



NEWSLETTER

Issue 41 – April 2015

FOREWORD

2015 has had an active start, with a number of Study Groups and Task Forces (SGTF) publishing several reports as well as updated and new CORESTA Recommended Methods. Organisation of the two main CORESTA events is in full swing; the Joint Study Group meetings are being held in South Korea and Turkey, two very attractive destinations. Abstract submission is open and many quality presentations are expected.

The Scientific Commission and Board met in January and February, respectively, and reworded the remit of the Smoke Science Study Group. The Board also discussed CORESTA's vision. A brief report on their deliberations and the changes made are overleaf.

A list of scheduled Sub-Group and Task Force meetings has been included in this Newsletter, together with brief reports from two of the groups.

CORESTA has featured in the press in articles related to the 2014 Congress and e-cigarette research. We also mention a publication "Tobacco People" that may be of interest to the tobacco community.

Starting with this issue, the CORESTA Newsletter will only be available for download from the website, but paper versions can still be obtained by those who specifically request a hard copy.

Sadly, CORESTA has to announce that one of its long-standing and active participants, Dr Karl-Ludwig Thelen, passed away at the beginning of the year.

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**.

KT&G will be kindly hosting this meeting.

Website: www.sspt2015.org

Jeju Island, also known as "Island of the Gods", is on the UNESCO World Heritage site list since 2007 and in 2011 was voted one of the "New 7 Wonders of Nature." Situated southwest of the Korean Peninsula, this volcanic island's temperate climate, breathtaking natural scenery and unusual attractions make it a popular destination for visitors, including delegates to conferences.

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**.

This meeting is being organised by CORESTA with the help of a local event planner and contributions from some tobacco companies with operations in Turkey.

Website: www.coresta-ap2015.org

Known as Smyrna in ancient times, Izmir is now a modern, cosmopolitan city, the third largest in Turkey, that has managed to preserve its rich archaeological and historical assets. It is located in western Turkey on the Aegean coast and is bordered by a huge bay and mountains. Its quality conference facilities and proximity to tobacco growing areas make it the perfect destination for an Agro-Phyto meeting.



GENERAL INFORMATION

Call for Papers and Abstract Submission: Available online via Meeting and CORESTA websites.

Abstract Submission Deadline: Friday, 15 May 2015

Abstract selection by Reading Committee: Wednesday, 3 June 2015

Author notifications and programme publication: End of June 2015

Meeting Registration: Available via Meeting websites at the beginning of June.

CORESTA Scientific Commission and Board Meetings



The **SCIENTIFIC COMMISSION** met in Chiang Mai, Thailand, on 20-21 January 2015, and was hosted by Premium Tobacco.

- Feedback was given on orientations discussed at a preparatory Board WebEx meeting held in December 2014.
- ISO/TC 126 (Tobacco and Tobacco Products): An intense smoking regime standard will eventually be developed. The development of a standard on nicotine determination in e-liquids has been proposed. The clarification of the scope of TC 126 to include e-cigarettes will be formalised at the plenary meeting in Zürich in April. High e-cigarette standardisation activity in France and UK was reported.
- ACAC: The specificity of cigar tobaccos and how ACAC could deal with them has been reviewed. Strategy for the coming years is being discussed. ACAC will begin a fourth review of GRLs in April.
- Agronomy & Leaf Integrity: the two-year TSNA project has been completed and a report is to be published. Joint work with ACAC on GMOs has been initiated. The first round of three-year CPA residue trials by the RFT TF will soon be completed. The work of the SUST TF is nearing completion and will complement Guide No. 3.

- Phytopathology & Genetics: Data from Poland is being considered to feed the Extended Diagnostic Expert System project (info for the e-phytia website and the Di@gnoplant app).
- Product Technology: the ECIG TF will start work on CRMs for e-liquids and emissions.
- Smoke Science: the IVT TF has become a Sub-Group (*see page 4*).
- CORESTA Standard TF: definitions, workflow charts and revision processes and a document numbering and follow-up system have been drafted.
- New Website: A new working group has been set up to re-launch this project.

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The **BOARD** met from 9-10 February 2015 in Geneva, Switzerland, invited by Japan Tobacco/JTI.

- A report was given on the December 2014 WebEx meeting where former President Martin Ward's handover report was reviewed. Much discussion focussed on the long-term vision of CORESTA and how and where it must be communicated by the association.
- A number of Committees were set up to distribute the work among the Administrators and prepare decision making during plenary sessions, with emphasis on the contribution of the Scientific Commission President and Vice-President.
- The newly elected Study Group Presidents have been invited to participate in the next Board meeting in July.
- Further to CRM75 being welcomed by ISO, other methods were considered as candidates.
- With no host for the Congress in 2016, CORESTA has once again been tasked with the organisation of this event. The location and details are being discussed.

CORESTA VISION

NEW

The website BusinessDictionary.com defines a vision as "an aspirational description of what an organization would like to achieve or accomplish in the mid-term or long-term future. It is intended to serve as a clear guide for choosing current and future courses of action". CORESTA has since decades defined its purposes in its statutes, but was missing a vision. Thanks to the legacy of the former president of the Board, Martin Ward, the new Board drafted in February the following vision:

"To be recognised by our members and relevant external bodies as an authoritative source of publically available, credible science and best practices related to tobacco and its derived products"

This vision aims at clearly stating what CORESTA wants to be within five years in order to meanwhile adapt itself to a drastically changing global context, embracing a widening scope of products. It also highlights the continuous scientific approach and expertise of CORESTA. Through collaborative work its members develop robust science that is meant to be shared openly with all internal and external CORESTA stakeholders, from R&D, manufacturing to corporate affairs teams, from shop floor users to upper management, from academic to regulatory stakeholders.

The vision will be posted on the CORESTA website.

CORESTA's purposes, as stated in the statutes of the association, need to be aligned to this vision, in particular to expand the scope of work to tobacco derived products. This alignment will be proposed at the next CORESTA General Assembly during the 2016 Congress.

CORESTA STUDY GROUPS

UPDATE

SMOKE SCIENCE STUDY GROUP

With the increasing focus on research on tobacco derived products, the Board and Scientific Commission reviewed and revised the remit of the Smoke Science Study Group as follows:

"The Smoke Science Study Group is responsible for the scientific study of emissions from, and exposure to, tobacco and related products. This includes development of specific chemical and biological methods and investigation of means to assess exposure and use."

CORESTA RECOMMENDED METHODS

Updated

- ◆ **CRM No. 36** – Determination of Nitrate in Tobacco and Smokeless Tobacco Products by Reduction to Nitrite and Continuous Flow Analysis (*Fourth edition – January 2015*)

The CRM references were updated after the publication by the Sub-Group Smokeless Tobacco of its Technical Report "Determination of Nitrate in Smokeless Tobacco Products by Continuous Flow Analysis. 2010 Collaborative and Proficiency Studies" in January 2015.

New

- ◆ **CRM No. 79** – Determination of ammonia in tobacco and tobacco products by ion chromatographic analysis (*April 2015*)

This CRM provides an optimised procedure for the determination of ammonia and is applicable to single grades of tobacco, processed tobaccos, smokeless tobacco products, and cigarette filler. The goal of this work had been to expand the scope of CRM No. 73 – *Determination of Ammonia in Tobacco by Ion Chromatographic Analysis*, to include smokeless tobacco products.

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



UPCOMING CORESTA MEETINGS (2015)

Meeting	Date	Location
Sub-Group Smoking Behaviour (TSB)	7-8 May	Zurich, Switzerland
Sub-Group Biomarkers (BMK)	7-8 May	Zurich, Switzerland
Task Force In Vitro Toxicity Testing of Tobacco Smoke (IVT)	18-19 May	Neuchâtel, Switzerland
INFESTATION CONTROL CONFERENCE (PSMST)	18-19 May	Lilongwe, Malawi
Sub-Group Pest and Sanitation Management in Stored Tobacco (PSMST)	20-21 May	Lilongwe, Malawi
Task Force CORESTA Standards (STDS)	2 June	Strasbourg, France
Agrochemical Advisory Committee (ACAC)	2 June	Strasbourg, France
Reading Committee	3 June	Strasbourg, France
Scientific Commission	4-5 June	Strasbourg, France
Task Force E-Cigarettes (ECIG)	10 June	Toronto, Canada
Sub-Group Agrochemical Analysis (AA)	29-30 June	Victoria Falls, Zimbabwe
Board	8-9 July	Windsor, UK
SMOKE SCIENCE and PRODUCT TECHNOLOGY	4-8 October	Jeju Island, South Korea
AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS	25-29 October	Izmir, Turkey

CORESTA SUB-GROUPS & TASK FORCES

AGRONOMY & LEAF INTEGRITY Study Group

Amendment to Objectives: Sub-Group TSNA in Air-Cured and Fire-Cured Tobacco (TSNA)

Updated Objectives:

1. To determine proper placement of data loggers in curing barns to best represent the true curing conditions within the barn.
2. To review the issues of post-cure tobacco storage and ventilation parameters.
3. Sampling
 - (a) To define proper sampling method of post-cure tobacco for TSNA determination.
 - (b) To determine the optimal method for sample preparation for TSNA determination.
4. To collect available TSNA presentations and papers and publish them on the CORESTA website.

UPDATE

Disbanded: Task Force Curing Technology (CTECH)

This Task Force, formed in 2008, has completed its work and was disbanded by the Scientific Commission. A full final report on this Task Force will be presented at the next Agro-Phyto Joint Study Groups meeting in Izmir, Turkey, in October 2015.

DISBANDED

PHYTOPATHOLOGY & GENETICS Study Group

Disbanded: Sub-Group Collaborative Study on Blue Mould (BM)

This Sub-Group was formed in 1964 to address the blue mould epidemic ravaging tobacco crops at the time. The Scientific Commission considered that since no new material had been found recently and no new developments reported over the last five years, the Sub-Group could be disbanded. Only a link with the AERET Blue Mould Warning Service is to be retained on the CORESTA website.

DISBANDED

SMOKE SCIENCE Study Group

Amendment to Group Type and Objectives: Sub-Group *In Vitro* Toxicity Testing of Tobacco Smoke (IVT)

Updated Objectives:

1. To conduct a proficiency testing programme to evaluate cigarette smoke using common experimental protocols and the Task Force's recommended test battery.
2. To compile and review information on *in vitro* whole smoke methodology.
3. To critique and review published papers and other available information on tobacco-related toxicity and suggest suitable work for further biological research and/or proficiency tests.

The Task Force was changed to a Sub-Group to better cover the scope of its amended objectives.

UPDATE

PRODUCT TECHNOLOGY Study Group

Amendment to Name and Objectives: Task Force Cigarette Variability (CVAR)

Updated Objectives:

1. To develop an appropriate experimental plan to explore cigarette variability.
2. To conduct a collaborative study to enhance the understanding of overall tobacco and smoke analyte variability relevant to commercial cigarette design features.
3. To create a CORESTA technical report.

The word "Manufacturing" was removed from the name of the Task Force.

UPDATE

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

CORESTA REPORTS

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

- **Determination of Nitrate in Smokeless Tobacco Products by Continuous Flow Analysis. 2010 Collaborative and Proficiency Studies**

Technical Report – January 2015 (Sub-Group Smokeless Tobacco)

The goal of this work was to calculate repeatability and reproducibility and update the current CORESTA Recommended Method (CRM) to include smokeless tobacco products as the CRM was developed with ground tobacco only. The study results demonstrated that the method was also suitable for the analysis of smokeless tobacco products and CRM No. 36 was updated.

- **CORESTA Reference Products - 2014 Analysis**

Technical Report – January 2015 (Sub-Group Smokeless Tobacco)

After the first report of the work done in 2011, and the second and third reports published in July 2014, this report presents the results of the fourth collaborative study designed to assess the stability of four smokeless CORESTA Reference Products (CRPs).

- **2012 Collaborative Study on Humectants**

Technical Report – February 2015 (Sub-Group Smokeless Tobacco)

A collaborative study was conducted in 2012 to evaluate the suitability of the CORESTA Recommended Methods (CRMs) Nos. 60 and 61 for the determination of 1,2-propylene glycol and glycerol in smokeless tobacco products. The study results demonstrated that the methods are fit for use and that the scopes of both CRMs should be updated to include smokeless tobacco products.

- **2013 Collaborative Study of CORESTA Monitor #7 (CM7) for the Determination of Test Piece Weight, TPM, Water, Nicotine, NFDPM, Carbon Monoxide and Puff Count Obtained under Mainstream 'ISO' and 'Intense' Smoking Regimes**

Technical Report – February 2015 (Sub-Group Routine Analytical Chemistry)

The Sub-Group Routine Analytical Chemistry is responsible for organising the annual testing of the CORESTA Monitor test piece. The analytical results of the 2013 collaborative study confirmed that it can be used as a monitor test piece in smoke analysis.

- **2014 Collaborative Study of CORESTA Ignition Propensity Monitor Test Piece CM IP 2 for the Determination of Ignition Propensity**

Technical Report – March 2015 (Sub-Group Routine Analytical Chemistry)

The Sub-Group Routine Analytical Chemistry was given the responsibility to provide a monitor test piece specific for the ignition propensity testing. A candidate CORESTA monitor test piece, called CORESTA Monitor IP No. 2 (CM IP 2), was manufactured and a collaborative test organised. This report presents the results of the statistical evaluation performed with the results obtained from the participating laboratories.

- **2014 Electronic Cigarette Aerosol Parameters Study**

Technical Report – March 2015 (Task Force E-Cigarettes)

The goal of this collaborative study was to compare results from cigarette-machine puffing of e-cigarettes under a range of puffing parameters to make a recommendation for standardised parameters. The study results demonstrated that any of the regimes evaluated gave similar results but that one would be more suitable for machine-testing of e-cigarettes of a conventional design for the determination of major constituents in trapped aerosol. Thus the favoured parameters (55mL/3s/30s/square) will serve as a recommended machine regime for e-cigarette aerosol collection and will be used for an upcoming proficiency test.

- **E-Cigarettes: E-Liquid Preliminary Proficiency Study**

Technical Report – March 2015 (Task Force E-Cigarettes)

The objective of this work was to compare results from multiple laboratories applying their own internal analytical methods for the determination of nicotine, propylene glycol, glycerin and water in e-liquid samples. The study demonstrated that even without a common method, results were broadly consistent, of low variability, and highly accurate among the participating laboratories, and that establishment of a CORESTA recommended method may be warranted.

- **E-Cigarettes: A Brief Description of History, Operation and Regulation**

Reference Report – February 2014 (Task Force E-Cigarettes)

This document was published in February 2014 as a point-in-time reference of e-cigarette technology and regulatory status in 2013. A note was added to the document to indicate this and mention that it does not include any emerging technology, new regulations, and advancements in e-cigarette knowledge after February 2014.

CIGARETTE VARIABILITY TASK FORCE

Analytical scientists worldwide measure analytes in cigarette tobacco and smoke and there is variability associated with these measurements. This variability can be due to either analytical sources (e.g. different methodologies or laboratories) or the inherent variability of the commercial cigarettes (e.g. raw materials or product design features). CORESTA has and is continuing to effectively understand and minimise analytical variability by creating consensus methods (CORESTA Recommended Methods) for measuring tobacco and smoke constituents through Sub-Groups such as Special Analytes, Routine Analytical Chemistry and Physical Test Methods. CORESTA has not historically addressed quantifying the variability associated with commercial cigarettes. In June of 2014, the CORESTA Scientific Commission approved the formation of the Cigarette Variability (CVAR) Task Force. The revised objectives (approved by the Scientific Commission in January 2015) of the CVAR Task Force are:

1. To develop an appropriate experimental plan to explore commercial cigarette variability
2. To conduct a collaborative study to enhance the understanding of overall tobacco and smoke analyte variability relevant to commercial cigarette design features
3. To create a CORESTA technical report

The CVAR Task Force, led by Jason Flora (Altria Client Services) and Rana Tayyarah (Lorillard Tobacco Company), held its first meeting on November 20, 2014, in Paris, France (hosted by Altria Client Services). The second Task Force meeting was held on March 17, 2015, in the USA in Charlotte, NC (hosted by Reynolds American Inc. Services Company). The meetings were attended by participants representing international cigarette manufacturers as well as machinery and raw material suppliers. During the course of these meetings, decisions were made regarding the appropriate experimental design that will provide a better understanding of measured tobacco and smoke analytes as it relates to worldwide commercial cigarette variability. Participants volunteered to provide commercial product and/or analytical services. The experimental design is being finalised and the Task Force plans to begin execution in the second quarter of 2015.



Jason FLORA
CVAR TF Coordinator



Rana TAYYARAH
CVAR TF Secretary

E-CIGARETTE TASK FORCE

The CORESTA E-Cigarette Task Force (ECIG TF), which was formed in 2013, has steadily grown and now has over 55 members from 45 different organisations representing e-cigarette and e-liquid manufacturers, academia, regulators, equipment suppliers, and testing labs. The Task Force is led by Dr Chuck Garner (Reynolds American Inc. Services Company) and Dr Rob Stevens (Lorillard Tobacco Company). The Task Force has completed three studies focused on the testing of e-liquid composition, the parameters for collection of e-cigarette aerosol, and the analysis of e-cigarette aerosol for nicotine, glycerine, propylene glycol, and water.

Rob Stevens made a presentation* at the first US FDA e-cigarette Workshop on December 10, 2014, whose purpose was “to gather scientific information and stimulate discussion among scientists about electronic cigarettes.” At this same Workshop, Mike Ogden, from Reynolds American Inc. Services Company and CORESTA Board Member, was a panellist. Chuck Garner was similarly a panellist at the second US FDA e-cigarette Workshop on March 9-10, 2015, that focused on “the impact of e-cigarettes on individual health.” In April 2015, Pierre-Marie Guitton, Secretary General for CORESTA, presented the Task Force accomplishments at a meeting of the French Standardisation body (AFNOR) linked to the development of standards in Europe. These presentations highlighted recent results for both e-liquid and e-cigarette aerosol studies, including discussions of major ingredients, analytical methods, selection of puffing parameters, and puff yields. Based on the Task Force’s findings, a 55 ml puff volume, 3 second puff duration, 30 second puff interval, and a square wave puff profile was recommended as a standardised approach for e-cigarette aerosol collection. In addition, the Task Force has implemented a preliminary proficiency study conducted at 14 labs using eight different Disposable and Rechargeable products. Tank systems will be studied in a second stage.

The CORESTA E-Cigarette Task Force Technical Reports have recently been posted on the CORESTA website as shown in this Newsletter. The Task Force is scheduled to hold its next meeting on June 10, 2015, in Toronto, Canada (sponsored by Labstat International ULC).

* Presentation can be viewed on the CORESTA website under the "Regulatory Affairs" section.



Chuck Garner
ECIG TF Coordinator



Rob Stevens
ECIG TF Secretary

CORESTA IN THE PRESS

Tobacco Journal International

CORESTA published an article in the *Tobacco Journal International* (TJI) Issue 6/2014, pages 120-122, entitled "CORESTA Congress Quebec – a place for scientific dialogue" highlighting the presentations, outcome and activities at the recent 2014 CORESTA October event.



Tobacco Reporter "Vapor Voice"

CORESTA's involvement in e-cigarette research is covered in the article "Science to the rescue" published in *Tobacco Reporter's* Vapor Voice Issue 1/2015, pages 22-24. The author discusses how CORESTA research and collaboration with the wider standardisation and regulatory scientific communities "should help counter misperceptions about e-cigarettes."

The full texts of these articles are available on the CORESTA website at www.coresta.org



CORESTA NEWSLETTER

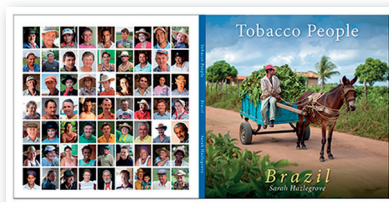
To communicate CORESTA information to a wider audience and ease circulation within organisations, the Newsletter is now available publicly for download in electronic format from the CORESTA website at www.coresta.org, beginning with Issue 39 - July 2014.

A paper version nevertheless remains valuable in terms of reading comfort, with high quality paper and print, and easier filing. Persons belonging to CORESTA Member companies who wish to receive a paper copy of the Newsletter by regular post are asked to please contact the CORESTA General Secretariat (if they have not already done so) in order to be added to the hardcopy mailing list for future issues.

"TOBACCO PEOPLE"

Sarah Hazlegrove, a fine art and commercial photographer, has created a series of three books featuring "Tobacco People" in Brazil, Indonesia and Malawi. Inspiration for these books came from her family's 200 year background of tobacco farming in Virginia, USA.

As mentioned on Sarah Hazlegrove's website (www.tobacco-people.com) the books offer "a different view of the tobacco world", a look "behind the scenes" and "a very simple but beautiful portrayal of the hardworking farmers and the communities where tobacco is grown." A fourth book on "Tobacco People" in Virginia will be published shortly.



Acronyms/abbreviations used in the Newsletter

ACAC..... CORESTA Agrochemical Advisory Committee	ISO/TC 126.....ISO Technical Committee on Tobacco and Tobacco Products
AFNOR Association Française de Normalisation	IVT.....In Vitro Toxicity Testing of Tobacco Smoke
AP2015 2015 Agronomy & Leaf Integrity and Phytopathology & Genetics Joint Study Groups Meeting	RFTAgrochemical Residue Field Trials
CM IP CORESTA Monitor Ignition Propensity	SGSub-Group
CPA Crop Protection Agent	SGTF.....Sub-Group and Task Force
CRM..... CORESTA Recommended Method	TFTask Force
CVAR..... Cigarette Variability	SSPT20152015 Smoke Science and Product Technology Joint Study Groups Meeting
ECIG..... E-Cigarette	SUST.....Sustainability in Tobacco Production
FDA..... Food and Drug Administration (USA)	UNESCOUnited Nations Organization for Education, Science and Culture
GMO Genetically Modified Organism	TSNATobacco Specific Nitrosamines
GRL Guidance Residue Level	
ISO International Organization for Standardization	

OBITUARY – KARL THELEN



Karl-Ludwig Thelen tragically passed away on 27 January 2015.

Karl worked for Papierfabrik Wattens, Austria, since 1974 when he joined as Laboratory Manager. In 1980 he was appointed Head of R&D, Quality Assurance and Quality Management Systems responsible for quality, environment and safety issues together with product integrity and customer relations. In 1999 he also took charge of Corporate and Regulatory Affairs. He retired in March 2013.

Karl was well known to many CORESTA participants due to his active participation in CORESTA activities. He attended numerous CORESTA meetings and Congresses, and had been coordinator of Task Forces working on cigarette paper burning additives and combustibility, cigarette ignition propensity and filter attachment technology from 1995 to 2008. He was also briefly secretary of the Smokeless Tobacco Sub-Group in 2012. Karl served on the CORESTA Scientific Commission for six years, two of which were served as President of the Product Technology Study Group (2004-06). He then represented Papierfabrik Wattens on the Board from 2006-2012. In 1999 he hosted the Joint Smoke Science and Product Technology Study Groups Meeting in Innsbruck, and also hosted Board and Scientific Commission meetings in Austria.

One of Karl's many talents was to establish contacts. Within CORESTA he contributed greatly to enlarging the network inside the industry, building bridges and encouraging cooperation. CORESTA would like to express its gratitude for Karl's dedication to the association, and presents its sincere condolences to his wife Eva and his family and his former colleagues.

ERRATUM: CORESTA Newsletter – Issue 40

2014-2016 Scientific Commission: *The biography for Martin Blumenstock erroneously reflected that of the former Secretary of the Smoke Science Study Group, Kei Yoshino. CORESTA sincerely apologises to Martin Blumenstock and CORESTA members for this error. It has been corrected on the electronic version of the Newsletter Issue 40 published on the CORESTA website.*

Vice-President

Martin BLUMENSTOCK, British American Tobacco, Germany



Martin holds a PhD in analytical chemistry from the Technical University, Munich. During his 12 years' service with BAT he has gained a professional background in product technology & analysis and scientific & regulatory affairs. He is an expert member on various national and regional technical committees and heads-up BAT's Western Europe Analytical labs.

