APPENDIX A3.3-7

P1 THS 2.2 STABILITY STUDY PROTOCOL DORADO I MINT VINNY LOW

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Introduction

This document describes the conditions for the THS 2.2 Low Menthol (Dorado I Mint Vinny) version (Platform 1) stability study and the tests planned for each time point, with the objective to demonstrate that the commercial product THS 2.2 produced at Philip Morris Manufacturing & Technology Bologna (PMMTB) remains within specifications, over the required period of (b) (4) .

(b) (4)

(b) (4) .

Batches

The batches were produced in PMMTB.

Table 1: Identification of THS 2.2 Dorado I Vinny Low

Product/ Test item	Consumable Batch Number	Finished Product Code	Manufacturing Date	Batch Size (sticks)
Dorado I Vinny Low	B-25900 / 41.2381531	ME000041.01	21.12.2015	(b) (4)
	B-25901 / 41.2374718	ME000041.01	22.12.2015	
	B-25902 / 41.2379112	ME000041.01	16.12.2015	

1.1 Samples Management

The samples required for the Stability study were delivered by the manufacturing site to the QC Unit after manufacturing and were placed in the climatic chambers in Philip Morris International, Neuchatel, R&D testing laboratories.

The samples are stored in the climatic chambers in packs. The packs are polypropylene wrapped packs consisted of two collation, each collation containing 10 Tobacco Sticks.

At each time point the dedicated number of samples will be removed from the climatic chambers for chemical, physical, sensorial evaluations and visual inspection.

Storage Conditions

Table 2: Stability Storage Conditions

(b) (4)

Table 3: WHO Climatic Zones

Climatic Zone	Definition	Long Term Testing Conditions
I	Temperate climate	21°C / 45% RH
II	Subtropical and Mediterranean Climate	25°C / 60% RH
III	Hot and dry climate	30°C / 35% RH
IVA	Hot and humid climate	30°C / 65% RH
IVB	Hot and very humid climate	30°C / 75% RH

Selection of Stability Parameters

1.2 Chemical and Physical Characterization

The chemical mainstream aerosol and physical parameters that will be followed during the stability study are listed in Table 4 to Table 6.

Table 4: List of Parameters Measured in the Mainstream Aerosol for the THS 2.2 Dorado Stability Study

Parameter	Units
(b) (4)	

Table 5: List of Physical Parameters Measured for the THS 2.2 Dorado Stability Study

Parameter	Unit
(b) (4)	

Table 6: Visual Inspection for the THS 2.2 Dorado Stability Study

Parameter	Unit
(b) (4)	

1.3 Sensorial Analysis

(b) (4)

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Table 7: Sensorial Analysis for the THS 2.2 Dorado Stability Study

Parameter	Unit
Quantitative Descriptive Profile	NA

Tests Methods and Specifications

(b) (4)

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Generation of the aerosol will be performed using the Health Canada Intense (HCI) smoking regime:

- Laboratory temperature: 22 ± 2°C
- Laboratory relative humidity: 60 ± 5%
- Puff volume: 55 mL
- Puff duration: 2.0 s
- Puff interval: 30 s
- Number of puffs: 12

All the instruments and material are listed in the relevant work instructions in Table 8.

Device DV.000174 is used to generate aerosol, device DV.000101.RD is used for sensorial evaluation in blind booths. The following test are performed by the testing laboratories.

Table 8: Tests, Methods and Specifications

Parameter	Method Name	Specifications
(b) (4)		

Parameter	Method Name	Specifications
(b) (4)		

Comments about the specifications:

(b) (4)

Testing Frequency

The samples are stored in climatic chambers in R&D Neuchâtel Product testing laboratories by the Test Item Management team.

The chemical and physical analyses are performed in R&D Neuchâtel Product testing laboratories.

(b) (4)

The visual inspection is performed in PMP QA laboratories.

Table 9: Testing Matrix Low Menthol product

Batch	Storage Conditions	Beginning of the Study	(b) (4)
(b) (4)			
(b) (4)			

(b) (4) according to Table 9, (b) (4) .

(b) (4) .

(b) (4)

Data Evaluation

The statistical analysis performed on stability data according to current procedures, following ICH Q1E and is performed by modelling the degradation profile of each test parameter by using regression models.

The regression analysis is performed to prove that a batch is capable of performing within the specification limits until the expiry date, at a certain confidence level.

The regression analysis defines the trend of a quantitative stability test parameter for each batch over time on the predetermined stress conditions.

Data Presentation

The results will be presented in a tabular form at the end of each time point. An intermediate report will be also written at T6. The raw data will be archived and can be audited upon request.

The analysis of the stability results will be performed at each time point and a final report will be issued at the end of the stability study.

Responsibilities

It is the responsibility of the Stability studies coordinator to ensure that the stability protocol is followed under the defined rules. (b) (4)

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(b) (4)

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(b) (4) .

References

WHO Stability Testing of Active Pharmaceutical Ingredients and Finished Pharmaceutical Products

ISO 3402:1999 Tobacco and Tobacco Products -- Atmosphere for Conditioning and Testing

International Conference for Harmonization ICH Q1E: Q1E Evaluation for Stability Data

International Conference for Harmonization ICH Q1A R2: Q1A(R2) Stability Testing of New Drug Substances and Products

P1 Product Specifications – appendix A3.2.1-3

Revision History for Stability Protocol

Version Nr	Description of change (including reason for change)	Justification
2.0	1. (b) (4) . 2. (b) (4) . (b) (4) . 4. (b) (4) . 5. (b) (4) 6. Added reference for P1 Product Specification report 7. Added Revision History for Stability Protocol	1. (b) (4) . Update of protocol.
3.0	1. (b) (4) 2. Added Stability study number in the header 3. Replaced Class of the parameters with units in Table 4 to Table 7 4. Updated Signature list and added roles	Update of protocol.
3.0 SV	1. General revision for submission purposes.	Update of protocol.
4.0 SV	1. (b) (4) . 2. Update of Table 9 (b) (4) .	1. (b) (4) . 2. (b) (4) at T4 (b) (4) .

Signatures

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