Sub-Group Report
Physical Test Methods (PTM)

Berlin, Germany

October 11, 2016

Outline

- The PTM Sub-Group
- Objectives
- Proficiency Test on Physical Parameters
- Round Robin Tests on Calibration Standards
- Other Work Items
- Planned Work Items
- Issues and Observations
- Next Meeting

The PTM Sub-Group

- **Sub-Group established in 2007**
- **Executives**
  - **Coordinator** — **Bernhard EITZINGER**
  - **Secretary** — **Patricia MÜLLER**
  - **SC Liaison** — **Nils ROSE**
- **Meetings**
  - **22nd Meeting** — **Milton Keynes, UK** — **April 7, 2016**
  - **23rd Meeting** — **Berlin, Germany** — **October 7, 2016**

Objectives

1. To develop and maintain CORESTA Recommended Methods (CRMs), pertinent to physical test methods related to tobacco products and their components

2. To develop CORESTA Technical Reports and Guides for the application of physical test methods related to tobacco products and their components

3. To organise, conduct and report on routine inter-laboratory studies in order to assess inter-laboratory consistency and to enable continual improvement of participating laboratories.

Former objectives 4-6 cancelled.

CORESTA Recommended Methods

- CRM 06 – Ventilation (1983) — ISO 9512
- CRM 40 – Air Permeability (1994) — ISO 2965
- CRM 41 – Draw Resistance (1995) — ISO 6565
- CRM 53 – Wrapper Burn Speed (2002)
- CRM 77 – Diffusion Capacity (2014)

- ~~CRM 25 – Air Flow in Smoking Machines (1991) — ISO 3308~~

Proficiency Test on Physical Parameters

- Annual proficiency test
- Participation of 15-20 laboratories
- Measurement of filters and cigarettes
  - Filters — weight, diameter, pressure drop (encapsulated)
  - Cigarettes — weight, diameter, open pressure drop, closed pressure drop, filter ventilation
  - Repeated measurements on different days
- Evaluation by z-scores

Proficiency Test on Physical Parameters

- 6th Proficiency Test on Physical Parameters (2013)
  - Report completed, but remains internal to PTM
- PTM063 - 7th Proficiency Test on Physical Parameters (2014)
  - Report submitted to SC
- PTM064 - 8th Proficiency Test on Physical Parameters (2015)
  - Report submitted to SC
- PTM108 - 9th Proficiency Test on Physical Parameters (2016)
  - Measurements completed; Evaluation and report pending
- 10th Proficiency Test on Physical Parameters (2017)
  - NWIP to be prepared

RR Tests on Calibration Standards

- Regular round robin (RR) test on calibration standards
- Participation of 3-4 calibration laboratories
- High-precision measurement of calibration standards for
  - Pressure drop
  - Filter ventilation
  - Air permeability
- Circulation of standards often takes more than one year
- Evaluation by z-scores

RR Tests on Calibration Standards

Pressure Drop

- PTM058 – 10th RR Test — Report published
- PTM059 – 11th RR Test — Evaluation and report pending
- PTM112 – 12th RR Test — Circulation started

Filter Ventilation

- PTM019 – 2nd RR Test — Report published
- PTM020 – 3rd RR Test — Report submitted to SC
- PTM021 – 4th RR Test — Circulation completed
- 5th RR Test — NWIP to be prepared

RR Tests on Calibration Standards

- **Air Permeability**
  - **PTM018 – 3rd RR Test** — **Report submitted to SC**
  - **PTM022 – 4th RR Test** — **Circulation ongoing**
  - **5th RR Test** — **NWIP to be prepared**

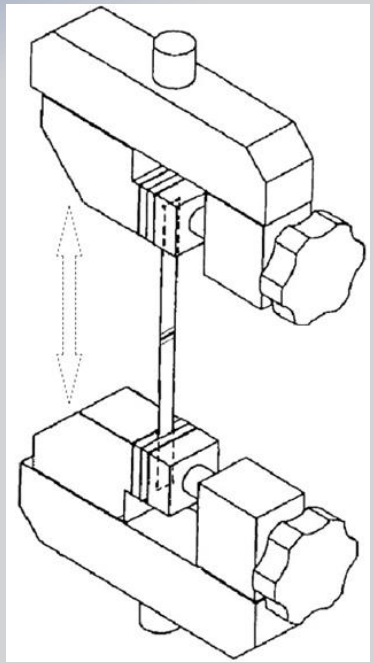
Other Work Items

- **PTM065 – Technical Report on CRM 40 (air permeability)**
  - Use of heads with small measurement area for paper samples taken from super-slim cigarettes
  - Influence of head geometry (area vs. perimeter) found
  - Report to be used for revision of ISO 2965
- **PTM061 – Update of CRM 6 (ventilation)**
  - Work ongoing since 2012
  - Updated version ready for publication

Other Work Items

- **PTM060 – New CRM on Snus Pouch Sealing Strength**
  - Draft method has been prepared in separate working group
  - First collaborative study (r&R) carried out
  - Revision of draft and second collaborative study
  - Further revision and third collaborative study planned
  - Publication of new CRM planned for second half 2017

❖ PTM060 – New CRM on Snus Pouch Sealing Strength



- Sample cut from snus pouch (2 options)
- Mounted in two spaced-apart clamps
- Clamps move at defined speed
- Force (stress) and distance (strain) are recorded
- Maximum force is reported
- Measurement in dry and wet state

Planned Work Items

- **CRM for Physical Measurements on Filter Capsules**
  - **WG installed to define the precise scope of the proposal**

- **3rd Proficiency Test on Diffusion Capacity**
  - **NWIP to be prepared**

Issues and Observations

- Discussion on collaborative study vs. proficiency test
- Uncertainty about outcome of work of STDS TF
  - Backlog regarding reports to be worked upon
- Positive experience with NWIP process
- New structure on project numbering / administration found helpful

Next Meeting

24th Meeting of the PTM Sub-Group

27th of April, 2017

Trier, Germany

upon kind invitation by Japan Tobacco International

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THANK YOU!