reports published in 2008 - ICRU 80 and ICRU 79, Receiver Operating Characteristic Analysis in Medical Imaging. Back issues up to ICRU 79 can be purchased as individual reports for \$192. ICRU 80 cannot yet be purchased as a back issue, but there will only an \$8 cost saving when it is available as a back issue. The form for ordering the report can be obtained from the website <http://jicru.oxfordjournals.org>.
2. The book, "Radiation Sterilization for Health Care Products: X-Ray, Gamma, and Electron Beam" by Barry Fairand, is available from CRC Press at www.crcpress.com. This book addresses the critical elements of the technology including chapters on basic principles, dosimetry, effects of radiation, irradiators, process validation, processing with irradiators and commercial aspects.
3. The IAEA has completed a new publication on food irradiation dosimetry (*Dosimetry for Food Irradiation*, IAEA, Vienna, 2002, Technical Report Series no.409). It is available without cost at http://www-pub.iaea.org/MTCD/publications/PDF/TRS409_scr.pdf

This book is the 2nd edition of K.H. Chadwick, D.A.E. Ehlermann and W.L. McLaughlin, Manual of Food Irradiation Dosimetry, International Atomic Energy Agency, Vienna, 1977, Techn. Reports Series no.178, which is referenced in many ASTM-standards on food irradiation and on dosimetry. It had been out of stock for years, and the 2nd edition is a complete up-date.

The new edition had been drafted by I. de Bruyn, R. Chu, D.A.E. Ehlermann, W.L. McLaughlin, P. Thomas; D.A.E. Ehlermann incorporated materials from other contributors and from IAEA staff members, and finally K. Mehta revised and edited the document for printing as IAEA Technical Report. The 1977 edition which was the first of its kind had not become obsolete in its contents; however, during those 25 years substantial material had been published in separate textbooks and in ASTM-standards, and hence, detailed description of a range of dosimetry systems could be omitted. Instead the focus is on irradiator design concepts, process validation, facility operation, process control and the contribution of dosimetry and dosimetry systems.

4. The book, "Food Irradiation Research and Technology" is published by Blackwell Publishing and currently available. It is edited by Christopher H. Sommers (United States Department of Agriculture - Agricultural Research Service) and Xuetong Fan (United States Department of Agriculture - Agricultural Research

Service. This book is now undergoing its first revision. The targeted publishing date for the first revision will be 2010.

The benefits of food irradiation to the public health have been described extensively by organizations such as the Centers for Disease Control and Prevention in the U.S. and the World Health Organization. The American Medical Association and the American Dietetic Association have both endorsed the irradiation process. Yet the potential health benefits of irradiation are unknown to many consumers and food industry representatives who are wary of irradiated foods due to myth-information from "consumer-advocate" groups.

ASTM colleagues Marsh Cleland, Kishor Mehta, C. Sommers, J. Maxim, Robert Griffin and Kevin O'Hara have helped with the book. Visit <http://www.blackwellpublishing.com/book.asp?ref=0813808820&site=34> for more information.

5. The IAEA has a publication on gamma irradiators (Gamma Irradiators for Radiation Processing, IAEA booklet, 40 p July 2005) available free from: Head, Industrial Applications and Chemistry Section, International Atomic Energy Agency, Wagramer Strasse 5, Vienna A-1400, Austria; Website address: '<http://www-naweb.iaea.org/napc/iachem/Brochgammairradd.pdf>'

The radiation technology is one of the most important fields which the IAEA supports and promotes, and has several programmes that facilitate its use in the developing Member States. In view of this mandate, this Booklet on "Gamma Irradiators for Radiation Processing" is prepared which describes variety of gamma irradiators that can be used for radiation processing applications. It is intended to present description of general principles of design and operation of the gamma irradiators available currently for industrial use. It aims at providing information to industrial end users to familiarise them with the technology with the hope that the information contained here would assist them in selecting the most optimum irradiator for their needs. Correct selection affects not only the ease of operation but also higher efficiency and thus improved economy. It is also intended for promoting radiation processing in general to governments and general public.

The Booklet is prepared by the IAEA's Industrial Applications and Chemistry Section, Division of Physical and Chemical Sciences with the assistance provided by consultant Mr. Kishor Mehta. The IAEA staff member responsible for this project was Mr. A. Chmielewski. The IAEA is grateful to all persons and organizations that provided valuable information for the Booklet.

6. GEX Corporation has published Kishor Mehta's "Radiation Processing Dosimetry (a practical manual)" with shipments expected by September 1, 2006. The book retails for \$40.00 USD each with a \$10.00 discount or \$30.00 sales price offered to all ASTM E10.01 or E10.06 members. Contact GEX at 303-400-9640 or mpageau@gexcorp.com to place your order. Major credit cards will be accepted for payment. A \$5.00 shipping and handling fee will be added.
7. A new book "TRENDS IN RADIATION STERILIZATION OF HEALTH CARE PRODUCTS" from the IAEA is being published and can be down-loaded at http://www-pub.iaea.org/MTCD/publications/PDF/Pub1313_web.pdf.

FINAL NOTE

It is my hope that the Progress Report remains useful, and detailed. Please contact me if you have comments or concerns.



John R. Logar, Chairman E10.01

APPENDIX A

Action Item List from Atlanta E10.01 Meeting Jan 26-28, 2009

Item	Action Required	Responsibility	Date issued	Due Date	Completion
1	Directory of services, still working on change control	J Logar/ TG 3	June 26, 07 Nov 1, 07	INACTIVE	INACTIVE
2	34 Standards require Action Chairs must open work items for Standards	TG Chairs	Jan 26 2009	Based on year of issue	ONGOING
3	Workshop sessions ready for dry run in June	Workshop Chairs	June 23, 08	Ongoing – Jun 13, 2009	ONGOING
4	Can link for sponsors' websites be linked to the workshop link on E10 page?	D Cleghorn/ J Koury	Jan 25, 2009	Feb 25, 2009	ONGOING
5	Joe Koury will follow up to see if there is a way to get the ISO ballot results available through a tag to the ANSI website.	D Cleghorn/ J Koury	June 23, 08 Update Jan 26, 2009	Feb 25, 2009	Complete
6	Please look at latest revision of terminology when revising for ballots. Contact Kishor if there is strong opposition to current terminology	All TG Chairs	Jan 26, 2009	On going	Glossary Distributed Mar 17, 09
7	Resolve pst transfer problem for TG Matrix updates with help from Art Heiss.	J Logar	Jan 26, 2009	Feb 26, 2009	Complete
8	Confirm if Doug Weiss is willing to stay on as co-chair for 2232.	J Logar	Jan 26, 2009	Feb 1, 2009	Complete
9	Anyone interested in open chair or co-chair positions please see John Logar. John update lists	All/ J Logar	Jan 26, 2009	Ongoing	Complete
10	Send photos collected from Harry Dinner to Sharon Farrar.	J Rickey	Update Jan 26, 2009	Feb 6, 2009	
11	Adhoc Group to go through list of standards for Relevance. Will review documents and emphasize relevant standards. Also consider some just going for re-approval	M Pageau B Lunduhl J Williams	June 24, 08 Update Jan 26, 2009	Mar 1, 2009 for PR 66	
12	Contact Jeff Martin about new AAMI work item on Equivalence of source loading to parallel efforts of ASTM	J Logar	June 24, 08 Update Jan 26 2009	Mar 1, 2009	
13	1 st Subcommittee ballot Deadline Feb 23, 2009. Send to Rod 1-2 weeks earlier	All chairs	Jan 28, 2009	Feb 23, 2009	Complete
14	Concurrent/Main Committee ballot Deadline April 1, 2009. Send to Rod 1-2 weeks earlier	All chairs	Jan 28 ,2009	April 1, 2009	
15	2nd Subcommittee/Main ballot Deadline May 8, 2009. Send to Rod 1-2 weeks earlier	All chairs	Jan 28, 2009	May 8, 2009	
16	ISO DIS ballot items submitted as soon as possible to Rod. timeline is 5 months	All chairs	ongoing	ongoing	
17	Input from all for PR66 to J Logar , PR66 to Joe Koury by March 1, 2009	Active TG chairs All	Jan 28, 2009	March 1, 2009	ONGOING
18	If interested in presenting 30 minutes at next meeting, contact J Logar	All	ongoing	ongoing	
19	Add Fred Halperin to MTG Balloting	J Logar	Jan 27, 2009	Feb 1, 2009	Complete
20	Ask IAEA if there is a way our group can help IAEA developing countries, need support and we may be able to reach out to help through IAEA	K Mehta	Jan 27, 2009	Mar 1, 2009	Complete
21	Proposal for New Exploratory Task Group on Process Control. Need to confirm that J Jansson, D Patil willing to chair. Prepare presentation of draft scope in Jan 2010	J. Logar/ J Jansson/ D Patil	Jan 27, 2009	Feb 1, 2009 Presentation Jan 2010	ONGOING
22	Send Thank you letter to Rad Source for tour	J Logar	Jan 28, 2009	Feb 1, 2009	Complete
23	Contact F04 chairman to discuss scope of standards to present to our group	J Logar	Jan 28, 2009	Mar 1, 2009	Complete
24	Forward information about the workshop to F04	D Patil/ J Logar	Jan 28, 2009	Mar 1, 2009	

APPENDIX B



ASTM Subcommittee E10.01
is proud to present the

SIXTH INTERNATIONAL WORKSHOP ON DOSIMETRY FOR RADIATION PROCESSING

A unique opportunity for improving dosimetry knowledge through in-depth plenary sessions and comprehensive hands-on dosimetry exercises based on industry standards.

October 4th to 8th, 2009

Ettlingen Castle
Ettlingen, Germany

Sponsored by



INTRODUCTION

ASTM Subcommittee E10.01, Radiation Processing: Dosimetry and Applications, is proud to present the sixth edition of our International Workshop on Dosimetry for Radiation Processing. This event will be held October 4th to 8th, 2009, at the Ettlingen Castle (Schloss Ettlingen) in Ettlingen, Germany, a district of Karlsruhe.

This workshop is patterned after our previous five successful workshops. It includes lectures, practical hands-on exercises and follow-up roundtable discussions, with emphasis on the application of ASTM and joint ISO/ASTM standards. Attendance will be limited to the first 100 technical participants who register.

OBJECTIVE

The objective of this workshop is to enhance the knowledge and use of dosimetry through improved understanding of dosimetry principles, factors that influence dosimeter performance, limiting factors on dosimeter usage, dosimetry system calibration requirements, uncertainty in absorbed dose measurements, and application of dosimetry in process validation and process control. Active participation will better equip participants regarding the requirements and application of ASTM and ISO/ASTM standards. This course provides essential information for all radiation processing applications, including the processing of medical products, foods, inks, packaging, polymers, and pharmaceuticals.

WHO SHOULD ATTEND?

This event will be valuable for anyone involved in radiation processing dosimetry. This includes:

- Researchers
- Irradiator operators
- Medical products manufacturers
- Dosimeter suppliers
- Regulatory personnel
- Food processors
- Quality assurance personnel
- Auditors

KEY WORKSHOP BENEFITS

- Gain a solid understanding of dosimetry principles, applications, and standards.
- Increase participants' knowledge and understanding of ASTM and ISO/ASTM standards and their application to radiation processes.
- Benefit from the insights and experience of internationally recognized dosimetry experts.
- Hear regulatory agencies' perspectives on standards and the radiation sterilization process.
- Build and strengthen contacts with developers, manufacturers, and users of current and new dosimetry systems.

WORKSHOP FORMAT

This comprehensive standards-based program incorporates overview plenary sessions, small roundtable workshop sessions, and practical hands-on exercises. Attendees will choose a specialized hands-on program developed for either a photon-based (gamma or x-ray) or electron beam processing application.

In plenary sessions speakers address all participants and will outline the applicable standards that establish the foundation for the hands-on exercises that follow. For the hands-on exercises, attendees will be divided into smaller groups focusing on either a photon-based or electron beam process. Each hands-on group will be chaired by an experienced leader who will facilitate the group exercises. Following each hands-on exercise, a roundtable session will provide a small group forum that discusses the group exercises, encourages a free exchange of ideas, allows the opportunity for further clarification and maximizes participation from each attendee.

Everyone is encouraged to bring specific problems or questions to the sessions with the expectation that they will be discussed and resolved by the end of the workshop.

HANDS-ON DOSIMETRY

Important aspects of dosimetry for gamma radiation, electron beam and X-ray processing will be covered through hands-on activities. This will include comprehensive data treatment and calibration exercises.

POSTER & DEMONSTRATION SESSION

An informal poster session is also planned, with posters displayed for the duration of the workshop. Attendees interested in presenting their work should contact Mark Bailey, mark.bailey@npl.co.uk, for details. Titles and abstracts are due by July 31, 2009. There also will be an equipment and technology demonstration session allowing attendees to meet "one-on-one" with developers, manufacturers, and users of current and new dosimetry systems. This session will focus on research activities and user/manufacture interactions.

SITE VISITS

Several companies have offered to host participants during the Tuesday site visits. Participants will have the opportunity to travel to one of the following facilities:

- Aerial, a manufacturer of dosimetry systems and services
- Beta Gamma Service, an irradiation service facility
- Max Rubner-Institut Federal Research Institute of Nutrition and Food, a research facility specializing in food and nutrition
- Bruker Biospin, a manufacturer of EPR systems for alanine dosimeters

A minimum number of registrants will be required to permit all choices. Passports may be required for some of the sites.

THE HOTELS

ASTM has arranged special rates of 84 € per night single occupancy and 94 € per night double occupancy at two hotels: the Stadthotel Engel Ettlingen (www.stadthotel-engel.de) and the Hotel Wathalden (www.hotel-wathalden.de). This rate includes breakfast each morning at the hotel and is valid for three days before and three days after the workshop. Both hotels are a short walk from the meeting rooms at the Castle.

Participants are responsible for reserving and paying for their own hotel rooms. When making reservations please mention ASTM Workshop.

COMPANIONS' ACTIVITIES

For workshop attendees who are traveling with a companion we are happy to announce a dedicated Companion's Program. Companions are welcome to attend the Sunday evening social (no cost) and Wednesday evening banquet (nominal fee). For each day of the workshop an event will be planned that showcases the history and intrigue of the Karlsruhe area. All events will cost a nominal fee; however, individuals will be able to choose the events they wish to attend. Details of the program and costs will be available soon on the workshop website.

SPONSORS

In addition to the time and effort provided by the members of the organizing committee and other ASTM members, a number of corporations have agreed to provide funding for specific events or services. This support is greatly appreciated, since it assists in keeping the registration fees low. We will acknowledge these companies at the Workshop and in future correspondence. Contact Joe Koury if your company is interested in becoming a sponsor.

TRANSPORTATION

Ettlingen is accessible by train via Karlsruhe main station and transferring to the local train (S Bahn) or taxi. Nearby airports in Frankfurt, Stuttgart and Strasbourg have train connections to Karlsruhe. Rail planning and ticketing is available at:

<http://reiseauskunft.bahn.de/bin/query.exe/e>
and
<http://www.raileurope.com>

Information on bus transfer from Baden-Airpark to Karlsruhe main station is available at:

<http://www.baden-airpark-express.de>

REGISTRATION

Online registration opens approximately April 1 and closes September 18, 2009. The fees to attend the workshop are listed below. Registration fees are in US

dollars and include Germany's 19% VAT. These fees include: registration, Sunday evening reception, four lunches, Wednesday Banquet dinner, coffee breaks, and site visits. All participants are expected to stay for the full workshop.

FEES (USD)

	Before <u>Aug. 1</u>	Aug. 1 to <u>Sep. 18</u>
ASTM Member	\$1425	\$1725
Non-Member	\$1500	\$1800

Space in the workshop is limited to 100 registrants. Register online before August 1, 2009 to be eligible for the early registration rates listed above and to ensure space.

To register, click the "Register Now" link at www.astm.org/MEETINGS/COMMIT/e10wkshp0909.htm

Cancellations

If you must withdraw your registration, please contact Hannah Sparks at ASTM Symposia Operations at hsparks@astm.org or tel: +1 610-832-9678 as soon as possible. Cancellation requests received by ASTM by September 4, 2009 will result in a full refund less a \$50.00 USD processing fee. For cancellations between September 4 and 18, a reduced refund will be provided. No refunds will be granted for cancellations after September 18, 2009. Refunds will be issued by ASTM approximately 10 business days following the conclusion of the workshop

Reception

A reception will be held Sunday evening, October 4. For workshop registrants, the cost of the reception is included in the workshop fee.

Banquet Dinner

A Banquet Dinner will be held Wednesday, October 7. For workshop registrants, the cost of the banquet dinner is included in the workshop fee.

Questions about Registration

If you have questions concerning online registration, please contact Hannah Sparks at ASTM Symposia Operations at:
E-mail hsparks@astm.org
Telephone: +1 610 832-9677.

VAT

The conference fee includes Germany's VAT of 19%. Companies in EU member states and in countries that have a reciprocity agreement with Germany may be able to recover VAT for the conference fee, hotel charges and other costs.

CONTACTS

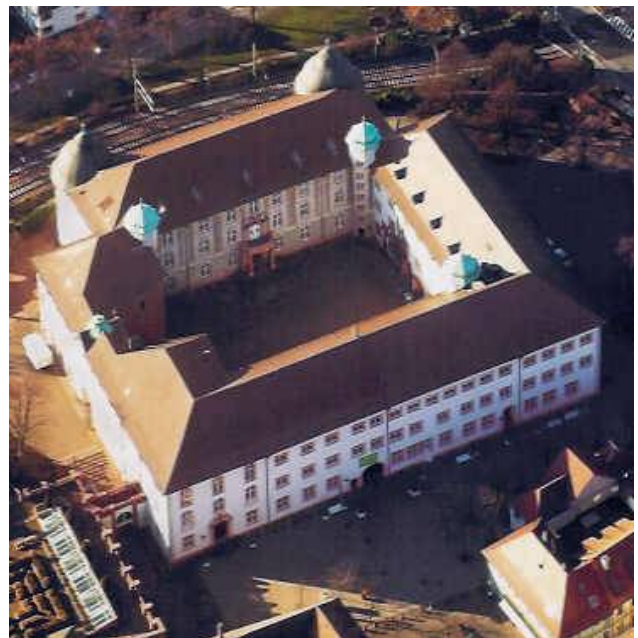
Contact:
Joe Koury
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E-mail: jkoury@astm.org

Technical Contacts:
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BD
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*Kevin O'Hara
MDS Nordion
E-mail: Kevin.ohara@mdsinc.com*

Workshop Website and Online Registration Link:
www.astm.org/MEETINGS/COMMIT/e10wkshp0909.htm

*Remember to make your hotel reservations at
Stadthotel Engel Ettlingen
www.stadthotel-engel.de
or
Hotel Watthalden
www.hotel-watthalden.de*



Conference sessions will be held at the Schloss Ettlingen (the Ettlingen Castle)

The plenary sessions and the workshop group discussions will cover the following topics:

I. Dosimetry Overview and Selection:

This session will serve as an introduction to many of the topics covered in more detail in later sessions. Topics include definitions and concepts, dosimetry requirements, relationship of ASTM standards to other recognized standards, dosimetry system selection, introduction to calibration and measurement uncertainty.

II. Uncertainties in Absorbed Dose Measurements:

Accurate dosimetry is essential in process control. For absorbed dose measurements to be meaningful the combined uncertainty associated with these measurements must be estimated and its magnitude quantified. Topics to be covered include:

- Basic concept of uncertainty in the measured value of a quantity and its significance
- Methodology for classification of uncertainty components
- Identification of sources of uncertainty
- Uncertainty evaluation for a measured dose value
- Standard uncertainty, combined uncertainty and expanded uncertainty
- Impact of uncertainty on routine processing and use in setting process parameters

III. Influence Quantities:

Many influence quantities can affect the performance of dosimeters and dosimetry systems used in radiation processing and must be considered during the performance characterization of the dosimeter and dosimetry system. Subcommittee E10.01 has produced a new standard to provide guidance to those performing studies to determine the effects of influence quantities. The topics include:

- Influence quantities to be considered
- Impact of influence quantities on routine processing dosimetry
- Design of experiments and its application in performance characterization
- Improvement of dosimetry results using acquired knowledge regarding the performance characteristics of the dosimetry system.

IV. Dosimetry System Calibration:

This session will provide an introductory overview of the objective and requirements of calibrating a routine dosimetry system. Details will be given for laboratory calibrations and in-plant calibrations.

V. Dose Mapping Gamma, X-Ray (Bremsstrahlung) and Electron:

Radiation processing is usually associated with absorbed dose

limits: a minimum to assure the desired effect (e.g., curing, and sterilization) and a maximum to avoid adverse effects (e.g., product degradation).

Dose mapping is performed to determine the capability of the facility to process products within defined limits and to qualify individual products. Operational Qualification (OQ) and Performance Qualification (PQ) will be covered.

VI. Hands-On Sessions:

The important aspects of dosimetry for gamma, electron beam, and x-ray processing discussed during the plenary sessions will be reinforced through a series of hands-on sessions. Attendees will choose from hands-on sessions that focus on either a photon source or electron source of radiation and will work in small groups to analyze data, make decisions about how to treat the data and prepare a rationalization documenting their decisions and treatment of the data. These hands-on sessions will allow participants to work through a series of specific examples related to:

- Calibration of dosimetry systems
- Dose mapping during Operational Qualification (OQ)
- Dose mapping during Performance Qualification (PQ)
- Process establishment and control

VII.A. Special Topic Session: The Application of Mathematical Modeling in Radiation Processing:

This session will present a short history of mathematical modeling with a description of most models in use today. Examples will present the problem, the data sets and the data analysis, including a look at the uncertainties associated with dose calculation. Examples will include dose uniformity in product, source rack transit and heterogeneous product.

VII.B. Special Topic Session: Low Energy E-Beam

The use of low energy electron beams for surface sterilization and material modification has specific dosimetric challenges. This session will discuss dosimetry system calibrations, electron beam system validations, product validations, and routine process monitoring for low energy electron beam systems.

VII.C. Special Topic Session: Worldwide Regulatory Perspective

Speakers from regulatory agencies will present their agency's perspective on standards and the radiation sterilization process.

WORKSHOP SCHEDULE

Ettlingen Castle, Ettlingen, Germany

October 4 to 8, 2009

	4-Oct-09 Sunday	5-Oct-09 Monday	6-Oct-09 Tuesday	7-Oct-09 Wednesday	8-Oct-09 Thursday
7:30					
8:00		BREAKFAST	BREAKFAST	BREAKFAST	BREAKFAST
8:30		WELCOME AND INTRODUCTION			
9:00		PLENARY I	HANDS-ON SESSION VI-A Calibration	HANDS-ON SESSION VI-B Dose Mapping (OQ)	HANDS-ON SESSION VI-D Process Establishment and Control
9:30		DOSIMETRY OVERVIEW AND SELECTION			
10:00		PLENARY IIA UNCERTAINTIES			
10:30		BREAK			
11:00		PLENARY III INFLUENCE QUANTITIES			
11:30			BREAK	BREAK	BREAK
12:00			HANDS-ON SESSION VI-A ROUNDTABLE	HANDS-ON SESSION VI-B ROUNDTABLE	HANDS-ON SESSION VI-D ROUNDTABLE
12:30					
13:00		LUNCH		LUNCH	LUNCH
13:30		PLENARY IV DOSIMETRY SYSTEM CALIBRATION			
14:00		PLENARY V DOSE MAPPING			SPECIAL TOPICS SESSION Modelling (VII-A)
14:30				HANDS-ON SESSION VI-C Dose Mapping (PQ)	SPECIAL TOPICS SESSION Low Energy E-Beam (VII-B)
15:00		PLENARY IIB UNCERTAINTIES			BREAK
15:30		BREAK	SOCIAL ACTIVITIES/ SITE TOURS BOX LUNCH and ON OWN FOR DINNER		SPECIAL TOPICS SESSION Regulatory Perspective (VII-C)
16:00	CONFERENCE REGISTRATION	Oral Summary of Poster Paper Sessions and Dosimetry Systems Demos		BREAK	RECAP and CLOSING REMARKS
16:30	and			HANDS-ON SESSION VI-C ROUNDTABLE	
17:00	WELCOME RECEPTION				Free Time
17:30	1500 - 1900			BANQUET	
18:00					
18:30					
19:00					
19:30		DINNER (on own)			
20:00					
20:30					

NOTE 1: Poster Session Room open all week for posters only (Poster/Demo room to be open Sunday from 1300 to 1700 for poster and equipment setup).

NOTE 2: Hands-on participants will be divided into groups according to their interest on the primary radiation source (photon versus electron beam).

PRELIMINARY AGENDA (FOR REVIEW BY E10.01)

**Fairmount Hotel - Vancouver
Vancouver, BC, Canada, June 14th – 17th, 2009**

Sunday, June 14th, 2009		
10:00 – 17:00	6 th International Workshop Meeting	Room TBD
17:00 – 20:00	E10.90 Executive Meeting	Room TBD
Monday, June 15th, 2009		
	Room TBD	
	ASTM E10.01 General Meeting and Announcements	
8:30 – 9:45	Issue Attendance List	Logar
	Introduction of Members	All
	Approve Minutes/Progress Report from Previous Meeting (PR 64)	Logar
	Review/Approve Agenda	Logar
	E10 Executive Meeting Update	Logar
	New Members / Termination List	Logar
	Appoint TG Chairs & Vice Chairs (new TG's)	Logar
	Results of Committee/Sub-committee Ballot	Chu
	Status of ISO/ASTM Agreement	Chu
	Results of ISO ballots.	Chu
	E10.01 Action Items	Logar/All
	Workshop Update	Calvert
	Monday's Social Activities, e.g. Group Dinner	Logar
9:45 – 10:15	Morning Break	
10:15 – 11:30	Room TBD	Room TBD
	Task Group Break Out	Task Group Break Out
11:30 – 12:00	Member Presentation	
12:00 – 13:30	Lunch	
13:30 – 14:45	Room TBD	Room TBD
	Task Group Break Out	Task Group Break Out
14:45 – 15:15	Afternoon Break	
15:15 – 17:00	Room TBD	Room TBD
	Task Group Break Out	Task Group Break Out
19:00 – 21:00	Group Dinner	

PRELIMINARY AGENDA (FOR REVIEW BY E10.01)

**Fairmount Hotel - Vancouver
Atlanta, Georgia, USA, June 14th – 17th, 2009**

Tuesday, June 16th, 2009		
8:30 – 9:45	Room TBD	
	ASTM E10.01 General Meeting and Announcements Task Group Updates Management Task Group Updates Liaison Reports / Handouts AAMI CIRMS iiA RPSMUG PANEL Group Picture	TG Chairs All Chairs Martin Uribe Logar O'Hara Sharpe Rickey
9:45 – 10:15	Morning Break	
10:15 – 11:30	Room TBD	Room TBD
	Task Group Break Out	Task Group Break Out
11:30 – 12:00	Member Presentation	
12:00 – 13:30	Lunch	
13:30 – 14:45	Room TBD	Room TBD
	Task Group Break Out	Task Group Break Out
14:45 – 15:15	Afternoon Break	
15:15 – 17:00	Room TBD	Room TBD
	Task Group Break Out	Task Group Break Out
16:30 – 17:30	E10 Main Committee Meeting	Room TBD

PRELIMINARY AGENDA (FOR REVIEW BY E10.01)

**Fairmount Hotel - Vancouver
Atlanta, Georgia, USA, June 14th – 17th, 2009**

Wednesday, June 17th, 2009	
8:30 – 9:45	Room TBD
	ASTM E10.01 General Meeting and Announcements Task Group Updates TG Chairs Dates & Deadlines Main Committee & Subcommittee Chu Action Items Logar/Cleghorn Input for Progress Report 64 Logar Upcoming Meetings 6 th Workshop, Ettlingen, Germany, September 2009 All San Antonio, TX, January 2010 Logar St. Louis, MO, June 2010 Anaheim, CA, January 2011
9:45 – 10:15	Morning Break
10:15 – 11:30	Room TBD
	Task Group Break Out
11:30 – 12:00	Member Presentation
11:30 – 13:30	Lunch
13:30 – 14:45	Room TBD
	Task Group Break Out
14:45 – 15:00	Afternoon Break
15:00 - ?????	GROUP OUTING - WHISTLER