APPENDIX A3.2.2-13

PHYSICAL METHODS

Confidentiality Statement

Confidentiality Statement: Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

1. PHYSICAL METHODS

1.1. Physical Measurements

1.1.1. Length, Weight and Diameter of Tobacco Stick

The Cerulean C² is a test station for physical measurements.

The Tobacco Sticks are loaded either into a hopper or into the buckets of a multihopper. The hopper drops the sticks one by one onto a balance where the weight is measured. Each stick is then conveyed from the balance and transfered down on two rollers. A pusher moves the stick forward along the rollers and positions it under a camera for optical measurement of stick length and diameter. Then the pusher moves the stick through a microwave module after which it is transferred directly into a turner. The turner rotates and transfers the stick with the filter downwards into a pressure drop (PD) module where the Resistance to Draw (RTD) may be measured before the stick is ejected in a tray. Figure 1 shows a sketch summarizing the measurement procedure of the C^2.

The Tobacco Sticks are conditioned for at least 24 hours at 22 ± 2°C and 50 ± 5 % RH (Residual Humidity) before testing.

Relevant details of technical performance characteristics of instrument and method are given in Table 1. The instrument is qualified and method is validated.

Table 1: Cerulean C² Instrument Specifications and Method Repeatability

Tobacco Stick	Range*	Resolution*	Accuracy*	Repeatability**
Weight (g)	0.0 – 4.0	0.001	± 0.002	0.0012
Diameter (mm)	4.9 – 8.3	0.001	± 0.005	0.008
Length (mm)	43 – 150	0.01	± 0.15	0.23

* Instrument specifications

** Method repeteability

Confidentiality Statement

Confidentiality Statement: Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

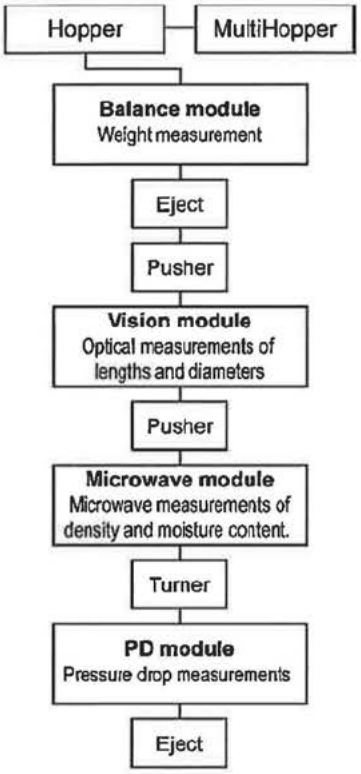


Figure 1: Cerulean C² Measurement Procedure

2. APPROVALS

	Name	Role	Signature	Date
Author	Hasan Goksel	Manager QA Technology		8 July 2016
Owner	Jan Verbeeck	Manager Testing Engineering		7 Jul 16
QA Review	Florence Kapp	QA Officer Audit		12Jul16

Confidentiality Statement

Confidentiality Statement: Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.