

Sterling Dual New – UK (200637285)



Report QDP Test

Technical Sensory Report

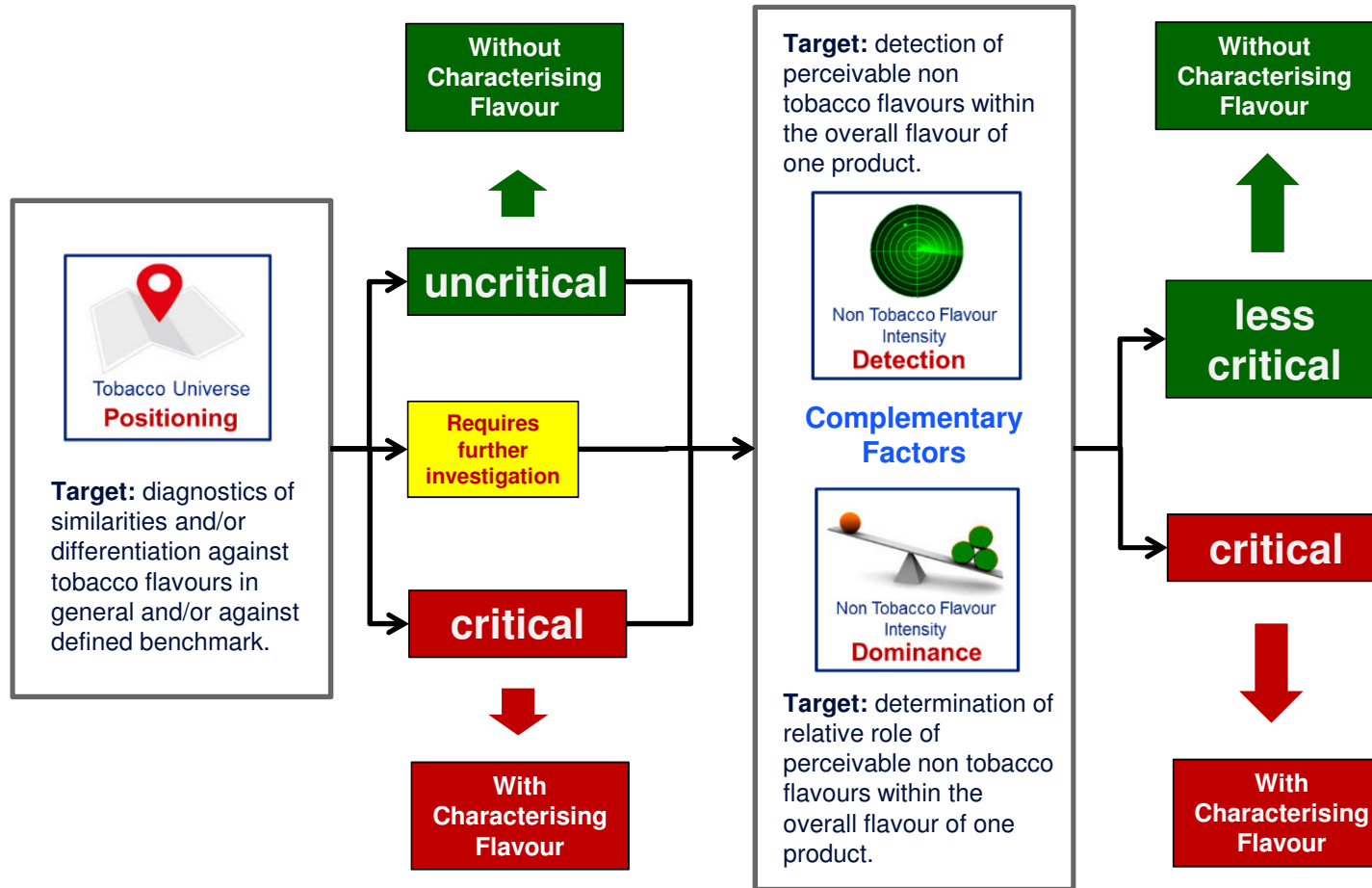
Annex to Test Report 4871612

16th July 2020



Critical Factors - Decision Tree (Principles)

Aggregated view on critical factors (matrix) leads to the risk assessment



Report QDP sniffing test (TPD “Characterising Flavours”)

Objective

Classification of the samples having “Characterising Flavours” or not for risk assessment.

Details of Samples

- Sterling Dual New – UK (200637285)

Procedure

- Method: QDP sniffing assessment
- Panel: SGS Panel, Hamburg
- Number of Panelists: 10
- Number of data points per sample: 30
- Week of testing: 6 - 10 July 2020

Test Execution

- Outsourced to external agency SGS (Hamburg/Germany) to avoid conflict of interest and to build on sensory expertise and experience of independent third party, highly qualified as globally operating Quality Assurance Service Provider.
- SGS works according to the applicable Quality Management Systems: ISO 17025, GMP, GLP, GEP, ISO: 9001/9100, 17021/17065 and 17020.

Result

Aggregated view on critical factors - Positioning, Detection, Dominance - following the Decision Tree results in the classification:

Sterling Dual New – UK ->

RISK 3



Sterling Dual New – UK: Result - **Criterion 1**



Scope of criterion: overall flavour perception of a product

Reference: overall flavour from tobaccos in general

Aim: diagnostics of similarities/differentiation against tobacco flavours in general

Evaluation: Principle Component Analysis (PCA) and Cluster Analysis

Actual Results

PCA

Sterling Dual New – UK

With characterising flavour – **critical**

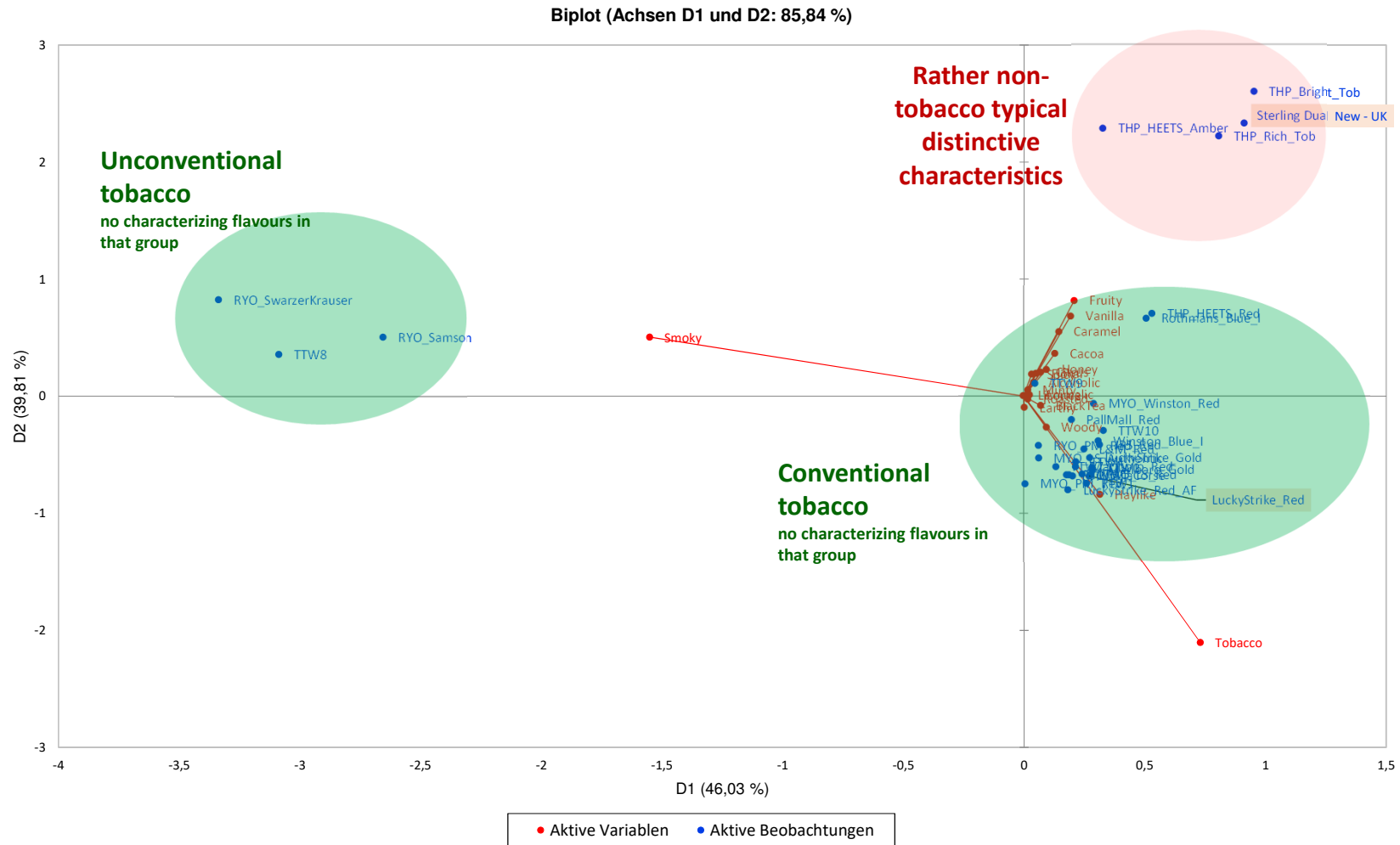
Cluster Analysis

Sterling Dual New – UK

With characterising flavour – **critical**

Sterling Dual New – UK: Result - Criterion 1 – PCA

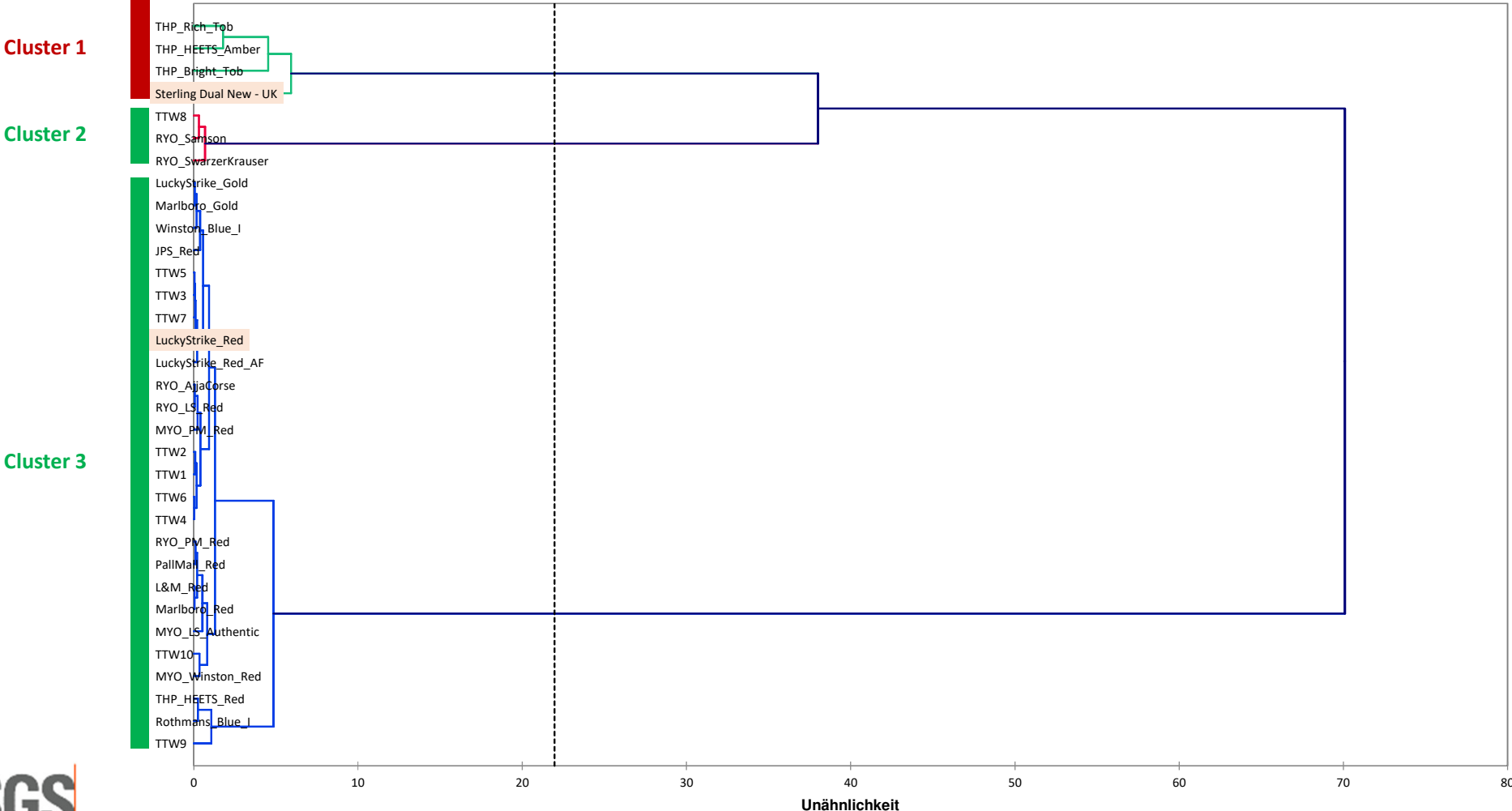
Segment: Rather non-tobacco typical distinctive characteristics



Sterling Dual New – UK: Result - Criterion 1 – Cluster Analysis

Assigned to Cluster 1 (Rather non-tobacco typical distinctive characteristics)

Dendrogramm



Sterling Dual New – UK: Result - **Criterion 2** 2 of the non tobacco flavours have a mean value > 1 – Fruity and Citrus



Scope of criterion: perception of individual, distinctive flavour directions

Reference: identified list of tobacco typical and tobacco non typical flavour directions

Aim: split of overall flavour perception into individual flavours contributing

Evaluation: perceived absolute intensities of distinctive flavour directions

Guiding Rules

Rules for classification as “characterising flavour”

non tobacco flavour mean value < 1 less critical
non tobacco flavour mean value > 1 critical

Actual Results

Mean value on 0-5 scale

Sample	Tobacco typical								Non tobacco typical										
	Tobacco	Smoky	Roasted	Haylike	BlackTea	Woody	Earthy	Animalic	Vanilla	Caramel	Honey	Fruity	Floral	Minty	Citrus	Cocoa	Licorice	Spicy	Alcoholic
Sterling Dual New - UK	1,60	0,00	0,07	0,27	0,13	0,07	0,00	0,03	0,43	0,33	0,20	2,70	0,43	0,43	1,17	0,07	0,00	0,00	0,17
Lucky Strike Red	4,17	0,00	0,67	1,19	0,31	1,03	0,17	0,06	0,08	0,08	0,19	0,03	0,00	0,00	0,03	0,03	0,00	0,00	0,00

LEGEND	
	>1 at non tobacco flavour

Sterling Dual New – UK

all non tobacco flavours > 1 **Critical**

Lucky Strike Red

all non tobacco flavours < 1 **Non Critical**

Sterling Dual New – UK: Result - Criterion 3

5 of the top 6 flavours are non tobacco Vanilla, Fruity, Floral, Minty and Citrus



Scope of criterion: perceived intensities of tobacco non typical flavours

Reference: perceived intensities of tobacco typical flavours in the same product

Aim: identify relevance of individual flavours contributing to overall flavour perception

Evaluation: Ranking of relative intensities of individual flavours contributing to the overall flavour perception

Guiding Rules Top 5 Ranking

Rules for classification as “no characterising flavour“

- Tobacco typical flavour has to be on top 1 ranking position (highest perceived intensity)
- Tobacco typical flavour has to be at least 1,0 scale units higher in intensity than any non tobacco typical flavour
- Top 5 flavour intensities must be dominated by tobacco typical flavours (3 of the 5 most intensive flavours have to be tobacco typical)

Actual Results

Sample	Tobacco typical								Non tobacco typical										
	Tobacco	Smoky	Roasted	Haylike	BlackTea	Woody	Earthy	Animalic	Vanilla	Caramel	Honey	Fruity	Floral	Minty	Citrus	Cocoa	Licorice	Spicy	Alcoholic
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LEGEND	
	Top 5

Sterling Dual New - UK:

Top ranking position is not tobacco, and 4 of the top 5 flavours are non tobacco
Therefore the product is **critical**

Lucky Strike Red:

All top 5 flavours are in the tobacco typical flavour zone
Therefore Lucky Strike Red is **uncritical**

For any questions please contact:

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