

Certificate of Analysis No. : 1630546

Customer

BRAIMIOTIS - P. SCARLATOS Ltd
144, 3rd SEPTEMVRIOU
11251 ATHENS

Attn.: Mr GOROGIAS

Date of issue: 11/11/2016

Sample information

Sample kind :	Parts of Electronic cigarette
Sample identification :	J-Easy 3 / P16 Clearomizer / OCC Coil Cylinder 1,6 Ohm (D-COCC-161018-006), prod/imp.: JFT Co, Ltd.1209, Seoulsoop SK-V1 Tower,5,Seongsuilro 8-gil, Seongdong-gu,Seoul, KOREA 04793
Received on :	31/10/2016 10:35:00 a.m.
Packaging :	---
Seals :	None
Temperature :	Ambient
Condition on receipt :	Normal

Sampling information

Sampling responsible :	Customer
Date :	---
Location :	---
Point :	---
Method :	---

Certificate of Analysis No. : 1630546

Analysis result

Date of analysis : 7/11/2016 – 9/11/2016

PARAMETER	METHOD	UNITS	RESULT	LIMITS
E-cigarette emission testing			.	
Emission protocol			.	
E-liquid			Reference A (AFNOR XP D 90-300-3)	
MOD			J-Easy 3	
Atomizer			P16 Clearomizer	
Atomizer head/coil			OCC Coil Cylinder 1,6 Ohm	
Coil Composition			Cr20Ni80	
Battery type			Li-ion polymer	
Battery capacity		mAh	900	
Wattage		W	11,55	
Voltage		V	4,3	
Device Airflow		on/off	Full On	
Puff duration		sec	3	
Puff interval (frequency)		sec	30	
Puffs per set		unit	20	
Set number		unit	5	
Puff number		unit	100	
Aspiration Airflow		l/min	1,1	
Puff volume		ml	55	
Vapor temperature at mouthpiece outlet		°C	<60	
Inclination angle of e-cigarette tank		°	45	
Emissions			.	
Nicotine 1st set	* GC/FID	mg / 100 puffs	14	
Nicotine 3rd set	* GC/FID	mg / 100 puffs	17	
Nicotine 5th set	* GC/FID	mg / 100 puffs	14	
Nicotine average		mg / 100 puffs	15	

The analysis results refer only to the items tested

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(*)Method out of the scope of accreditation

Certificate of Analysis No. : 1630546

Conclusion

The mass variability of the emitted nicotine is less than 25% for each measurement relative to the average value of the 3 measurements.

For
A. TSAKALIDIS Inc.

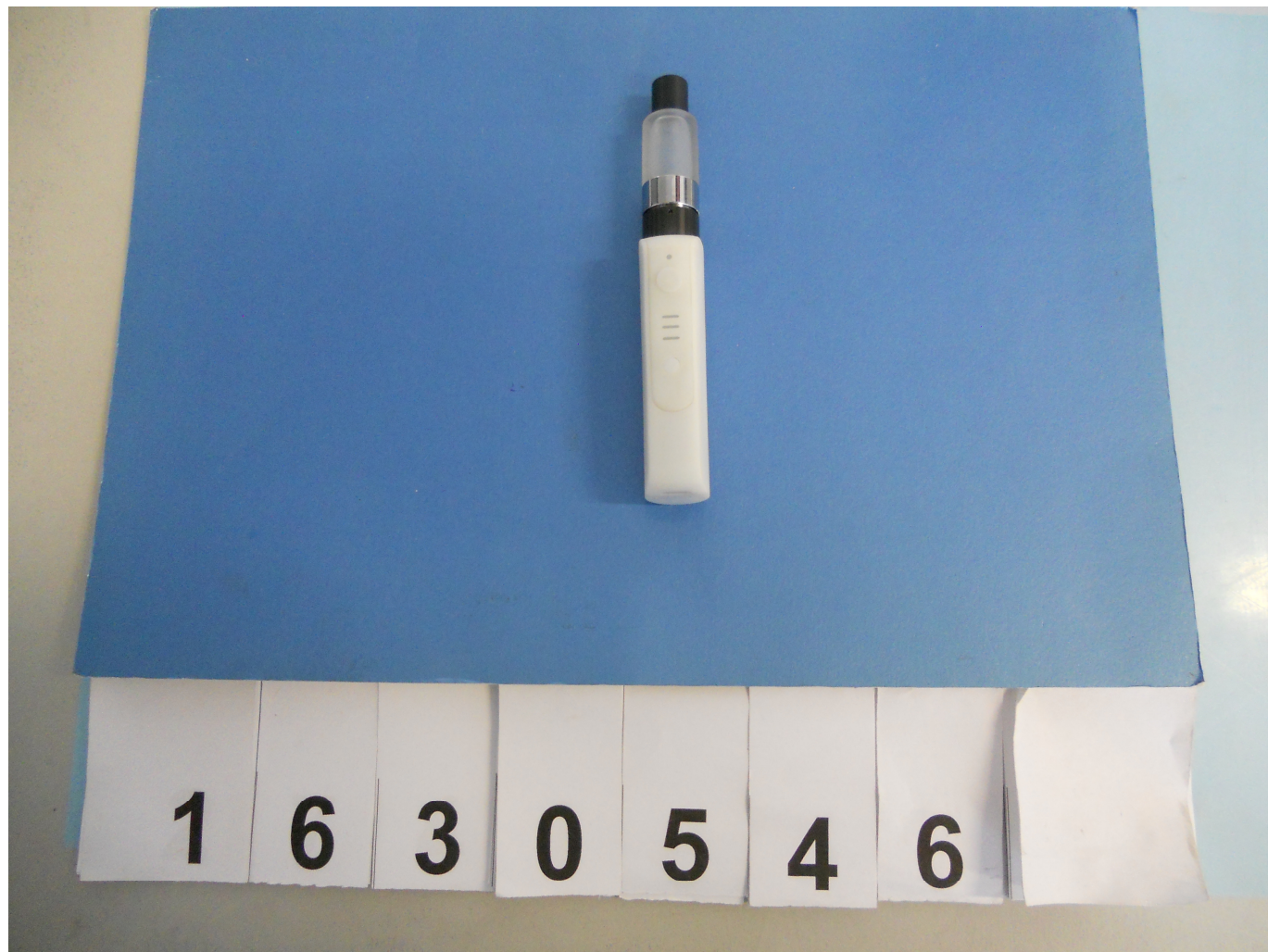
A. TSAKALIDIS
Managing Director

Certificate of Analysis No. : 1630546

APPENDIX A

SAMPLE'S PHOTOGRAPH

Certificate of Analysis No. : 1630546



Certificate of Analysis No. : 1630546

APPENDIX B

CHROMATOGRAMS

Certificate of Analysis No. : 1630546

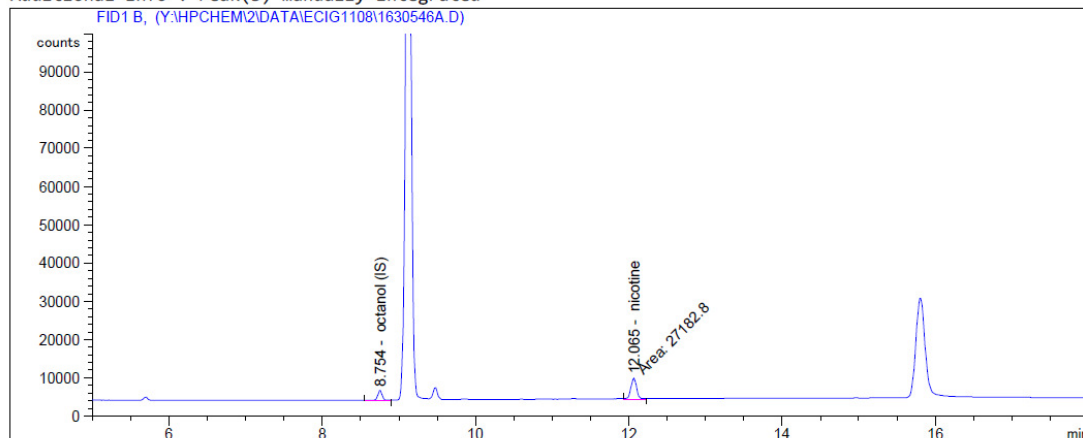
1. Nicotine in the first set

Data File Y:\HPCHEM\2\DATA\ECIG1108\1630546A.D
Sample Name: 1630546a

```
=====
Acq. Operator   : Arkouli                      Seq. Line :   16
Acq. Instrument : Instrument 2                  Location  : Vial 16
Injection Date  : 9/11/2016 8:41:12 µµ          Inj       :    1
                                           Inj Volume: 1 µl

Acq. Method     : C:\HPCHEM\2\METHODS\ECIGAR.M
Last changed    : 28/10/2016 4:50:39 µµ by drillia
Analysis Method : C:\METHODS (PROS) FID\ECIGAR2.M
Last changed    : 10/11/2016 2:09:29 µµ
Method Info     : GC5 HP wax
=====
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 10/11/2016 2:09:14 µµ
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID1 B,

Peak #	RetTime [min]	Type	Width [min]	Area counts*s	Area %	Name
1	8.754	BV +	0.0869	1.02599e4	27.40164	octanol (IS)
2	12.065	MM +	0.0817	2.71828e4	72.59836	nicotine
3	12.557	+	0.0000	0.00000	0.00000	diethylen
Totals :				3.74427e4	100.0000	

Certificate of Analysis No. : 1630546

2. Nicotine in the third set

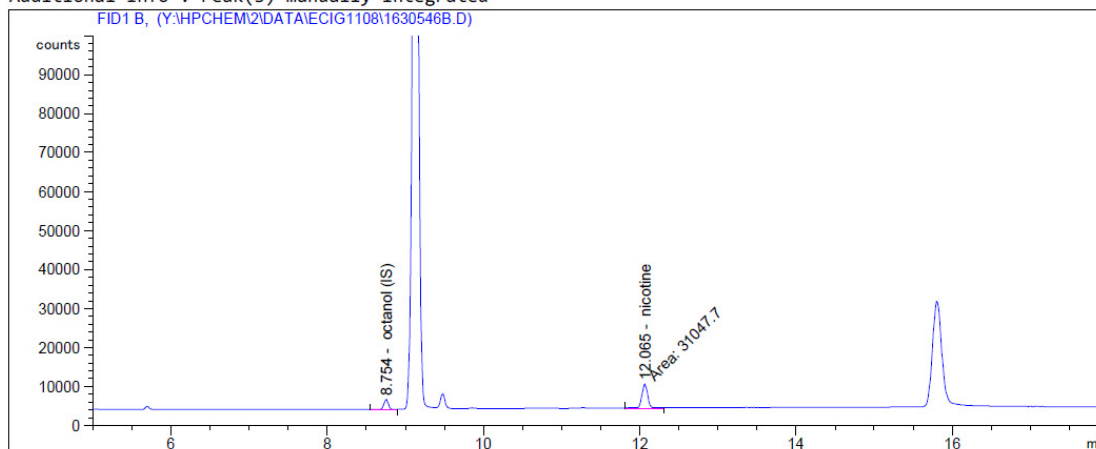
Data File Y:\HPCHEM\2\DATA\ECIG1108\1630546B.D

Sample Name: 1630546b

```
=====
Acq. Operator   : Arkouli                      Seq. Line :   17
Acq. Instrument : Instrument 2                  Location  : Vial 17
Injection Date  : 9/11/2016 9:08:49 µµ         Inj       :    1
                                           Inj Volume: 1 µl

Acq. Method     : C:\HPCHEM\2\METHODS\ECIGAR.M
Last changed    : 28/10/2016 4:50:39 µµ by drillia
Analysis Method : C:\METHODS (PROS) FID\ECIGAR2.M
Last changed    : 10/11/2016 2:09:29 µµ
Method Info     : GC5 HP wax
=====
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```
=====
Sorted By      :      Signal
Calib. Data Modified : 10/11/2016 2:09:14 µµ
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID1 B,

Peak #	RetTime [min]	Type	Width [min]	Area counts*s	Area %	Name
1	8.754	BV +	0.0870	1.02315e4	24.78612	octanol (IS)
2	12.065	MM +	0.0828	3.10477e4	75.21388	nicotine
3	12.557	+	0.0000	0.00000	0.00000	diethylen

Totals : 4.12792e4 100.0000

Certificate of Analysis No. : 1630546

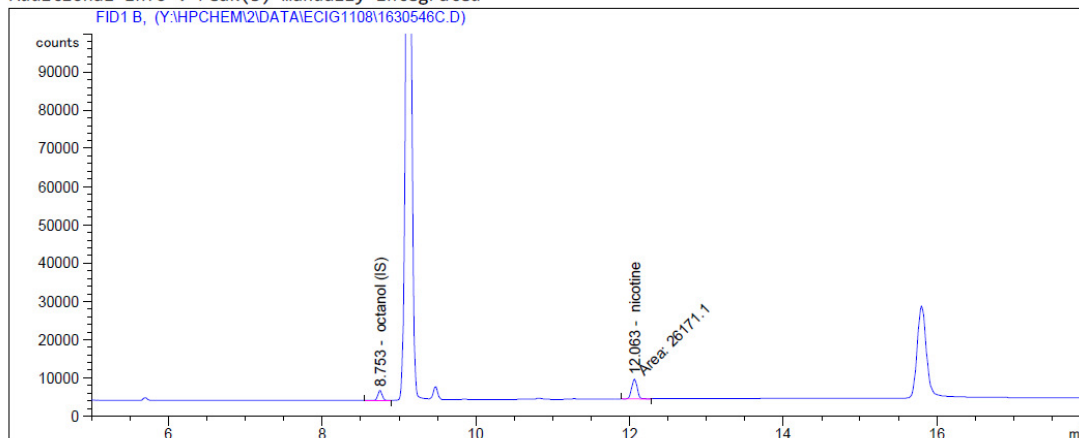
3. Nicotine in the fifth set

Data File Y:\HPCHEM\2\DATA\ECIG1108\1630546C.D
Sample Name: 1630546c

```
=====
Acq. Operator   : Arkouli                      Seq. Line :   18
Acq. Instrument : Instrument 2                  Location  : Vial 18
Injection Date  : 9/11/2016 9:36:29 µµ         Inj       :    1
                                           Inj Volume: 1 µl

Acq. Method     : C:\HPCHEM\2\METHODS\ECIGAR.M
Last changed    : 28/10/2016 4:50:39 µµ by drillia
Analysis Method : C:\METHODS (PROS) FID\ECIGAR2.M
Last changed    : 10/11/2016 2:09:29 µµ
Method Info     : GC5 HP wax
=====
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 10/11/2016 2:09:14 µµ
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID1 B,

Peak #	RetTime [min]	Type	Width [min]	Area counts*s	Area %	Name
1	8.753	BV +	0.0850	9948.92871	27.54406	octanol (IS)
2	12.063	MM +	0.0829	2.61711e4	72.45594	nicotine
3	12.557	+	0.0000	0.00000	0.00000	diethylen
Totals :				3.61201e4	100.0000	

Certificate of Analysis No. : 1630546

APPENDIX C

ANALYTICAL METHODS DESCRIPTION

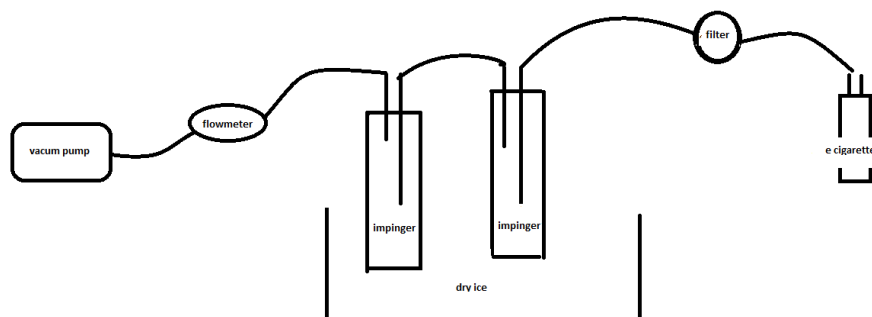
Certificate of Analysis No. : 1630546

TESTING OF CONSTANT EMISSION OF NICOTINE FROM ELECTRONIC CIGARETTE DEVICE

1. Vapor sampling

For the testing of constant emission of nicotine from electronic cigarette devices, a vaporization test using the reference liquid A is carried out (&5.2.4, AFNOR XP D90-300-3) according to the parameters defined in paragraphs 5.4.2 , 5.4.7 & 5.9 of AFNOR XP D90-300-3 (July 2016), and the concentration of nicotine which is emitted during the first, third and fifth period of puffs is determined.

For the collection of vapor, filters of 37 mm diameter and traps under cooling are used by the use of the following device.



The vapor is collected on filter which is followed by the traps that contain methanol and are cooled by dry ice.

- Each filter is extracted by methanol and nicotine is determined by gas chromatography and flame ionization detector.

2. Description of analytical methods

Determination of nicotine

Instrumentation

- Gas Chromatograph (GC) Hewlett Packard 5890
- Capillary column HP-INNOWAX with dimensions: length 30m x diameter 0.32mm x film thickness 0.25μ
- Injector split/splitless
- Detector FID
- Carrier gas helium

Experimental procedure

The filter is extracted by methanol using ultrasounds, followed by filtration of the extract. Using an appropriate aliquot of the extract, the internal standard 1-octanol is added. Then, analysis by GC/FID is followed and quantification of nicotine is done by the use of calibration curve, which is constructed by the analysis of four standards.