

EXHIBIT 3

Section H. Scientific Studies and Analyses
 RAI Services Company
 Vuse Alto PMTAs

Table of Contents

Table of Contents..... 1

Table of Tables..... 4

Table of Figures.....10

Table of Abbreviations12

H. Scientific Studies and Analyses15

H.1 Design and Manufacturing.....15

H.1.1 Components, Ingredients, and Additives.....15

H.1.1.1 Finished Product–Aerosolizing Apparatus With E-Liquid.....15

H.1.1.2 Power Unit Components and Design.....17

H.1.1.3 Cartridge Components and Design.....28

H.1.1.4 Electrical Connections and Mechanical Interface39

H.1.1.5 Product Design Failure Mode and Effects Analysis40

H.1.1.6 Comparison With Other ENDS Closed E-Cigarettes40

H.1.1.7 E-Liquid Ingredients41

H.1.1.8 Packaging60

H.1.2 Principles of Operation61

H.1.2.1 Connecting the Components.....61

H.1.2.2 Operation of the Product.....61

H.1.2.3 LED Indications During Use61

H.1.2.4 Charging of the Power Unit.....62

H.1.2.5 Features That Mitigate a Consumer’s Ability to Change the Product Characteristics62

H.1.2.6 Features That Prevent Use of Vuse Alto Power Units and Cartridges With Other Products62

H.1.3 Planned Post-Sale Activation Technology: Prevention of Youth Access63

H.1.3.1 Overview of the Two-Step PSA Process.....63

H.1.3.2 PSA Technology Hardware and Software Additions64

H.1.3.3 PSA Feasibility and Optimization Evaluations65

H.1.3.4 Summary of the PSA Technology66

H.1.4 Manufacturing.....67

H.1.4.1 Managerial Oversight67

H.1.4.2 Employee Training.....68

H.1.4.3 Supplier Qualification and Monitoring68

H.1.4.4 Handling of Non-Conforming Products and Processes, Corrective Action Preventive Action, and Complaints.....70

H.1.4.5 Manufacturing Overview71

H.1.4.6 Manufacturing Processes and Testing Procedures72

H.2 Properties.....84

H.2.1 Aerosol Constituents84

H.2.1.1 Aerosol Constituent Studies85

H.2.1.2 Analytical Testing88

H.2.1.3 Results91

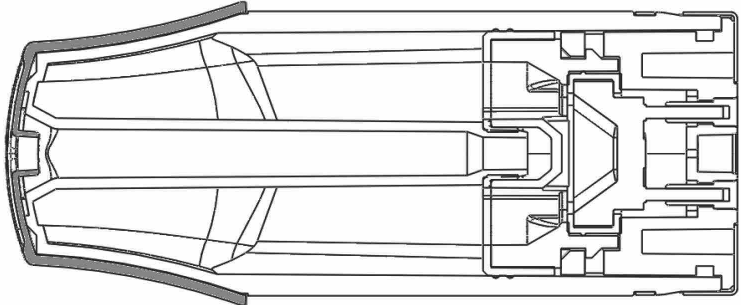

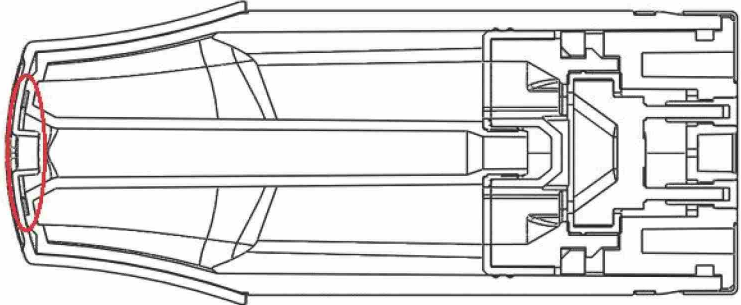
H.2.1.4 Published Studies in the Literature102

H.2.1.5 Conclusions102

H.2.2 E-Liquid Properties104

Section H. Scientific Studies and Analyses
 RAI Services Company
 Vuse Alto PMTAs

Table H-6: Vuse Alto Cartridge Component Details

#	Location and Description	Supplemental view
1	<p>Cartomizer Holder Tap:</p>  <p>The "Cartomizer Holder Tap" component is a mouthpiece made from black polycarbonate that is mechanically attached to the Cartomizer Tube component by snap joints. Aerosol is drawn through the hole at the center.</p>	
2	<p>Silicone 4:</p>  <p>The "Silicone 4" component is a seal made from silicone. This component is compressed between the Cartomizer Holder Tap and the Cartomizer Tube to inhibit leakage of airflow or condensate around the mouthpiece.</p>	