



NEWSLETTER

Issue 42 – August 2015

FOREWORD

CORESTA has continued its surge in activity and work output with the publication of several new technical reports and updated Recommended Methods after intense discussion within the Scientific Commission. Sub-Groups and Task Forces continue to work to their objectives; some of these objectives having been revised to better cover the scope of the tasks being undertaken. Reports on meetings of three Sub-Groups are included in this issue.

The 2015 Joint Study Group meeting programmes have been set and published. The abstracts are of a high standard and promise to provide delegates with presentations giving interesting insight into the latest research on tobacco and tobacco related products. Workshops have been planned at each of the meetings and keynote speakers include non-tobacco related scientists. Feedback from previous CORESTA meetings shows that such Workshops are an ideal discussion forum. The local organising committees and CORESTA look forward to welcoming delegates to South Korea and Turkey, both locations having UNESCO World Heritage sites included in the planned excursions.

CORESTA continues to establish connections with external bodies and has recently been accepted as a liaison member of the newly created CEN/TC 437 'Electronic cigarettes and e-liquids'. CORESTA's work on e-cigarettes, through its E-Cigarette Task Force and contributions to standardisation bodies, is a vital development for the future.

This Newsletter, similarly to previous issues, also gives the list of forthcoming CORESTA meetings.



Joint Study Group Meetings 2015

SSPT2015 - The Smoke Science and Product Technology Joint Study Groups Meeting will be held at the Lotte Hotel on **Jeju Island, South Korea**, from **4–8 October 2015** and is kindly hosted by KT&G.

Registration and accommodation information is available on the official meeting website at www.sspt2015.org. Any queries concerning the meeting should be addressed directly to the meeting Secretariat at secretary@sspt2015.org.

The Working Programme currently consists of 57 oral presentations and 32 posters. A Workshop on E-Cigarettes will be held on Tuesday, 6 October.

Online registration is available until 4 September.



AP2015 - The Joint Meeting of the Agronomy & Leaf Integrity and Phytopathology & Genetics Study Groups will be held at the Swissôtel, in **Izmir, Turkey**, from **25–29 October 2015** and is being organised by CORESTA with the help of a local event planner and contributions from some tobacco companies with operations in Turkey.

Meeting information can be found on the meeting website at www.coresta-ap2015.org and all queries should be sent to coresta-ap2015@claros.com.tr.

The Working Programme has 48 oral and 38 poster presentations scheduled for presentation. A Workshop on Omics will take place on Tuesday, 27 October.

Online registration is open until 27 September.

Joint Study Group Meetings 2015

Reading Committee

The CORESTA Scientific Commission Reading Committee consists of Study Group Presidents and Secretaries, and additional Study Group executives as required. It usually meets early June to select the abstracts submitted for presentation at the annual CORESTA meetings and draft the programme of working sessions.

This year, the Reading Committee met on 3 June in Strasbourg, France. Of the total of 205 abstracts submitted, 175 were chosen. Two Workshops were scheduled (see below) during which there will be four presentations in each and time for debate and discussion. In addition, the Sub-Group and Task Force Coordinators will report on their groups' activities.

The Opening Sessions of both events will see presentations by leading tobacco representatives of each host country. They will give an overview of their country's tobacco production and regulations.

Abstract acceptance and paper or poster instructions were emailed to authors on 25 June, and the latest versions of the programmes and lists of papers are available from the CORESTA website at www.coresta.org and the official meeting websites at www.sspt2015.org and www.coresta-ap2015.org



WORKSHOPS

SSPT2015 – E-Cigarettes – Tuesday, 6 October

The workshop will feature four renowned speakers that will cover a wide range of topics related to e-cigarette usage and product regulations.

The speakers will include:

Dr Riccardo Polosa (Full Professor of Internal Medicine, University of Catania, Italy) who will present on the health effects related to e-cigarette usage; Lise Fraissinet (Pharmaceutical Product Development Consultant, KintelHealth, Hong Kong) will cover product testing standards; Dr Derek Mariner (Principal Scientist, Analytical Development Centre, Group R&D, British American Tobacco, UK) will discuss the regulatory environment surrounding e-cigarettes around the world; and Paul Hare (Head of Marketing, Innokin Technology, China) will present a review of history of e-cigarettes from the early devices to modern, power and temperature controlled devices.

The workshop will conclude with a 30-minute open discussion with the speakers.

AP2015 – Omics – Tuesday, 27 October

"Omics" is the suffix that groups three major areas of cell studies: genomics, transcriptomics and metabolomics. The major advances made the last ten years in these domains paved the way for the identification and the characterisation of the major genes used in plant breeding. Thus, solutions adapted to the challenges of sustainable agriculture with more performant products can be expected from these technologies.

Four speakers will be covering various aspects of "Omics":

Dr Kieron Edwards (Applied Molecular Breeding Manager, Plant Biotechnology Division, Group R&D Cambridge, British American Tobacco, UK); Dr Nicolas Sierro (Genome Sequence Analysis, Philip Morris International R&D, Switzerland); Dr Yongfeng Guo (Professor, CNTC Tobacco Research Institute - Academy of Agricultural Science, China); Dr Marianne Mazier (Senior Scientist, CR1, INRA, Génétique et Amélioration des Fruits et Légumes, France).

After an introduction on the basics of genetics by Kieron Edwards, new powerful tools to identify candidate genes will be presented: the tobacco genome sequencing by Nicolas Sierro and an application of transcriptomics and metabolomics by Yongfeng Guo. Marianne Mazier will conclude the presentations with a talk on new breeding techniques.

The attendees will then be invited to debate around two questions: 1) What can we expect from Omics for the tobacco breeders, the growers, the industrials and the consumers, and when? 2) What are the limitations of these new technologies (technical, intellectual property and acceptability)?

CORESTA Scientific Commission and Board Meetings

The **SCIENTIFIC COMMISSION** met in Strasbourg, France, on 4-5 June, invited by Imperial Tobacco.

- Feedback was given on the Vision and Mission of CORESTA as discussed by the Board, with a focus on strategy and guidance through dedicated Board committees.
- ISO/TC 126 (Tobacco and Tobacco Products): A standard on intense smoking will be developed, as well as a standard on nicotine determination in e-liquids. The revised scope of TC 126 to include e-cigs was formalised however ISO acceptance was put on hold due to the possible creation of an e-cig Technical Committee within ISO, as has been the case at European level (CEN). CORESTA proposal that CRM81 (e-cig. machine definition) become a standard was approved and CRM70, 74 and 79 will also be proposed.
- ACAC: Guide No. 1 is undergoing its fourth revision. ACAC is considering increased liaison with the SC to better align the work streams with the AP groups. Discussions with CPA producers have proven effective.
- Agronomy & Leaf Integrity: The Sustainability TF has produced 17 documents that are currently being reviewed. The GMO SG participants have increased and now include government laboratories.
- Phytopathology & Genetics: While the BM SG has been disbanded, two new Sub-Groups have been proposed (see overleaf).
- Product Technology: CM8 and CM IP 2 are now available. The CVAR TF production programme started in June.
- Smoke Science: CRMs on carbonyls and volatiles will be proposed as ISO standards.

- CORESTA Standards TF: Templates for various documents and processes are being reviewed and posters will be presented at both AP2015 and SSPT2015 meetings in October.
- New Website: A consensus was found on the choice of supplier among the three interviewed.

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The **BOARD** met on 8-9 July in Windsor, UK, hosted by Alliance One International.

- The Study Group Presidents had been invited to share their views, concerns and needs. Key actions were defined: select and focus on priorities to ease the workload and improve speed and improve communication to internal and external stakeholders to promote CORESTA outputs and gain contributors.
- The Board had invited top management representatives from two CORESTA Member organisations to present their perception of CORESTA and how the association could better meet their needs. Similar invitations will be extended at future meetings in different regions.
- With the launch of an e-cig Technical Committee within CEN, the Board decided to nominate CORESTA experts in the CEN WG3 (e-liquids) and WG4 (emissions).
- The role of the Science Communication Committee was emphasised to both engage on what has been done and prepare for what is perceived as upcoming topics.

CORESTA RECOMMENDED METHODS

New

- ◆ **CRM No. 81** – Routine Analytical Machine for E-Cigarette Aerosol Generation and Collection - Definitions and Standard Conditions (*June 2015*)

This CRM defines the requirements found necessary for the generation and collection of e-cigarette aerosol for analytical testing purposes. The method is based on the findings reported in the CORESTA E-cigarette Task Force Technical Report 2014 *Electronic Cigarette Aerosol Parameters Study*, March 2015

Updated

- ◆ **CRM No. 60** – Determination of 1,2-Propylene Glycol and Glycerol in Tobacco and Tobacco Products by Gas Chromatography (*Third edition – July 2015*)
- ◆ **CRM No. 61** – Determination of 1,2-Propylene Glycol, Glycerol and Sorbitol in Tobacco and Tobacco Products by High Performance Liquid Chromatography (HPLC) (*Third edition – July 2015*)

In 2012, the CORESTA Smokeless Tobacco Sub-Group (STS) conducted a collaborative study (*2012 Collaborative Study on Humectants*, February 2015) for the determination of 1,2-propylene glycol and glycerol in smokeless tobacco products. The above CRMs have been updated to expand their scope to cover smokeless tobacco.

All CORESTA Recommended Methods can be downloaded in PDF format at www.coresta.org

CORESTA SUB-GROUPS & TASK FORCES

PHYTOPATHOLOGY & GENETICS Study Group

Amendment to Group Type: Sub-Group Integrated Pest Management (IPM)

UPDATE

With the initial objectives nearing completion and the imminent publication of its Guide giving a common outline framework based on relevant IPM methods, the Task Force will be changed to a Sub-Group to better anticipate its future role in completing and maintaining the published document.

Amendment to Objectives: Sub-Group Viruses (VIR)

Updated Objectives:

1. To synthesise and draw conclusions from the viral data (1995-2011).
2. To promote sharing of experience in coping with tobacco virus diseases.

UPDATE

The first objective of the Sub-Group was changed to cover the work to be done prior to the presentation of a final report at the next Agro-Phyto Joint Study Groups meeting in Izmir, Turkey, in October 2015, following which the Sub-Group will most likely be disbanded.

New Task Force: Collaborative Study Black Shank (BKS)

Objective:

- ◆ To test the black shank resistance of the best available varieties under different conditions. For more information please contact David Shew – North Carolina State University, USA (david_shew@ncsu.com)

NEW

New Task Force: Efficacy of Biological and Eco-Friendly CPAs (BIO)

Objective:

- ◆ To test promising biocontrol agents, compared with current control practices. For more information please contact Hannah Burrack – North Carolina State University, USA (hannah_burrack@ncsu.com)

NEW

PRODUCT TECHNOLOGY Study Group

Amendment to Objectives: Sub-Group Smokeless Tobacco (STS)

Updated Objectives:

1. To perform collaborative studies on main chemical parameters of smokeless products.
2. To develop CORESTA Recommended Methods as agreed by the Scientific Commission.
3. To maintain the glossary on product definition and definitions of terms to support harmonisation of nomenclature.

UPDATE

The previous third objective "to define and set standards for the manufacture of reference products and storage requirements for long term stability" was considered complete following the publication of the Technical Report "CORESTA Reference Products – 2014 Analysis" in January 2015.

Amendment to Objectives: Sub-Group E-Cigarettes (ECIG)

Updated Objectives:

1. To gather and share preliminary data on analysis relevant to e-cigarettes worldwide with a view to making recommendations for product testing.
2. To define the relevant categories of products for potential further CORESTA studies.

UPDATE

The previous first objective "to create a document on worldwide product definition and definitions of terms to support harmonisation of nomenclature" was considered complete following the publication of the Reference Report in February 2014 "E-Cigarettes: A Brief Description of History, Operation and Regulation" and subsequent decision to keep this document as a point-in-time reference not to be updated.

CORESTA SUB-GROUPS & TASK FORCES

Special Task Force

Amendment to Objectives: Task Force CORESTA Standards (STDS)

Updated Objectives:

1. To review existing procedures for the documentation of the scientific output of CORESTA.
2. To develop document management systems.
3. To develop and publish related guidelines and templates.

The objectives were amended to more accurately reflect the extended scope of the Task Force, which was initially set to work only on Recommended Methods. A poster and a report will be presented at both the Joint Study Groups Meetings in Jeju and Izmir to explain the reorganisation of the documentation procedures within CORESTA.

**For more information on these and other Sub-Groups and Task Forces
please contact the CORESTA Secretariat.**

UPDATE

CORESTA REPORTS

The following reports have been published on the CORESTA website at www.coresta.org:

- **Analysis of Variability in Curing Conditions and TSNA within Barns of Dark Air-Cured Tobacco**
Study Grant Report – May 2015 (Sub-Group TSNA in Air-cured and Fire-cured Tobacco)

TSNA levels can vary tremendously between samples collected within the same barn leading to questions about the spatial variability of curing conditions within air-cured barns and how well the variation in conditions correlates to variations in TSNA accumulation in the cured leaf. To investigate this, a study was undertaken that entailed the placing of data loggers at regular intervals throughout two different barns and analysing cured leaf samples for TSNA levels. Research was conducted in 2012 and 2013 at the University of Kentucky locations with financial support from a CORESTA Study Grant.

- **Results of the 2014 CORESTA Part-Filter Method Ring Trial and Comparison with the 2012 Ring Trial**
Technical Report – June 2015 (Sub-Group Smoking Behaviour)

In this report the results of the 2014 Ring Trial are communicated and compared with the Ring Trial reported in 2012 with the aim of assessing whether the standardised method agreed by the CORESTA Smoking Behaviour Sub-Group should be recognised by CORESTA as a Recommended Method.

- **2014 Collaborative Study for the Determination of Repeatability and Reproducibility of CRM 77**
Technical Report – June 2015 (Sub-Group Physical Test Methods)

A study on repeatability and reproducibility was conducted in 2013 to be able to finalise the CORESTA Recommended Method (CRM) No. 77 for publication. The initial study covered banded lower ignition propensity (LIP) cigarette papers and a tipping base paper with higher diffusion capacity. This report covers the second study carried out in 2014 to verify the results obtained in 2013 and to extend the range of repeatability and reproducibility data to diffusion capacities higher than 0.5 cm/s.

- **2014 Proficiency Test Report – The Measurement of Diffusion Capacity of Cigarette Papers**
Technical Report – July 2015 (Sub-Group Physical Test Methods)

This proficiency test was conducted to serve as an assessment of the capability of the participating laboratories for the measurement of diffusion capacity using CRM 77 as a general guideline.

- **CORESTA Monitor Test Pieces – Use & Conditions**
Information Documents – April/June 2015 (Sub-Group Routine Analytical Chemistry)

Monitor test pieces are used to monitor the stability of the analytical processes involved when using a cigarette smoking machine for routine analysis. CORESTA followed the International Standard, ISO 16055:2003, that describes the requirements for and use of a monitor test piece, to design its own test pieces. These are referred to as CM8 and CM IP 2 ("8" and "2" being the version number of the available batch and IP referring to "Ignition Propensity"). The "Use and Conditions" provide details on specifications and use of the current available batches of the test pieces.

Cigar Smoking Methods Sub-Group Meeting (United Kingdom)

The CORESTA Cigar Smoking Methods Sub-Group (CSM SG) meeting was held on 24 February in Milton Keynes, United Kingdom, and was organised by Cerulean.

Twenty-one members from Belgium, China, Cuba, France, Germany, Italy, the Netherlands, Spain, the United Kingdom and the United States took part. As several members attended for the first time, the objectives of the Sub-Group were brought to attention:

1. To develop and update CORESTA Recommended Methods as requested by the Scientific Commission by investigating the technical problems associated with the mechanical smoking of cigars.
2. To conduct periodical collaborative studies in order to improve repeatability and reproducibility in different cigar sizes and types.
3. To establish confidence intervals for the smoke yields of all different cigar sizes.

During the meeting the results and statistical study of the 10th Collaborative Study (CS) of the CSM Sub-Group were reviewed and discussed. Eight laboratories of the member companies participated in these studies. No outliers were identified, which indicates that the participating laboratories have gained more control over the methods, probably due to an increased experience level. The r&R estimations were in line with the previous collaborative studies and the changes that were made in the protocol seem to have had a positive impact on the R estimations.

The participants agreed on an 11th Collaborative Study as well as on a review of the existing Recommended Methods (CRM Nos. 46, 47, 64, 65, 66, 67 and 68) prior to the next meeting. The next CSM SG meeting will be held in February / March 2016, either in Amsterdam or in Brussels.

The CSM SG meeting was an opportunity for tobacco scientists working with cigars to learn from each other and the collaborative studies that are conducted annually allow the participating laboratories to improve their performance and benchmark their results with their peers. The pleasant atmosphere of Milton Keynes helped to increase the good links already established among the CSM members.



Bob VAN MIERLO
CSM SG Coordinator

Smoking Behaviour and Biomarkers Sub-Group Meeting (Switzerland)

The Smoking Behaviour (TSB) and Biomarker (BMK) Sub-Groups both held their mid-year meeting in Zurich on 7 May. These meetings were organised and supported by Celerion.

At these meetings, which are always very interactive, recent work on proficiency tests for biomarkers of exposure and collaborative study on topography devices were discussed.

The groups also discussed important topics such as 1) key points to consider when designing and conducting pharmacokinetic studies with tobacco and nicotine products; 2) Models to predict reduction in smoking related risk; 3) Reference materials for bioanalytical labs; and 4) Biomarkers of effects.

The members of the TSB SG had proposed to expand the remit to include 'use behaviour of tobacco and nicotine products' and it was confirmed that the scope of the whole Smoke Science Study Group has been modified to include the "scientific study of emissions from and exposure to tobacco and related products."

A tour of Celerion laboratories was organised on the morning of 8 May, providing more opportunity to discuss biomarker analysis.

The next TSB and BMK Sub-Group meetings will be held in Jeju Island, South Korea, on Sunday, 4 October.



Krishna PRASAD
TSB SG Coordinator



G.L. PRASAD
BMK SG Coordinator

Physical Test Methods Sub-Group Meeting (China)

The CORESTA Physical Test Methods Sub-Group (PTM) held a meeting in the beautifully located city of Hangzhou, Zhejiang Province, China, on 29 April 2015 at the kind invitation of China Tobacco Zhejiang Industrial Co., who hosted several CORESTA Sub-Group meetings in the same week. The meeting was well attended by 26 participants. Highlights of the meeting were the presentations by two speakers, Michael Morton and Alexandra Martin. Michael Morton explained the differences between collaborative studies and proficiency tests with respect to the purpose, the set-up of the study and the statistical evaluation of the results. This has been a frequent point of discussion not only within the PTM Sub-Group but also between the PTM Sub-Group and the Scientific Commission of CORESTA and helped to clarify some issues with currently pending reports on the annual proficiency test. Alexandra Martin presented the work of the Standards Task Force of CORESTA and provided templates for reports on proficiency tests and collaborative studies, which are planned to be used in the future within the PTM Sub-Group.

A further point on the agenda was the annual proficiency test on physical parameters. Some reports and statistical analyses of the results are still pending, but are expected to be completed soon, so that the PTM Sub-Group expects to be up-to-date with its reports in the near future.

Another topic, which the PTM Sub-Group has been working on, is diffusion capacity and in particular its measurement. Based on CRM 77, which was published in April 2014, collaborative studies and a proficiency test have been carried out and reports have in the meantime been submitted to the Scientific Commission and the Board for approval. Further work will focus on the search for reference materials for diffusion capacity.

At the end of the meeting Mario Mayr, coordinator of the PTM Sub-Group, announced his intention to resign as coordinator after the next meeting, which will take place in Hamburg, Germany, on 16 September 2015.



Mario MAYR
PTM SG Coordinator



Bernhard EITZINGER
PTM SG Acting Secretary



UPCOMING CORESTA MEETINGS (2015)

Meeting	Date	Location
Sub-Group Physical Test Methods (PTM)	16 September	Hamburg, Germany
Sub-Group Routine Analytical Chemistry (RAC)	2 October	Jeju Island, South Korea
Task Force CORESTA Standard (STDS)	3 October	Jeju Island, South Korea
Task Force Cigarette Variability (CVAR)	3 October	Jeju Island, South Korea
Task Force In Vitro Toxicity Testing of Tobacco Smoke (IVT)	3 October	Jeju Island, South Korea
Sub-Group Smokeless Tobacco (STS)	3 October	Jeju Island, South Korea
Sub-Group Smoking Behaviour (TSB)	4 October	Jeju Island, South Korea
Sub-Group Biomarkers (BMK)	4 October	Jeju Island, South Korea
Task Force E-Cigarettes (ECIG)	4 October	Jeju Island, South Korea
Sub-Group Special Analytes (SPA)	4 October	Jeju Island, South Korea
SMOKE SCIENCE and PRODUCT TECHNOLOGY	4-8 October	Jeju Island, South Korea
Task Force Sustainability in Leaf Tobacco Production (SUSt)	24 October	Izmir, Turkey
Task Force Agrochemical Residue Field Trials (RFT)	24 October	Izmir, Turkey
Sub-Group Integrated Pest Management (IPM)	25 October	Izmir, Turkey
Sub-Group Collaborative Study Black Shank (BKS)	25 October	Izmir, Turkey
Sub-Group Efficacy of Biological and Eco-Friendly CPAs (BIO)	25 October	Izmir, Turkey
Sub-Group Proficiency Testing for Detection of Transgenic Tobacco (GMO)	25 October	Izmir, Turkey
Agrochemical Advisory Committee (ACAC)	25 October	Izmir, Turkey
AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS	25-29 October	Izmir, Turkey



GLOBAL TOBACCO & NICOTINE FORUM (GTNF)

This year *Tobacco Reporter's* annual GTNF is being held in Bologna, Italy, from 15-17 September (www.gtnf-2015.com).

Since its launch in 2008, the GTNF (formerly the Global Tobacco Networking Forum) has become, to quote the organisers, "the world's leading interactive tobacco talk show." It aims to connect leaders from all sectors of the tobacco industry with experts from government, finance, public health and social responsibility.

Dr Mike Ogden, representative for Reynolds American Inc. Services Company on the CORESTA Board, and member of the GTNF Advisory Committee, has been instrumental in organising a panel on "Science for Regulation". This provides an excellent opportunity for CORESTA to be visible and to promote its activity to top executives in the tobacco and e-cigarette industry, public health officials and associations and more, as the CORESTA Secretary General, Pierre-Marie Guitton, will be one of the panellists.

Acronyms/abbreviations used in the Newsletter

ACAC	CORESTA Agrochemical Advisory Committee	ISO/TC 126	ISO Technical Committee on Tobacco and Tobacco Products
AP2015	2015 Agronomy & Leaf Integrity and Phytopathology & Genetics Joint Study Groups Meeting	PTM	Physical Test Methods
BMK	Biomarkers	SG	Sub-Group
CEN	European Committee for Standardization	SGTF.....	Sub-Group and Task Force
CM IP	CORESTA Monitor Ignition Propensity	SSPT2015	2015 Smoke Science and Product Technology Joint Study Groups Meeting
CPA.....	Crop Protection Agent	TC	Technical Committee
CRM.....	CORESTA Recommended Method	TF	Task Force
CSM	Cigar Smoking Methods	TSB	Smoking Behaviour
CVAR.....	Cigarette Variability	TSNA	Tobacco Specific NitrosAmines
GMO	Genetically Modified Organism	UNESCO	United Nations Organization for Education, Science and Culture
GRL	Guidance Residue Level	WG	Working Group
ISO	International Organization for Standardization		

