



# **Sub-Group Report Physical Test Methods (PTM)**

**Hamburg, Germany**

**October 9, 2019**



- ❖ **The PTM Sub-Group**
- ❖ **Objectives**
- ❖ **Collaborative Study on Physical Parameters**
- ❖ **Round Robin Tests on Calibration Standards**
- ❖ **Other Work Items**
- ❖ **Systematic Document Review**
- ❖ **Future Work Items**
- ❖ **Next Meeting**



# The PTM Sub-Group

## ❖ Sub-Group established in 2007

- 20 active members (42 on the distribution list)

## ❖ Executives

- **Coordinator**                      **Bernhard EITZINGER**
- **Secretary**                         **Patricia MÜLLER**
- **SC Liaison**                         **Bernhard EITZINGER**

## ❖ Meetings

- **28<sup>th</sup> Meeting**                      **Orléans, France**                      **April 3, 2019**
- **29<sup>th</sup> Meeting**                      **Munich (MUC), Germany**                      **September 17, 2019**



# Objectives

- 1. To propose and maintain CORESTA Recommended Methods (CRMs) and related documents for the physical testing of tobacco, tobacco products and their components.**
- 2. To organise interlaboratory testing related to Objective 1.**

❖ **No change since June 2018.**



# Published Documents

ID	Project Title	Status	Time
PTM-166	6 <sup>th</sup> Round Robin Test on Filter Ventilation Calibration Standards	TR published	03/2019
PTM-159	13 <sup>th</sup> Round Robin Test on Pressure Drop Calibration Standards	TR published	01/2019
PTM-167	11 <sup>th</sup> Collaborative Study on Physical Parameters	TR published	12/2018
PTM-192	Guide No. 4 on Pressure Drop Measurement	TG updated	01/2019
PTM-201	CRM 53 on Paper Wrapper Burn Speed	CRM updated	01/2019
PTM-214	CRM 77 on Diffusion Capacity	CRM updated	06/2019
PTM-215	Guide No. 14 on Diffusion Capacity	TG updated	06/2019



# Published Documents

ID	Project Title	Status	Time
PTM-060-1	Collaborative Study on Pouch Sealing Strength	TR published	03/2019
PTM-060-2	CRM 90 on Pouch Sealing Strength	CRM published	03/2019
PTM-216	Revision of CRM 90 and TR on related Collaborative Study	CRM revised	06/2019

- ❖ **PTM-204 12<sup>th</sup> Collaborative Study on Physical Parameters**
- ❖ **Measurement of Filters and Cigarettes**
  - **Filters**                                      **weight, diameter, pressure drop**
  - **Cigarettes**                                    **weight, diameter, open draw resistance**  
**closed draw resistance, filter ventilation**
  
  - **5 Filters, 5 Cigarettes, 5 replicate measurements on different days**
  
- ❖ **Monitoring CRMs 6, 41 and respective ISO standards**



# Annual Collaborative Study

- ❖ **PTM-204 12<sup>th</sup> Collaborative Study on Physical Parameters**
- ❖ **27 Participants (34 sample sets)**
- ❖ **Samples and protocol distributed in June**
- ❖ **Measurements completed (deadline August 31<sup>st</sup>)**
- ❖ **Statistical evaluation and report under preparation**



## ❖ Pressure Drop Calibration Standards

- PTM-159 13<sup>th</sup> RR Test – Technical Report published
- PTM-197 14<sup>th</sup> RR Test – Report under preparation
- PTM-209 15<sup>th</sup> RR Test – Circulation of standards ongoing

## ❖ Filter Ventilation Calibration Standards

- PTM-166 6<sup>th</sup> RR Test – Technical Report published
- PTM-191 7<sup>th</sup> RR Test – Report under preparation
- PTM-212 8<sup>th</sup> RR Test – Circulation of standards ongoing

## ❖ Air Permeability Calibration Standards

- PTM-152 5<sup>th</sup> RR Test – Circulation of standards almost completed
- PTM-211 6<sup>th</sup> RR Test – Circulation of standards started

## ❖ Revision of ISO Standards

- ISO 9512:2019 – Ventilation Revised standard published
- ISO 2965:2019 – Air Permeability Revised standard published



## ❖ PTM-060 CRM on Pouch Sealing Strength

### ➤ PTM-060-2 CRM

- CRM published in March 2019 as CRM 90
- Update of r&R data in June 2019

### ➤ PTM-060-1 Collaborative Study

- TR published in March 2019
- Update of report and r&R due to missing lab data in June 2019

## ❖ PTM-219 1<sup>st</sup> Collaborative Study on Air Permeability

### ➤ Measurements on Paper Samples

- |                              |          |                                |
|------------------------------|----------|--------------------------------|
| • Cigarette paper            | 60 CU    | 2×15 mm head and 10×20 mm head |
| • Plug wrap paper            | 10000 CU | 10×20 mm head                  |
| • Tipping electro-perforated | 400 CU   | 10×20 mm head                  |
| • Tipping laser-perforated   | 1400 CU  | 10×20 mm head                  |

### ➤ Protocol

- 3 replicates of 20 measurements per sample



## Other Work Items

- ❖ **PTM-219 1<sup>st</sup> Collaborative Study on Air Permeability**
- ❖ **11 Participants (16 sample sets)**
- ❖ **Samples and protocol distributed in June**
- ❖ **Measurements completed (deadline August 31<sup>st</sup>)**
- ❖ **Statistical evaluation completed**
- ❖ **Technical Report prepared and circulated in PTM SG**
- ❖ **Draft report submitted to SC for approval and comments**



## ❖ **PTM-218 CRM on Capsule Crush Strength**

- **CRM to measure the crush strength of flavor capsules for filters**
- **Project launched in May 2019**
- **8 participants**
- **First draft method distributed for comments in July 2019**
- **Draft method under revision**
- **First Collaborative Study for r&R data under preparation**



# Systematic Document Review

❖ CRM 06 – Ventilation (1983)	ISO 9512	updated	09/2016
❖ CRM 16 – Lamina Particle Size (1991)	ISO 12194	confirmed	10/2018
❖ CRM 17 – Stem Content (1991)	ISO 12195	confirmed	10/2018
❖ CRM 41 – Draw Resistance (2007)	ISO 6565	confirmed	10/2018
❖ CRM 40 – Air Permeability (2016)	ISO 2965	obsolete	
❖ CRM 53 – Wrapper Burn Speed (2002)		revised	01/2019
❖ CRM 77 – Diffusion Capacity (2014)		revised	06/2019
❖ CRM 90 – Pouch Sealing Strength (2019)		published	03/2019



# Systematic Document Review

❖ Guide No. 04 – Pressure Drop	revised	01/2019
❖ Guide No. 06 – Use of Balances	under revision	PTM-213
❖ Guide No. 10 – Diameter	to be revised	
❖ Guide No. 14 – Diffusion Capacity	revised	06/2019





# Future Work Items

- ❖ **Permeability of Pouch Materials**
  - Sufficient number of participants found
  - NWIP to be submitted
  
- ❖ **Collaborative Study on Diffusion Capacity**
  - NWIP to be submitted
  
- ❖ **Measurement of low pressure drops**
  - To be further discussed



# Next Meeting

**30<sup>th</sup> Meeting of the PTM Sub-Group**

**April/May 2020**

**Host to be defined.**



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**April/May 2020**

**Host to be defined.**

**THANK YOU!**