Tobacco and Tobacco Products Analytes Sub-Group (TTPA) Annual Report

2020 Online CORESTA Congress
October 2020
Coordinator and Scientific Commission Liaison
   ➢ Karl Wagner, Ph.D. (Altria Client Services, United States)

Secretary
   ➢ Johan Lindholm, Ph.D. (Swedish Match, Sweden)

Established in 2008

Meet twice a year
   ➢ ~ 50 attendees
   ➢ ~ 40 organisations represented

Meetings since 2019 SSPT Meeting, Hamburg
   ➢ 26th meeting – virtual (April 23, 2020)
   ➢ 27th meeting – virtual (scheduled for October 13, 2020)
Subgroup Objectives

- To organise the manufacture of and maintain smokeless tobacco reference products (CRPs)
- To propose and maintain CORESTA Recommended Methods (CRMs) and related documents for the analysis of tobacco and unburned tobacco products
- To organise interlaboratory testing
Organization of RAC, SMA and TTPA SGs
(COR-080/20)

❖ The SC conducted a review of SG workstreams to optimize the workload and the use of resources

❖ RAC and SMA would merge to form a new SG – Smoke Analysis (SA)
  ➢ Co-Coordinators: Jana Jeffery and Hiromoto Yamazaki
  ➢ Workstreams and leads:
    • Reference products – Thomas Schmidt
    • Cigar smoke HPHC methods – Anthony Brown
    • Cigarette smoke methods – Rana Tayyarah

❖ The scope of work would not change

❖ Transition projects involving smoke to the SA workstreams and the projects involving tobacco and unburned tobacco products to the TTPA
Produced in 2009 and 2016

- Swedish style snus pouch
- American-style loose moist snuff
- American-style loose dry snuff powder
- American-style loose-leaf chewing tobacco
CORESTA Reference Products (CRPs)

2009
CRP 1 – CRP 4

2016
CRP 1.1 – CRP 4.1
Collaborative studies to assess stability:
- Nicotine
- TSNAs
- pH
- Moisture (oven volatiles)

CRPs have been shown to be stable when stored at the recommended temperature of -20 °C

Distributed by North Carolina State University
- [https://strp.wordpress.ncsu.edu/](https://strp.wordpress.ncsu.edu/)
Ground Tobacco Reference Products
University of Kentucky, Center for Tobacco Reference Products

- Dark Fire-Cured
- Flue-Cured
- Dark Air-Cured
- Oriental
- Burley
- Flavored Cigar Filler
- Unflavored Cigar Filler
11 Documents Published in Last 12 Months

- CORESTA 2009 Reference Products - 2019 Analysis (July 2020)
- 2019 Collaborative Study for the Determination of Nicotine in Tobacco and Tobacco Products (April 2020)
  - CRM No. 62 - Determination of Nicotine in Tobacco and Tobacco Products by Gas Chromatographic Analysis (April 2020)
  - CRM No. 87 - Determination of Nicotine in Tobacco Products by GC-MS (April 2020)
- 2019 Stability Study Protocol for Sample Handling of Smokeless Tobacco and Smokeless Tobacco Products - Collaborative Study (May 2020)
  - Guide No. 11 - Technical Guideline for Sample Handling of Smokeless Tobacco and Smokeless Tobacco Products (May 2020)
- 2018 Metals Collaborative Study (July 2020)
  - CRM No. 93 - Determination of Selected Metals in Tobacco Products by ICP-MS (July 2020)
- 2020 Nicotine and Nicotine Degradants Proficiency Study
- No. 15 - CORESTA Reference Products - Production and Evaluation
**Future Work Plan**

**Ongoing**

1. Development of CRM for nicotine and nicotine degradants in nicotine pouches and e-liquids
   - Currently in small group development
2. Characterization of new University of Kentucky reference products
   - 4 certified smokeless products sponsored by FDA
   - 4 reference cigars for un-burned analytes produced by industry working group
3. Biennial stability study for 2016 CRP
4. Evaluate CRMs for fitness of use for the analysis of tobacco free nicotine pouches
5. Development of CRM for nitrate and nitrite in unburned tobacco and tobacco products by IC
   - Propose small group development
6. PT Study for Total Aerobic Microbial counts (TAMC), Total Yeast and Mold counts (TYMC) in unburned tobacco products
7. Evaluate and update Guides No. 11 to include other products (cigars, ?)
   - No. 11 - Technical Guideline for Sample Handling of Smokeless Tobacco and Smokeless Tobacco Products
8. Minor alkaloids proposal from RAC

**Not initiated**
## Constituents of Regulatory Concern

**Unburned Tobacco Filler (cigarettes, cigars, RYO)**

<table>
<thead>
<tr>
<th>Constituent</th>
<th>CRM</th>
<th>ANVISA (Brazil)</th>
<th>Health Canada</th>
<th>China STMA</th>
<th>US FDA</th>
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NA = not required
## Constituents of Regulatory Concern

### Smokeless Tobacco

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<td>93</td>
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<td>✓</td>
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The “‡” symbol indicates pH is either required or needed for the calculation of free nicotine.
Benefits to the Scientific Community

❖ Production and maintenance of CRPs

❖ Development of robust CRMs with defined repeatability and reproducibility values

❖ Interlaboratory studies
  ➢ Provides laboratory performance feedback
  ➢ Supports ISO 17025 accreditation

❖ Study results and methodology are a source of engagement with stakeholders
Participating laboratories and their management’s support

Study Coordinators and Statistical Support

- Tony Brown and Mike Morton (Altria)
  - CORESTA 2016 Reference Products - 2019 Analysis

- John Bunch (American Snuff Co.) and Mike Morton (Altria)
  - CORESTA 2009 Reference Products - 2019 Analysis

- Tony Brown and Mike Morton (Altria)
  - Collaborative Study for the Determination of Nicotine in Tobacco and Tobacco Products and revision of CRM Nos. 62 and 87

- Johan Patring and Robert Pendrill (Swedish Match)
  - 2019 Stability Study for Sample Handling of Smokeless Tobacco and revision of Guide No. 11

- Jannell Rowe (R.J. Reynolds), Chao Wei and Walter Morgan (RAI Services Company)
  - Metals Collaborative Study and publication of CRM

- Fadi Aldeek and Mike Morton (Altria)
  - 2020 Nicotine and Nicotine Degradants Proficiency Study
Thank You!