Agrochemicals Analysis (AA) Sub-Group Report

2019 CORESTA AP Conference
Victoria Falls, Zimbabwe
17th October 2019
AA SG – Objectives

- To perform regular proficiency testing of Multi-Residue Methods for the analysis of agrochemical residues on tobacco.

- To undertake joint experiments to resolve unanswered questions arising from proficiency tests; to expand knowledge base on agrochemical residues and their analysis.

- To produce and maintain a series of Technical Notes (on different agrochemical residue classes and selected individual compounds) to supplement the Technical Guideline and aid method development and improvement.
Proficiency testing 2019 (FAPAS FT0115)

- 107 CPAs listed in CORESTA Guide No.1 and its 23 GRL candidates
- Direction on reporting the sum of CPAs
  - Residue definition and Conversion factor
- Two test materials (artificially spiked and agronomically incurred)
  - 17 CPAs spiked on blank Burley tobacco
  - 12 CPAs in incurred Oriental tobaccos (provided by RFT SG)
- 28 laboratories from 18 countries
- z-score evaluation
- FAPAS Report (June 2019)
- Discussion at SG meeting in July 2019
AA SG – Activities

**z-score trend (FAPAS FT0101-FT0115)**

Analytes not found

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<th>Year</th>
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Proportion of z-scores

% |z|≤2

% |z|>2
Follow-up of Joint Experiment Technical Study (JETS) on Maleic Hydrazide

- During the systematic review of the ISO 4876:1980 method (Tobacco and tobacco products - Determination of maleic hydrazide residues) in 2011, two revision proposals were submitted to the ISO/TC 126/SC 2.
- AA SG conducted two rounds of JETS in 2016 and 2017 to evaluate the capacity of two proposed methods and concluded that the tested methods did not compare to the ISO method statistically and needed further development.
- The ISO/TC 126 adopted the Resolution No 94 in 2018 that SC 2 decides to wait for the work of CORESTA AA SG prior to initiate a new work item proposal.
- SG made a statement of the findings from two JETSs in 2018 for submitting to the ISO/TC 126/SC 2, instead of a third study for developing a new method.
- CORESTA submitted the statement in 2018 to the ISO/TC 126, in response to the Resolution No 94.
- The ISO/TC 126 mentioned the Resolution No 94 and decided not to initiate a new work item proposal in 2019, in accordance with the feedback from CORESTA.
Revision of CORESTA Guide No.5 - Technical Notes (TNs)

- Guide No.5 and TN #001: Maleic Hydrazide were revised in October 2018.
- Following the TN #001, AA SG decided to revise TNs #002-#005:
  - TN #002 Dinitroanilines
  - TN #003 Methamidophos
  - TN #004 Pyrethroids
  - TN #005 Dicamba, 2,4-D, 2,4,5-T

- Revised versions drafted and finalized by SG members
- To be published on the CORESTA website after reviewed by the Scientific Commission and the Board
2019 AA SG meeting
❖ Dubai, UAE on July 3-4, 2019
❖ Hosted by Premium Tobacco
❖ 23 participants from 14 countries
❖ 18 presentations by 10 speakers
Joint Experiment Test Study (JETS 19/1) on Matrix Effects from DAC tobacco

- **Coordinator:** Masahiro Miyoshi (JT)
- **Background:**
  - Matrix effects are a major concern in CPA analysis on tobacco.
  - AA SG has conducted numerous proficiency testing and JETS using BLY (Burley) or FCV (Flue-cured Virginia), however DAC (dark air-cured) tobacco was never used.
- **Objective:**
  - To know if there are any differences in matrix effects among DAC, BLY and FCV
- **Study design:**
  - Comparing responses from solvent standard and three types of matrix-matched standards
- **11 laboratories registered**
- **Test materials (DAC, BLY, FCV) to be dispatched (November 2019)**
- **Outcome to be discussed at next SG meeting**
Proficiency testing 2020 (FAPAS FT0116)

➢ Meeting with FAPAS on 18 Sep 2019
➢ Study design confirmed
  ● Spiked and incurred tobacco samples
  ● Trackable sample shipment
  ● Reminding participants of reporting rule for the sum of CPAs

➢ Timeline
  ● Registration: Jan 2020
  ● Sample dispatching: Feb 2020
  ● Submission of results: Apr 2020
  ● FAPAS report: May 2020
  ● Discussion: Jun 2020
Proficiency testing 2019 (FAPAS FT0115)

➢ Dominic Anderson (Fera)
➢ Marco Prat (JTI)
➢ Torbjörn Synnerdahl (Eurofins Sweden)
➢ CORESTA RFT SG
➢ All participating laboratories

Follow-up of Joint Experiment Technical Study (JETS) on Maleic Hydrazide

➢ Keisuke Nakayama (JT)
➢ Pierre-Marie Guitton (CORESTA)

Revision of Technical Notes

➢ Bernhard Mayer-Helm (JTI)
➢ Heather Westberg (GLS)
➢ Cabinet C. Musuna-Garwe (TRB)
➢ Mark Hathaway (Microbac)
➢ Jodi Ruotolo (Microbac)
➢ Huimin Deng (CTQTC)
Thank you for your attention!